

DIGESTIVE DISEASE DAYS

2016

# PROGRAMMA

18 en 19 maart

Congrescentrum NH Koningshof  
Veldhoven

**NVGE**  
NEDERLANDSE VERENIGING  
VOOR GASTRO-ENTEROLOGIE



DIGESTIVE DISEASE DAYS - DDD

## Het programma werd samengesteld met inbreng van:

Nederlandse Vereniging voor Gastro-enterologie  
Nederlandse Vereniging voor Gastrointestinale Chirurgie  
Nederlandse Vereniging voor Hepatologie  
Nederlandse Vereniging van Maag-Darm-Leverartsen

### *Secties:*

Sectie Gastrointestinale Endoscopie  
Sectie Experimentele Gastroenterologie  
Sectie Neurogastroenterologie en Motiliteit  
Sectie Gastrointestinale Oncologie  
Sectie Inflammatoire Darmziekten IBD  
Sectie Kinder-MDL  
Verpleegkundigen & Verzorgenden Nederland – MDL  
PhD Netwerk

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## Tijdstip ledenvergadering woensdag

Nederlandse Vereniging voor Gastroenterologie 18 maart, 12.15 uur Brabantzaal

Nederlandse Vereniging voor Hepatologie 18 maart, 14.15 uur Baroniezaal

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## Tijdstip ledenvergadering donderdag

Nederlandse Vereniging van Maag-Darm-Leverartsen 19 maart, 15.15 uur Baroniezaal



## Programma MDL Update

Dinsdag 17 maart - Brabantzaal

Onderwerp: **Hepatologie**

10.30 uur Registratie, koffie

11.00 uur Opening door voorzitters  
*Pre-test vragen met behulp van Mentimeter*

Voorzitters: Dr. R.J. de Knecht en aios

### Chirurgie bij patiënten met levercirrose of gevorderde leverziekte

11.15 uur Extrahepatische abdominale chirurgie bij levercirrose  
Risico's en complicaties  
*Dr. J.I. Erdmann, chirurg, Amsterdam UMC*

11.45 uur Bariatrische chirurgie bij obesitas en MASLD  
*J. Apers, chirurg, Franciscus Gasthuis & Vlietland, Rotterdam*

12.15 uur Symptomatisch galsteenlijden inclusief cholecystitis: wanneer wel en wanneer  
geen chirurgie bij patiënten met leverziekte  
*Dr. P. de Reuver, chirurg, Radboudumc, Nijmegen*

12.45 uur **Lunch in de Limburgfoyer**

### Levertransplantatie

13.45 uur Preservatie van donorlevers, hoe de aanpak van levertransplantatie verandert  
*Dr. J. de Jonge, chirurg, Erasmus MC, Rotterdam*

14.15 uur Bijzondere indicaties voor levertransplantatie: colorectale levermetastasen en  
cholangiocarcinoom  
*Dr. F.G.I. van Vilsteren, MDL-arts, UMC Groningen*

14.45 uur Lange termijn resultaten levertransplantatie: recidief "oude" ziekte en  
complicaties  
*Prof. dr. M.J. Coenraad, MDL-arts, LUMC, Leiden*

15.15 uur **Pauze**



### Palliatieve zorg

- 15.45 uur Palliatieve zorg in de hepatologie  
*Dr. R.B. Takkenberg, MDL-arts, Amsterdam UMC*
- 16.15 uur Palliatieve zorg in de hepatologie: wat kunnen we leren vanuit de oncologie?  
*Prof. dr. C. van Zuylen, professor klinische palliatieve zorg, Amsterdam UMC*

### Hepatologische verrichtingen: How to do it, and why

- 16.45 uur Leverbiopten en ascitesdrainage  
*Dr. J.M. Vrolijk, MDL-arts, Ziekenhuis Rijnstate Arnhem*
- 17.10 uur Transjugulaire drukmetingen levervasculatuur, terug van weggeweest of nooit weggeweest?  
*Prof. dr. T. Vanwolleghem, MDL-arts, UZA Antwerpen, België*
- 17.35 uur Eind-test vragen met behulp van Mentimeter
- 17.50 uur Afsluiting door de voorzitters en prijsuitreiking hoogste score

Het aansluitende (vegetarisch Aziatisch) buffet vindt plaats in restaurant Binnenhof, nabij de hoofdingang.

## Symposium IBD/Voeding/Kinder-MDL Brabantzaal

Woensdag 18 maart - Brabantzaal

Voorzitters: T.G.J. de Meij en I.A.M. Gisbertz

09.30 uur Voeding bij IBD, CEDED dieet  
*Dr. N.J. Wierdsma, diëtist, Amsterdam UMC, Amsterdam*

09.55 uur Darmfalen bij IBD, prevalentie en behandeling  
*Dr. Y. Wouters, MDL-arts, Radboudumc*

10.20 uur Sarcopenie bij IBD patiënten  
*Prof. dr. J. Sabino, MDL-arts, UZ Leuven*

10.45 uur Einde van deze sessie  
Gemodereerde postersessies en koffie-/theepauze in de expositiehal

## Plenaire opening DDD - President Select

Woensdag 18 maart - Brabantzaal

Voorzitters: A.E. van der Meulen en A.G.L. Bodelier

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

- 11.15 uur      Systemic antibody responses against herpesviruses and Bacteroides associate with disease progression in Inflammatory Bowel Disease  
*M.G. Griesbaum<sup>1</sup>, A.R. Bourgonje<sup>1</sup>, F.E. Veenstra<sup>1</sup>, S. Geertsema<sup>1</sup>, Z.M.A. Al-Radi<sup>1</sup>, A. Weinberger<sup>2</sup>, E. Segal<sup>2</sup>, T. Vogl<sup>3</sup>, R.K. Weersma<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, University Medical Center Groningen, Groningen, <sup>2</sup>Dept. of Computer Science and Applied Mathematics, Weizmann Institute of Science, Rehovot, Israël, <sup>3</sup>Center for Cancer Research, Medical University of Vienna, Vienna, Oostenrijk.*
- 11.23 uur      Preoperative Evaluation of Lymph Nodes of resectable Cholangiocarcinoma by Endoscopic Ultrasound: the POELH trial  
*D.M. de Jong<sup>1</sup>, W.J. Lammers<sup>1</sup>, D.C. Booi<sup>1</sup>, A. Inderson<sup>2</sup>, J.E. van Hooft<sup>2</sup>, A.E. Braat<sup>3</sup>, J. de Bruijne<sup>4</sup>, L.M.G. Moons<sup>4</sup>, J. Hagendoorn<sup>5</sup>, J.W. Poley<sup>6</sup>, M. Dewulf<sup>7</sup>, F.G.I. van Vilsteren<sup>8</sup>, W.B. Nagengast<sup>8</sup>, F.J.H. Hoogwater<sup>9</sup>, R.L.J. van Wanrooij<sup>10, 11</sup>, R.P. Voermans<sup>10, 11</sup>, J.I. Erdmann<sup>12, 13</sup>, P. Hindryckx<sup>14</sup>, S. Ribeiro<sup>14</sup>, H.H. Eker<sup>15</sup>, J. de Jonge<sup>16</sup>, W.G. Polak<sup>16</sup>, M. Doukas<sup>17</sup>, R.S. Dwarkasing<sup>18</sup>, B. Groot Koerkamp<sup>16</sup>, M.J. Bruno<sup>1</sup>, L.M.J.W. van Driel<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, <sup>3</sup>Dept. of Surgery, Leiden University Medical Center, Leiden, <sup>4</sup>Dept. of Gastroenterology and Hepatology, University Medical Center Utrecht, Utrecht, <sup>5</sup>Dept. of Surgery, University Medical Center Utrecht, Utrecht, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Maastricht University Medical Center+, Maastricht, <sup>7</sup>Dept. of Surgery, Maastricht University Medical Center+, Maastricht, <sup>8</sup>Dept. of Gastroenterology and Hepatology, University Medical Center Groningen, Groningen, <sup>9</sup>Dept. of Surgery, University Medical Center Groningen, Groningen, <sup>10</sup>Dept. of Gastroenterology and Hepatology, Amsterdam University Medical Center, Amsterdam, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Cancer Center Amsterdam, Cancer Treatment and Quality of Life, Amsterdam, <sup>12</sup>Dept. of Surgery, Amsterdam University Medical Center, Amsterdam, <sup>13</sup>Dept. of Surgery, Cancer Center Amsterdam, Cancer Treatment and Quality of Life, Amsterdam, <sup>14</sup>Dept. of Gastroenterology and Hepatology, University Hospital Ghent, Ghent, België<sup>15</sup>Dept. of Surgery, University Hospital Ghent, Ghent, België<sup>16</sup>Dept. of Surgery, Erasmus MC University Medical Center, Rotterdam, <sup>17</sup>Dept. of Pathology, Erasmus MC University Medical Center, Rotterdam, <sup>18</sup>Dept. of Radiology and Nuclear Medicine, Erasmus MC University Medical Center, Rotterdam, The Netherlands.*

## Plenaire opening DDD - President Select - vervolg

Woensdag 18 maart - Brabantzaal

- 11.31 uur Targeting the JAK-STAT pathway reprograms intestinal fibroblasts and attenuates IBD-associated fibrosis  
*J. Su<sup>1</sup>, B.W. Van Os<sup>1</sup>, B.J. Ke<sup>2</sup>, S. De Winter<sup>3</sup>, E.H.J. Danen<sup>3</sup>, P.W. Voorneveld<sup>1</sup>, L.J.A.C. Hawinkels<sup>1</sup>, G. Matteoli<sup>4</sup>, M.C. Barnhoorn<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leiden university medical center, Leiden, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Translational Research Center for Gastrointestinal Disorders (TARGID), Leuven, België<sup>3</sup>Dept. of Scientific Research, Leiden university, Leiden, The Netherlands, <sup>4</sup>Dept. of Gastroenterology and Metabolism, Translational Research Center for Gastrointestinal Disorders (TARGID), Leuven, België*  
\*Presentation in English
- 11.39 uur Uitreiking NVGE erelidmaatschap
- 11.45 uur Keynote: Ontwikkelingen robotchirurgie MDL-ziekten  
*Prof. dr. I. Broeders, chirurg, Meander MC*
- 12.15 uur **Algemene Ledenvergadering NVGE**
- 12.30 uur Gemodereerde postersessies en lunchpauze in de expositiehal

## Abstractsessie Sectie Gastrointestinale Oncologie

Woensdag 18 maart - Brabantzaal

Voorzitters: J. Honing en R.W.M. Schrauwen

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

- 13.30 uur      Optimizing pancreatic cyst surveillance: a cost-effectiveness analysis using microsimulation  
*M.L.J.A. Sprij<sup>1</sup>, O.B. White<sup>2</sup>, D.L. Cahen<sup>1</sup>, M.B. Bruno<sup>1</sup>, G. Marchegiani<sup>3</sup>, N. Canitano<sup>3</sup>, I. Lansdorp-Vogelaar<sup>2</sup>, I.M.C.M. de Kok<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, University Medical Center Rotterdam, Rotterdam, <sup>2</sup>Dept. of Public Health, Erasmus MC, University Medical Center Rotterdam, Rotterdam, The Netherlands, <sup>3</sup>Dept. of Surgery, University of Padua, Padua, Italië*
- 13.38 uur      Healthcare expenditures across the full care continuum of pancreatic cancer and resected precursor lesions in the Netherlands: variations by patient- and disease characteristics  
*M.L.J.A. Sprij<sup>1</sup>, B. van Stigt<sup>2</sup>, A.G. Siebers<sup>3</sup>, O.R. Busch<sup>4</sup>, N.G. Venneman<sup>5</sup>, R.P. Voermans<sup>6</sup>, E. Kouw<sup>7</sup>, M.B. Bruno<sup>1</sup>, D.L. Cahen<sup>1</sup>, I. Lansdorp-Vogelaar<sup>2</sup>, I.M.C.M. de Kok<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, University Medical Center Rotterdam, Rotterdam, <sup>2</sup>Dept. of Public Health, Erasmus MC, University Medical Center Rotterdam, Rotterdam, <sup>3</sup>Dept. of Pathology, The Dutch nationwide pathology databank (Palga foundation), Houten, <sup>4</sup>Dept. of Surgery, Amsterdam University Medical Center, Amsterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Amsterdam University Medical Center, Amsterdam, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Gelre Hospital, Zutphen, The Netherlands.*
- 13.46 uur      Facilitating high quality manual segmentation while minimizing annotation workload: a pilot study on continuous learning for the pancreas in MRI  
*M.M.L. Engels<sup>1</sup>, A.M. Bogdanski<sup>1</sup>, S. Maijer<sup>2</sup>, V.C. Van der Sluis<sup>2</sup>, D.C.F. Klatte<sup>1</sup>, M.E. Van Leerdam<sup>1</sup>, A. Broersen<sup>2</sup>, B. Boekstijn<sup>3</sup>, J. Dijkstra<sup>2</sup>, J.E. Van Hooft<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, LUMC, Leiden, <sup>2</sup>Dept. of LKEB Radiology, LUMC, Leiden, <sup>3</sup>Dept. of Radiology, LUMC, Leiden*
- 13.54 uur      RUBATO-study: Exploring preferences and attitudes of Both patients And doctors Towards surveillance after local resection of high-risk T1 colorectal cancer  
*D.A. Verhoeven<sup>1</sup>, L.H.I. Overeem<sup>2</sup>, W.H. De Vos Tot Nederveen Cappel<sup>2</sup>, H.L. van Westreenen<sup>3</sup>, L. Oterdoom<sup>4</sup>, S. Brouwer<sup>4</sup>, W.L. Hazen<sup>5</sup>, D. Bierens-Peters<sup>5</sup>, P.R. Bos<sup>6</sup>, J. van den Brink<sup>6</sup>, K.V. Basiliya<sup>1</sup>, J. van der Kraan<sup>1</sup>, A.M.J. Langers<sup>1</sup>, M.E. van Leerdam<sup>1</sup>, S.H. van den Berg<sup>1</sup>, K.C.M.J. Peeters<sup>7</sup>, F.A. Holman<sup>7</sup>, E. van*

## Abstractsessie Sectie Gastrointestinale Oncologie - vervolg

Woensdag 18 maart - Brabantzaal

*den Akker-van Marle<sup>8</sup>, J.J. Boonstra<sup>1</sup>, H. Dang<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>3</sup>Dept. of Surgery, Isala, Zwolle, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Haga Teaching Hospital, Den Haag, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Elisabeth-TweeSteden Hospital, Tilburg, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Gelderse Vallei Hospital, Ede, <sup>7</sup>Dept. of Surgery, Leiden University Medical Center, Leiden, <sup>8</sup>Dept. of Medical decision making, Leiden University Medical Center, Leiden, The Netherlands.*

14.02 uur Per-person healthcare costs of colorectal cancer by stage, phase of care and mode of detection: a Dutch nationwide analysis  
*B.J. van Stigt<sup>1</sup>, K. de Nijs<sup>1</sup>, H.J. van de Schootbrugge-Vandermeer<sup>1</sup>, C.A. van Iersel<sup>1</sup>, E. Toes-Zoutendijk<sup>1</sup>, I.Lansdorp-Vogelaar<sup>1</sup>, <sup>1</sup>Dept.of Public Health, Erasmus MC, Rotterdam, The Netherlands.*

14.10 uur Crossroads2  
*S.N. Verhoeve, arts-onderzoeker, UMC Utrecht*

14.30 uur Einde van deze sessie

## Symposium Werkgroep Bariatrie

Woensdag 18 maart - Brabantzaal

Voorzitter: P.R. Oosterwijk en T.C.C. Boerlage

**Titel: Van binnenuit veranderen: Endoscopische bariatrie in beweging**

14.30 uur Hybride endoscopische behandeling van obesitas; endoscopische gastric sleeve plus mucosale ablatie van de fundus

*Dr. D.P. Hirsch, MDL-arts, Rijnstate ziekenhuis, Arnhem*

14.45 uur Creon na bariatrische chirurgie: noodzaak of overbehandeling?

*Dr. T.C.C. Boerlage, MDL-arts, Groene Hart Ziekenhuis, Gouda*

*Dr. Th.J. Aufenacker, chirurg, Ziekenhuis Rijnstate, Arnhem*

15.10 uur Landschap van obesitas medicaties

*Dr. M. Savas, endocrinoloog, Erasmus MC, Rotterdam*

15.40 uur Alcoholgebruik na een Bariatrische Operatie: Wat je moet weten?

*Dr. P. Koehestanie, MDL-arts, Bravis Ziekenhuis, Bergen op Zoom*

15.55 uur Afsluiting

16.00 uur Gemodereerde postersessies en theepauze in de expositiehal

## Symposium / Abstracts Sectie Gastrointestinale Oncologie en Experimentele Gastroenterologie

Woensdag 18 maart - Brabantzaal

Voorzitters: L.J.A.C. Hawinkels en J. Honing

- 16.30 uur      New insights of immunotherapy in upper GI cancer  
*Dr. M. Slingerland, internist-oncoloog, LUMC, Leiden*
- 16.53 uur      Mini-tumors, major insights: exploring cancer-associated fibroblasts induced chemotherapy resistance in difficult-to-treat gastrointestinal tumors  
*A. Valles Marti<sup>1</sup>, A. Van der Wielen<sup>1</sup>, S.G.T Janson<sup>1</sup>, J. Zonneveld<sup>1</sup>, M. Slingerland<sup>2</sup>, L.J.A.C. Hawinkels<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, <sup>2</sup>Dept. of Medical Oncology, Leiden University Medical Center, Leiden, The Netherlands.*
- 17.03 uur      The clinical relevance of tumor-host interactions in cancer cachexia  
*S.S.M. Rensen, associate professor, Maastricht UMC+, Maastricht*
- 17.26 uur      De-implementation of routine FDG-PET/CT use in staging locally advanced gastric cancer  
*L. Triemstra<sup>1</sup>, S.W.J.M. Spruijt<sup>2</sup>, J.P. Ruurda<sup>1</sup>, H.J.F. Brenkman<sup>1</sup>, S.S. Gisbertz<sup>3, 4</sup>, R. van Hillegersberg<sup>1</sup>, P. van Duijvendijk<sup>5</sup>, B.P.L. Wijnhoven<sup>6</sup>, B.P.L. Witteman<sup>7</sup>, M.J. van Det<sup>8</sup>, J.W. van Sandick<sup>9</sup>, H.H. Hartgrink<sup>10</sup>, A.Y. Thijssen<sup>11</sup>, M.D.P. Luyer<sup>12</sup>, M.I. van Berge Henegouwen<sup>3, 4</sup>, J.W. van den Berg<sup>1</sup>, E.S. van der Zaag<sup>5</sup>, S.M. Lagarde<sup>6</sup>, E.A. Kouwenhoven<sup>8</sup>, L.F. de Geus-Oei<sup>2</sup>, J.S.E. Quik<sup>9</sup>, W.O. de Steur<sup>10</sup>, E.J.T. Belt<sup>13</sup>, G.A.P. Nieuwenhuijzen<sup>12</sup>, K. Keywani<sup>3, 4</sup>, P.C. van der Sluis<sup>6</sup>, E.B. Wassenaar<sup>5</sup>, S. van Hootegem<sup>6</sup>, P.D. Siersema<sup>14</sup>, R.B. Kool<sup>15</sup>, N. Haj Mohammad<sup>16</sup>, L.A.A. Brosens<sup>17</sup>, M.P. van der Meulen<sup>18</sup>, L. Timmermans<sup>19</sup>, I. Somers<sup>20</sup>, E. Vegt<sup>21</sup>, <sup>1</sup>Dept. of Surgery, University Medical Center Utrecht, Utrecht, <sup>2</sup>Dept. of Radiology and Nuclear Medicine, Leiden University Medical Center, Leiden, <sup>3</sup>Dept. of Surgery, Amsterdam UMC Location University of Amsterdam, Amsterdam, <sup>4</sup>Dept. of Surgery, Cancer Center Amsterdam, Cancer Treatment and Quality of Life, Amsterdam, <sup>5</sup>Dept. of Surgery, Gelre Hospital Apeldoorn, Apeldoorn, <sup>6</sup>Dept. of Surgery, Erasmus MC University Medical Center Rotterdam, Rotterdam, <sup>7</sup>Dept. of Surgery, Rijnstate Hospital, Arnhem, <sup>8</sup>Dept. of Surgery, Ziekenhuisgroep Twente, Almelo, <sup>9</sup>Dept. of Surgery, The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Amsterdam, <sup>10</sup>Dept. of Surgery, Leiden University Medical Center, Leiden, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Albert Schweitzer Hospital, Dordrecht, <sup>12</sup>Dept. of Surgery, Catharina Hospital Eindhoven, Eindhoven, <sup>13</sup>Dept. of Surgery, Albert Schweitzer Hospital, Dordrecht, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center Rotterdam, Rotterdam, <sup>15</sup>IQ Healthcare, Radboud University Medical Center, Nijmegen, <sup>16</sup>Dept. of Medical Oncology, University Medical Center Utrecht, Utrecht, <sup>17</sup>Dept. of Pathology, University Medical Center Utrecht, Utrecht, <sup>18</sup>Dept. Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht, <sup>19</sup>Dept. of Public Health, Radboud University Medical Center, Nijmegen, <sup>20</sup>Dept. of Radiology, The Netherlands Cancer Institute - Antoni van Leeuwenhoek, Amsterdam, <sup>21</sup>Dept. of Radiology and Nuclear Medicine, Erasmus MC University Medical Center Rotterdam, Rotterdam, The Netherlands.*

## Symposium / Abstracts Sectie Gastrointestinale Oncologie en Experimentele Gastroenterologie - vervolg

Woensdag 18 maart - Brabantzaal

- 17.36 uur      Onset of CRC and western type diet  
*S. Plugge, Erasmus MC, Rotterdam*
- 17.59 uur      Endoglin loss in Collagen1 $\alpha$ 1-expressing fibroblasts enhances macrophage recruitment and promotes colorectal tumorigenesis  
*S. Abudukelimu<sup>1</sup>, M.J.A. Schoonderwoerd<sup>1</sup>, M. Paauwe<sup>1</sup>, E.S.M. De Jonge-Muller<sup>1</sup>, S.T.G. Janson<sup>1</sup>, N. Van Montfoort<sup>1</sup>, L.J.A.C. Hawinkels<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, The Netherlands.*
- 18.10 uur      Einde van deze sessie

## Symposium Nederlandse Vereniging voor Gastrointestinale Chirurgie

Woensdag 18 maart - Auditorium

Voorzitters: J. Wiggers en R. de Vos tot Nederveen Cappel

09.30 uur Inleiding  
*Dr. J.F.M. Lange, MDL-arts, UMC Groningen, Groningen*

09.35 uur Visie vanuit DICA  
*Dr. J.W.T. Dekker, MDL-arts, Reinier de Graaf Gasthuis, Delft*

### Visie vanuit diverse werkgroepen

09.50 uur ZUUR  
*Dr. W.E. Hueting, Chirurg, Alrijne Ziekenhuis, Leiden*

09.56 uur DSCRS  
*S.J. Oosterling, Chirurg, Spaarne Gasthuis, Haarlem*

10.02 uur ICCS  
*F.J. Hoogenboom, Chirurg, UMC Groningen, Groningen*

10.08 uur DHS  
*Dr. B Bloemendaal, Chirurg, Reinier de Graaf Gasthuis, Delft*

10.14 uur Transplantatie  
*Prof. dr. I.P.J. Alwayn, Chirurg, LUMC, Leiden*

10.20 uur Pancreatitis  
*Dr. S.A.W. Bouwense, Chirurg, Maastricht UMC+, Maastricht*

10.26 uur DSMBS  
*Dr. E.G. Boerma, Chirurg, Zuyderland Ziekenhuis, Sittard-Geleen*

10.35 uur Discussie o.l.v. J.F.M. Lange

10.45 uur Einde van deze sessie  
Gemodereerde postersessies en koffie-/theepauze in de expositiehal

## Abstractsessie Nederlandse Vereniging voor Gastrointestinale Chirurgie

Woensdag 18 maart – Auditorium

Voorzitters: R.J. De Vos tot Nederveen Cappel en J. Wiggers

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

13.30 uur Detection and treatment of peritoneal metastases in colon cancer: COLOPEC trial compared to routine practice

*I. Hochstenbach<sup>1, 2</sup>, J.J.M. Hamm<sup>3</sup>, E. Rademaker<sup>1, 3</sup>, A.G.J. Aalbers<sup>4</sup>, D. Boerma<sup>5</sup>, W.M.U. van Grevenstein<sup>6</sup>, P.H.J. Hemmer<sup>2</sup>, I.H.J.T. de Hingh<sup>7</sup>, N.F.M. Kok<sup>4</sup>, J.B. Tuynman<sup>8</sup>, E.V.E. Madsen<sup>3</sup>, J.H.W. de Wilt<sup>9</sup>, E.C.J. Consten<sup>2, 10</sup>, H.L. van Westreenen<sup>1</sup>, P.J. Tanis<sup>3</sup>, <sup>1</sup>Dept. of Surgery, Isala, Zwolle, <sup>2</sup>Dept. of Surgery, UMC Groningen, Groningen, <sup>3</sup>Dept. of Surgery, Erasmus MC Cancer Institute, Rotterdam, <sup>4</sup>Dept. of Surgery, Netherlands Cancer Institute/Antoni van Leeuwenhoek Hospital, Amsterdam, <sup>5</sup>Dept. of Surgery, Antonius Ziekenhuis, Nieuwegein, <sup>6</sup>Dept. of Surgery, UMC Utrecht, Utrecht, <sup>7</sup>Dept. of Surgery, Catharina Ziekenhuis, Eindhoven, <sup>8</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, <sup>9</sup>Dept. of Surgery, Radboud UMC, Nijmegen, <sup>10</sup>Dept. of Surgery, Meander MC, Amersfoort*

13.38 uur Influence of relative hospital volume on locoregional recurrence and survival in patients with complex colon cancer

*I. Hochstenbach<sup>1,2</sup>, E. Rademaker<sup>1,3</sup>, K.C.M.J. Peeters<sup>4</sup>, D.D.E. Zimmerman<sup>5</sup>, N.F.M. Kok<sup>6</sup>, J.H.W. de Wilt<sup>7</sup>, I.H.J.T. de Hingh<sup>8</sup>, J.M.J. Schreinemakers<sup>9</sup>, A.B. Smits<sup>10</sup>, L.C.F. de Nes<sup>7, 11</sup>, J.W.A. Leijtens<sup>12</sup>, J.W.T. Dekker<sup>13</sup>, C. Hoff<sup>14</sup>, H.J. Belgers<sup>15</sup>, P.J. Tanis<sup>16</sup>, H.L. van Westreenen<sup>1</sup>, E.C.J. Consten<sup>2, 17</sup>, <sup>1</sup>Dept. of Surgery, Isala, Zwolle, <sup>2</sup>Dept. of Surgery, UMC Groningen, Groningen, <sup>3</sup>Dept. of Surgery, Erasmus MC Cancer Institute, Rotterdam, <sup>4</sup>Dept. of Surgery, Leiden UMC, Leiden, <sup>5</sup>Dept. of Surgery, Elisabeth-TweeSteden Hospital, Tilburg, <sup>6</sup>Dept. of Surgery, Netherlands Cancer Institute/Antoni van Leeuwenhoek Hospital, Amsterdam, <sup>7</sup>Dept. of Surgery, Radboud UMC, Nijmegen, <sup>8</sup>Dept. of Surgery, Catharina Ziekenhuis, Eindhoven, <sup>9</sup>Dept. of Surgery, Amphia, Breda, <sup>10</sup>Dept. of Surgery, Antonius Ziekenhuis, Nieuwegein, <sup>11</sup>Dept. of Surgery, Pantein, Boxmeer, <sup>12</sup>Dept. of Surgery, Laurentius ziekenhuis, Roermond, <sup>13</sup>Dept. of Surgery, Reinier de Graaf Gasthuis, Delft, <sup>14</sup>Dept. of Surgery, Frisius MC, Leeuwarden, <sup>15</sup>Dept. of Surgery, Zuyderland MC, Heerlen/Sittard, <sup>16</sup>Dept. of Surgery, Erasmus MC, Rotterdam, <sup>17</sup>Dept. of Surgery, Meander MC, Amersfoort*

13.46 uur Long-term changes in quality of life and bowel function in rectal cancer patients managed with a watch-and-wait strategy after clinical (near) complete response

*C. Ceuppens<sup>1</sup>, C.M.E. ter Heegde<sup>2</sup>, P. Custers<sup>3</sup>, B.A. Grotenhuis<sup>1</sup>, S.M.J. van Kuijk<sup>4</sup>, G.L. Beets<sup>2</sup>, S.O. Breukink<sup>2</sup>, <sup>1</sup>Dept. of Gastrointestinal Surgery, Anthony van Leeuwenhoek ziekenhuis, Amsterdam, <sup>2</sup>Dept. of Gastrointestinal Surgery, Maastricht University Medical Center, Maastricht, <sup>3</sup>Dept. of Surgery, Catharina ziekenhuis, Eindhoven, <sup>4</sup> Faculty of Health Medicine and Life Sciences, Maastricht*

## Abstractsessie Nederlandse Vereniging voor Gastrointestinale Chirurgie

Woensdag 18 maart – Auditorium

- 13.54 uur      The impact of post-cholecystectomy diarrhoea on patient-reported quality of life: a cross-sectional, comparative study of two independent cohorts  
*M.M.F. Vos<sup>1</sup>, J.I.M. Driessen<sup>2</sup>, A. Jonkers<sup>1</sup>, A.M. Ellegaard<sup>3</sup>, S. Bluiminck<sup>2</sup>, P.R. de Reuver<sup>2</sup>, <sup>1</sup>Dept. of Gastroenterology, RadboudUMC, Nijmegen, <sup>2</sup>Dept. of Surgery, RadboudUMC, Nijmegen, <sup>3</sup>University of Copenhagen, Copenhagen, Denmark*
- 14.02 uur      Covered versus bare-metal stenting of the mesenteric arteries in patients with chronic mesenteric ischaemia (CoBaGI): A cost-utility analysis  
*E.K. Bocharewicz<sup>1, 2</sup>, D. Harmankaya<sup>1, 2</sup>, M.A.H. Oude Voshaar<sup>3</sup>, L.G. Terlouw<sup>1</sup>, L.J.D. van Dijk<sup>2</sup>, K.P. Pieterman<sup>4</sup>, R.H. Geelkerken<sup>5</sup>, P.D. Siersema<sup>1</sup>, M.J. Bruno<sup>1</sup>, D. van Noord<sup>1, 2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus Medical Centre, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Franciscus Hospital, Rotterdam, <sup>3</sup>Dept. of Public Health, Erasmus Medical Centre, Rotterdam, <sup>4</sup>Dept. of Radiology and Nuclear Medicine, Erasmus Medical Centre, Rotterdam, <sup>5</sup>Dept. of Surgery, Medisch Spectrum Twente, Enschede*
- 14.10 uur      Sequential hypo- and normothermic perfused extended criteria livers: two-center results of 205 cases  
*R. Broere<sup>1</sup>, S.B. Bodewes<sup>2</sup>, O.B. van Leeuwen<sup>2</sup>, P.C. Groen<sup>1</sup>, J. Blokzijl<sup>3</sup>, S. Darwish Murad<sup>4</sup>, S. Fouraschen<sup>2</sup>, C. den Hoed<sup>4</sup>, B. Lascaris<sup>2</sup>, M.W. Nijsten<sup>5</sup>, W.G. Polak<sup>1</sup>, J. de Jonge<sup>1</sup>, V.E. de Meijer<sup>2</sup>, R.J. Porte<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Erasmus MC Transplant Institute, Rotterdam, <sup>2</sup>Dept. of Surgery, University Medical Center Groningen, Groningen, <sup>3</sup>Dept. of Hepatology, University Medical Center Groningen, Groningen, <sup>4</sup>Dept. of Hepatology, Erasmus MC Transplant Institute, Rotterdam, <sup>5</sup>Dept. of Medicine, University Medical Center Groningen, Groningen*
- 14.18 uur      Cryptoglandular anal fistula core outcome measurement set (AFCOMS): standardised definitions and measurement instruments  
*N. Tabakovic<sup>1</sup>, S. Joshi<sup>2</sup>, M. Kimman<sup>3</sup>, L. Mitalas<sup>1</sup>, N. Iqbal<sup>4</sup>, P. Tozer<sup>2</sup>, S. Breukink<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Maastricht University Medical Centre, Maastricht, <sup>2</sup>Dept. of Surgery, Robin Phillips' Fistula Research Unit, St. Mark's Hospital, London, Verenigd Koninkrijk, <sup>3</sup>Dept. of Epidemiology, Maastricht University Medical Centre, Maastricht, <sup>4</sup>Dept. of Surgery, Robin Phillips' Fistula Research Unit, St Mark's Hospital, London, Verenigd Koninkrijk*
- 14.30 uur      Einde van deze sessie

# Symposia werkgroepen NVGIC

Woensdag 18 maart - Auditorium

## Werkgroep ICCS

Voorzitter: F.B. Poelmann

14.30 uur Een samenvatting van de ECCO 2026  
*Dr. C. van Kessel, chirurg, Reinier de Graaf Gasthuis, Delft*  
*Dr. F.D.M. van Schaik, MDL-arts, UMC Utrecht*

## Werkgroep Pancreatitis

Voorzitters: S.A.W. Bouwense en C.L. van Veldhuisen

15.15 uur Acute pancreatitis & infecties  
*H.S. Pauw, PhD student, Antonius Ziekenhuis, Nieuwegein*

15.35 uur Acute pancreatitis: kan de chirurg naar huis?  
*Dr. R.C. Verdonk, MDL-arts, Antonius Ziekenhuis, Nieuwegein*

16.00 uur Gemodereerde postersessies en koffie-/theepauze in de expositiehal

## Werkgroep DHS

Voorzitter: B. Bloemendaal

16.30 uur Introductie  
*Dr. B. Bloemendaal, Chirurg, Reinier de Graaf Gasthuis, Delft*

16.35 uur Waar staan we nu met de Rebound mesh?  
*M. Möllers, chirurg, Heelkunde Friesland, Friesland*  
*W. Zwaans, chirurg, Maxima MC, Eindhoven*

16.45 uur Wat hebben we geleerd van dit probleem? Tijd voor een protocol "mesh-calamiteit".  
*Dr. B Bloemendaal, chirurg, Reinier de Graaf Gasthuis, Delft*  
*J. Harlaar, chirurg i.o., Ziekenhuisgroep Twente, Almelo*

16.55 uur Is het tijd voor een centrale mesh-registratie?  
*Dr. E.B. Deerenberg, chirurg, Franciscus, Rotterdam*  
*Prof. dr. M.A. Boermeester, chirurg, Amsterdam UMC, Amsterdam*  
*Dr. A.H.W. Schiphorst, chirurg, Diaconessenhuis, Utrecht*

## Symposia werkgroepen NVGIC vervolg

Woensdag 18 maart - Auditorium

### Werkgroep ZUUR

Voorzitter: volgt

#### Een bredere Blik op Zuur! (Nu de rook uit de Kuip is weggetrokken)

17.15 uur Waarde gedreven zorg voor refluxziekte (risicostratificatie, wachttijden, prioritering)  
*Spreker volgt*

17.30 uur Praktijk Ondersteuner Huisarts (POH) maagklachten  
*Spreker volgt*

17.45 uur Samenwerken met andere zorgpartijen, Een integrale businesscase  
*Spreker volgt*

## Abstractsessie Sectie Gastrointestinale Endoscopie

Woensdag 18 maart - Baroneizaal

Voorzitter: R. Zoutendijk en C.N. Frederiks

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

- 09.30 uur      Low recurrence rates after endoscopic eradication therapy with RFA of Barrett's neoplasia: Long-term follow-up results from the Dutch Barrett's registry  
*V. Bos<sup>1</sup>, S.N. van Munster<sup>1</sup>, B.L.A.M. Weusten<sup>2, 3</sup>, A. Alvarez Herrero<sup>2</sup>, E.J. Schoon<sup>4</sup>, E. Curvers<sup>4</sup>, W.B. Nagengast<sup>5</sup>, A. Alkhalaf<sup>6</sup>, A.D. Koch<sup>7</sup>, P.J.F. de Jonge<sup>7</sup>, J. Westerhof<sup>8</sup>, J.J. Bergman<sup>1</sup>, R.E. Pouw<sup>1, 3</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, location VUmc, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Sint Antonius Hospital, Nieuwegein, <sup>3</sup>Dept. of Gastroenterology and Hepatology, University Medical Center, Utrecht University, Utrecht, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>5</sup>Dept. of Gastroenterology, University Medical Center Groningen, Groningen, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Isala Ziekenhuis, Zwolle, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, University Medical Center, Rotterdam, <sup>8</sup>Dept. of Gastroenterology and Hepatology, University Medical Center Groningen, Groningen, The Netherlands.*
- 09.38 uur      Low rates of lymph node metastases and recurrence following radical endoscopic resection of T1b adenocarcinoma in Barrett's esophagus: Evidence from the PREFER study supports a strict endoscopic surveillance strategy with annual CT/PET.  
*V. Bos<sup>1</sup>, M.W. Chan<sup>1</sup>, W.B. Nagengast<sup>2</sup>, M.J. Bourke<sup>3</sup>, T. Beyna<sup>4</sup>, R. Bisschops<sup>5</sup>, A.D. Koch<sup>6</sup>, B.L.A.M. Weusten<sup>7, 8</sup>, A. Alkhalaf<sup>9</sup>, O. Pech<sup>10</sup>, S. Seewald<sup>11</sup>, R. Haidry<sup>12, 13</sup>, D. De Wulf<sup>14</sup>, C. Schlag<sup>15</sup>, E.J. Schoon<sup>16</sup>, M.H.M.G. Houben<sup>17</sup>, H. Messmann<sup>18</sup>, J. Westerhof<sup>19</sup>, M. Spaander<sup>6</sup>, G. De Hertogh<sup>20</sup>, E.A. Nieuwenhuis<sup>1</sup>, M. Jansen<sup>21</sup>, H. Neuhaus<sup>4</sup>, S.L. Meijer<sup>22</sup>, J.J. Bergman<sup>1</sup>, R.E. Pouw<sup>1, 8</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, location VUmc, Amsterdam, <sup>2</sup>Dept. of Gastroenterology, University Medical Center Groningen, Groningen, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Westmead Hospital, Sydney, Australië<sup>4</sup>Dept. of Gastroenterology and Hepatology, Evangelisches Krankenhaus Düsseldorf, Düsseldorf, Duitsland<sup>5</sup>Dept. of Gastroenterology and Hepatology, University Hospitals Leuven, Leuven, België<sup>6</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, University Medical Center, Rotterdam, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Sint Antonius Hospital, Nieuwegein, <sup>8</sup>Dept. of Gastroenterology and Hepatology, University Medical Center, Utrecht University, Utrecht, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Isala Ziekenhuis, Zwolle, <sup>10</sup>Dept. of Gastroenterology and Hepatology, St John of God Hospital, Regensburg, <sup>11</sup>Dept. of Gastroenterology and Hepatology, GastroZentrum, Klinik Hirslanden, Zurich, Zwitserland<sup>12</sup>Dept. of Gastroenterology and Hepatology, University College Hospital NHS Trust, London, Verenigd Koninkrijk<sup>13</sup>Dept. of Gastroenterology and Hepatology, Digestive Diseases and Surgery Institute, Cleveland Clinic London, London, Verenigd Koninkrijk<sup>14</sup>Dept. of Gastroenterology and Hepatology, AZ Delta Roeselare, Roeselare, België<sup>15</sup>Dept. of Gastroenterology and Hepatology, Klinikum rechts der Isar der, Technical University of Munich, II, München, Duitsland<sup>16</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Haga Ziekenhuis, Den Haag, <sup>18</sup>Dept. of Gastroenterology and Hepatology, University Hospital*

## Abstractsessie Sectie Gastrointestinale Endoscopie- vervolg

Woensdag 18 maart - Baroneizaal

*Augsburg, Augsburg, Duitsland, <sup>19</sup>Dept. of Gastroenterology and Hepatology, University Medical Center Groningen, Groningen, <sup>20</sup>Dept. of Pathology, University Hospitals Leuven, Leuven, België<sup>21</sup>Dept. of Pathology, University College Hospital NHS Trust, London, Verenigd Koninkrijk<sup>22</sup>Dept. of Pathology, Amsterdam UMC, location VUmc, Amsterdam, The Netherlands.*

09.46 uur Evaluation of a real-time Computer-aided Detection and Diagnosis system for Barrett's neoplasia during live endoscopic procedures: A multicenter prospective study  
*R.A.H. van Eijck van Heslinga<sup>1</sup>, F.C. Slooter<sup>1</sup>, M.R. Jong<sup>1</sup>, C.H.J. Kusters<sup>2</sup>, T.J.M. Jaspers<sup>2</sup>, T.G.W. Boers<sup>2</sup>, L.C. Duits<sup>1</sup>, R.E. Pouw<sup>3</sup>, B.L.A.M. Weusten<sup>3, 4</sup>, L. Alvarez Herrero<sup>4</sup>, A. Alkhalaf<sup>5</sup>, P.H.N. de With<sup>2</sup>, F. van der Sommen<sup>2</sup>, J.J. Bergman<sup>1</sup>, A.J. de Groof<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Electrical Engineering, Eindhoven University of Technology, Eindhoven, <sup>3</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>4</sup>Dept. of Gastroenterology and Hepatology, St. Antonius ziekenhuis, Nieuwegein, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, The Netherlands.*

09.54 uur 10-year trends in the proximal serrated polyp detection rate in a FIT-based colorectal q cancer screening program  
*N.S. van Roermund<sup>1</sup>, J.E.G. Ijspeert<sup>2</sup>, E. Dekker<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastrointestinal Oncology, Antoni van Leeuwenhoek, Amsterdam, The Netherlands.*

10.02 uur Comparing outcome of enteroscopy-assisted ERCP for benign hepaticojejunostomy stenosis following pancreatoduodenectomy versus Roux-en-Y reconstruction  
*A.M.M. Helmig<sup>1, 2</sup>, J.V. Veld<sup>2, 3</sup>, A. Aznou<sup>1, 2</sup>, M.G.H. Besselink<sup>4, 5</sup>, M. Bronswijk<sup>6, 7</sup>, M.A.J.M. Jacobs<sup>1, 2</sup>, M.C.B. Wielenga<sup>2, 3</sup>, B.M. Zonderhuis<sup>5, 8</sup>, Y.S. de Boer<sup>1, 2</sup>, R.P. Voermans<sup>2, 3</sup>, R.L.J. van Wanrooij<sup>1, 2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Vrije Universiteit, department of gastroenterology and hepatology, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Amsterdam Gastroenterology Endocrinology Metabolism, Cancer Center, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, AUMC, University of Amsterdam, Amsterdam, <sup>4</sup>Dept. of Gastrointestinal Surgery, Amsterdam UMC, University of Amsterdam, Amsterdam, <sup>5</sup>Dept. of Gastrointestinal Surgery, Amsterdam Gastroenterology Endocrinology Metabolism, Cancer Center, Amsterdam, <sup>6</sup>Dept. of Gastroenterology and Hepatology, University Hospitals Leuven, Leuven, België, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Imelda General Hospital, Bonheiden, België, <sup>8</sup>Dept. of Gastrointestinal Surgery, Amsterdam UMC, Vrije Universiteit, Amsterdam, The Netherlands.*

10.10 uur Three-prong asymmetric tip FNB needle to obtain tissue specimens of pancreatic ductal adenocarcinoma for personalized based chemotherapy  
*M.J.P. de Jong<sup>1</sup>, F. van Delft<sup>1</sup>, T.M. Bisseling<sup>1</sup>, N.G. Venneman<sup>2</sup>, T.F.M. Wijnands<sup>3</sup>, P. Appelhof<sup>4</sup>, Y. Hazewinkel<sup>4</sup>, C. Jansen<sup>5</sup>, E.M. van Geenen<sup>1</sup>, L.A.A. Brosens<sup>6</sup>, P.D. Siersema<sup>1, 7</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede,*

## Abstractsessie Sectie Gastrointestinale Endoscopie- vervolg

Woensdag 18 maart - Baroneizaal

<sup>3</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Tergooi Medisch Centrum, Hilversum, <sup>5</sup>Dept. of Pathology, LABPON, Hengelo, <sup>6</sup>Dept. of Pathology, Radboudumc, Nijmegen, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, The Netherlands.

10.18 uur EUS-guided Choledochoduodenostomy with EC-LAMS is a Cost-Effective Alternative to ERCP for Malignant Distal Biliary Obstruction

M.G. Oude Vrielink<sup>1</sup>, K.R. Beukema<sup>1</sup>, J.A.M. van der Palen<sup>2</sup>, N.G. Venneman<sup>3</sup>, <sup>1</sup>Dept. of Gastroenterology, Medisch Spectrum Twente, Enschede, <sup>2</sup>Dept. of Clinical Epidemiology, Medisch Spectrum Twente, Enschede, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, The Netherlands.

10.26 uur Combination of NSAIDs and prophylactic pancreatic duct stent is superior in preventing post-endoscopic retrograde cholangiopancreatography pancreatitis in patients with one or more unintentional pancreatic duct cannulations (FLUYT-2)

M.J.P. de Jong<sup>1</sup>, C.J. Sperna Weiland<sup>2</sup>, F. van Delft<sup>1</sup>, B.C. van Eijck<sup>3</sup>, T.R. de Wijkerslooth<sup>4</sup>, M. Hadithi<sup>5</sup>, R.C. Verdonk<sup>6</sup>, T. Verlaan<sup>7</sup>, A. Bhalla<sup>8</sup>, A.A. Vrij<sup>9</sup>, T.M. Bisseling<sup>1</sup>, N.D.E. Thierens<sup>1</sup>, A. Nagelhout<sup>10</sup>, T.C.J. Seerden<sup>11</sup>, R.C.H. Scheffer<sup>2</sup>, Y. Hazewinkel<sup>12</sup>, N.G. Venneman<sup>13</sup>, K. Boonstra<sup>1</sup>, I.L. Huibregtse<sup>4</sup>, P. Koehestanie<sup>14</sup>, A.M.C.J. Voorburg<sup>15</sup>, A.C. Poen<sup>16</sup>, M.J. Bruno<sup>17</sup>, E.M. van Geenen<sup>1</sup>, P.D. Siersema<sup>1, 17</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, 's-Hertogenbosch, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Spaarne Gasthuis, Hoofddorp, <sup>4</sup>Dept. of Gastrointestinal Oncology, Antoni van Leeuwenhoek Hospital, Amsterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Maastad Hospital, Rotterdam, <sup>6</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Hospital, Nieuwegein, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Hospital Gelderse Vallei, Ede, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Haga Hospital, The Hague, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Ziekenhuisgroep Twente, Almelo, <sup>10</sup>Dept. of Surgery, Radboudumc, Nijmegen, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Amphia Hospital, Breda, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Tergooi Medisch Centrum, Hilversum, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Bravis Hospital, Roosendaal, <sup>15</sup>Dept. of Gastroenterology and Hepatology, Diaconessenhuis, Utrecht, <sup>16</sup>Dept. of Gastroenterology and Hepatology, Isala, Zwolle, <sup>17</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, The Netherlands.

10.34 uur Endoscopic Ultrasound guided Hepatico-gastrostomy: a real-life cohort from the Netherlands

D.M. de Jong<sup>1</sup>, L.M.J.W. van Driel<sup>1</sup>, A. Inderson<sup>2</sup>, J.W. Poley<sup>3</sup>, R.L.J. van Wanrooij<sup>4, 5</sup>, R.P. Voermans<sup>4, 5</sup>, P. Didden<sup>6</sup>, T.R. de Wijkerslooth<sup>7</sup>, F. van Delft<sup>8</sup>, N.G. Venneman<sup>9</sup>, R.C. Verdonk<sup>10</sup>, J.P. van Nes<sup>1</sup>, M.J. Bruno<sup>1</sup>, W.J. Lammers<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Maastricht University Medical Center+, Maastricht, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Amsterdam University Medical

## Abstractsessie Sectie Gastrointestinale Endoscopie- vervolg

Woensdag 18 maart - Baroniezaal

*Center, Amsterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Cancer Center Amsterdam, Cancer Treatment and Quality of Life, Amsterdam, <sup>6</sup>Dept. of Gastroenterology and Hepatology, University Medical Center Utrecht, Utrecht, <sup>7</sup>Dept. of Gastrointestinal Oncology, Netherlands Cancer Institute, Antoni van Leeuwenhoek Hospital, Amsterdam, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Radboud University Medical Center, Nijmegen, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>10</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Hospital, Nieuwegein, The Netherlands.*

10.45 uur Gemodereerde postersessies en koffie-/theepauze in de expositiehal

## Pitches NVH Young Hepatologists Awards 2025 en ALV NVH

Woensdag 18 maart - Baroniezaal

Voorzitters: M.J. Coenraad

Sessie met drie klinische en drie basale pitches met de beste publicaties van eigen bodem 2025 t.b.v. de Young Hepatologist Awards.

Stemmen verloopt via de DDD congresapp.

### Pitches klinisch

- 13.30 uur Comparison of diagnostic accuracy and utility of non-invasive tests for clinically significant liver disease in a general population with metabolic dysfunction  
*Dr. L.A. van Kleef, Aios MDL, Ikazia Ziekenhuis, Rotterdam*
- 13.35 uur Rifaximin- $\alpha$  reduces healthcare utilization in patients with cirrhosis and recurrent episodes of hepatic encephalopathy  
*D.J. van Doorn, arts-onderzoeker, Amsterdam UMC*
- 13.40 uur Gut-to-bile transfer of microbially amidated minor bile acids in patients with hepatopancreatobiliary disorders  
*I.J. Schurink, student, Erasmus MC, Rotterdam*

### Pitches basaal

- 13.45 uur Hyperammonemia induces programmed liver cell death  
*Dr. A.J.C. Kerbert, Aios MDL, LUMC, Leiden*
- 13.50 uur Macrophage-augmented organoids recapitulate the complex pathophysiology of viral diseases and enable development of multitarget therapeutics  
*F. Wolters, PhD student, Amsterdam UMC*
- 13.55 uur **Stemmen en prijsuitreiking Young Hepatologist Award basaal en klinisch**
- 14.15 uur Algemene Ledenvergadering Nederlandse Vereniging voor Hepatologie

## Symposium Nederlandse Vereniging voor Hepatologie en NVGIC

Woensdag 18 maart - Baroniezaal

Voorzitter: M.J. Sonneveld

**Titel: Perioperatief management van de patiënt met gevorderde leverziekte**

15.00 uur Pre-operatieve risicostratificatie en de rol van TIPSS  
*Dr. R. Maan, MDL-arts, Erasmus MC, Rotterdam*

15.20 uur Chirurgische aspecten aan de hand van casuïstiek  
*Dr. J. Erdmann, chirurg, Amsterdam UMC*

15.40 uur Peri-operatieve optimalisatie: antibiotica, stollingscorrectie, vocht- en voedingsbeleid, ascitesdrainage  
*Dr. D.M. Hotho, MDL-arts, UMC Groningen*

16.00 uur Gemodereerde postersessies koffie-/theepauze in de expositiehal

## Symposium Sectie Inflammatoire Darmziekten en NVGIC

Woensdag 18 maart - Baroniezaal

Vorzitters: A.J. de Groof en A.C. de Vries

16.30 uur Gecompliceerd beloop ICR  
*F.J. Hoogenboom, chirurg, UMC Groningen*  
*Dr. R.J.L. Stuyt chirurg, Isala, Zwolle*

17.00 uur Post colectomie enteritis  
*F.J. Hoogenboom, chirurg, UMC Groningen*  
*L.F. Wymenga, MDL-arts, Sionsberg Netwerk Ziekenhuis, Dokkum*

17.30 uur Een fistelende pouch  
*Dr. O. van Ruler, chirurg, IJsselland Ziekenhuis, Capelle a/d IJssel*  
*R.L. Goetgebuer, MDL-arts, Amsterdam UMC*

18.00 uur Einde van deze sessie

## Abstractsessie Sectie Inflammatoire Darmziekten

Woensdag 18 maart - Parkzaal

Voorzitters: V.E.R. Asscher en M.M.C. Hirdes

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

- 13.30 uur      Het effect van leefstijlinterventie op het beloop van IBD: een overzicht van de literatuur  
*L.J.M. Koppelman, Wetenschappelijk Projectcoördinator, Nederlandse Donor Feces Bank*
- 13.50 uur      The effect of intensive physical exercise on fatigue and quality of life in patients with quiescent inflammatory bowel disease: a multicentre randomised controlled trial (ENERGIZE-IBD trial)  
*J.J.H. Hendriks<sup>1</sup>, D. Oomkens<sup>1</sup>, J.P.E. van Berlo<sup>1</sup>, L.W. van Erp<sup>1</sup>, W. Heida<sup>1</sup>, J.P. Wisse<sup>1</sup>, L.J.W. Kapelle<sup>2</sup>, C.S. Liem<sup>3</sup>, A.P.J. Kokshoorn<sup>4</sup>, T.E.H. Römken<sup>5</sup>, A.C.I.T.L. Tan<sup>6</sup>, W.A. van Dop<sup>7</sup>, M. Duijvestein<sup>7</sup>, P.J. Wahab<sup>1</sup>, M.J.M. Groenen<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Rijnstate, Arnhem, <sup>2</sup>Sport Medisch Centrum Papendal, Arnhem, <sup>3</sup>Formupgrade, Arnhem, <sup>4</sup>Sport Medisch Centrum Jeroen Bosch, 's-Hertogenbosch, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, 's-Hertogenbosch, <sup>6</sup>Dept. of Gastroenterology and Hepatology, CWZ, Nijmegen, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, The Netherlands.*
- 13.58 uur      Effectiveness of lifestyle care counters in gastrointestinal patients: a prospective observational cohort study  
*A. Jonkers<sup>1</sup>, D. Oomkens<sup>1</sup>, P. van Kraaij<sup>2</sup>, H. Cusveller<sup>3</sup>, H.R.W. Touw<sup>3</sup>, P.R. de Reuver<sup>4</sup>, M. Duijvestein<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of General practice and elderly care medicine, Radboudumc, Nijmegen, <sup>3</sup>Intensive Care, Radboudumc, Nijmegen, <sup>4</sup>Dept. of Surgery, Radboudumc, Nijmegen, The Netherlands.*
- 14.06 uur      Feasibility of a multimodal lifestyle intervention program for patients with ulcerative colitis  
*D. Oomkens<sup>1</sup>, W.A. Van Dop<sup>1</sup>, M. Severs<sup>1</sup>, S. Kooij<sup>2</sup>, R. Vehof<sup>2</sup>, M. Duijvestein<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>2</sup>Dept. of Dietetics, Radboudumc, Nijmegen, The Netherlands.*
- 14.14 uur      Patient-centred de-escalation of routine care for IBD in enduring remission: the PEACE survey  
*I. Geers<sup>1</sup>, W. van Dop<sup>1</sup>, D. de Jong<sup>1</sup>, M. van Workum<sup>1</sup>, M. Verweij<sup>1</sup>, M. Schlotter<sup>1</sup>, M. Duijvestein<sup>1</sup>, M. Severs<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Radboud UMC, Nijmegen, The Netherlands.*
- 14.22 uur      The societal burden of perianal fistulizing Crohn's disease: high costs driven by absenteeism in a prospective nationwide Dutch cohort study  
*M.M. Verweij<sup>1</sup>, M.T.J. Bak<sup>1</sup>, S.C.M. Heemskerk<sup>2</sup>, R.A.J. Post<sup>3</sup>, L.P.S. Stassen<sup>4</sup>, C.J. Buskens<sup>5</sup>, A. Pronk<sup>5</sup>, J. van der Bilt<sup>6</sup>, K.B. Gecse<sup>7</sup>, K.H.N. de Boer<sup>7</sup>, C.D.M. Witjes<sup>8,9</sup>, C. Fitzpatrick<sup>10</sup>, S. Breukink<sup>4</sup>, M. Pierik<sup>11</sup>, E. Verdaasdonk<sup>12</sup>, L. Nissen<sup>13</sup>, L. Gilissen<sup>14</sup>, J.*

## Abstractsessie Sectie Inflammatoire Darmziekten - vervolg

Woensdag 18 maart - Parkzaal

*Bloemen<sup>15</sup>, R. West<sup>16</sup>, R. Kortekaas<sup>17</sup>, W. Mares<sup>18</sup>, G. de Jong<sup>19</sup>, S. Janssen<sup>20</sup>, B. Bloemendaal<sup>21</sup>, M. Sikkema<sup>22</sup>, D. Zimmerman<sup>23</sup>, K.C.M.J. Peeters<sup>24</sup>, A.E. van der Meulen<sup>25</sup>, F. van Schaik<sup>26</sup>, M.C. Richir<sup>27</sup>, K. van Dongen<sup>28</sup>, M. Duijvenstein<sup>29</sup>, F.J. Hoogenboom<sup>30</sup>, M.C. Visschedijk<sup>31</sup>, I. Molendijk<sup>1</sup>, O. van Ruler<sup>8,9</sup>, A.C. de Vries<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus Medical Center, Rotterdam, <sup>2</sup>Dept. of Public Health, Erasmus Medical Center, Rotterdam, <sup>3</sup>Dept. of Biostatistics, Erasmus Medical Center, Rotterdam, <sup>4</sup>Dept. of Surgery, Maastricht Universitair Medisch Centrum, Maastricht, <sup>5</sup>Dept. of Surgery, Amsterdam University Medical Center, Amsterdam, <sup>6</sup>Dept. of Surgery, Flevo ziekenhuis, Almere, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Amsterdam University Medical Center, Amsterdam, <sup>8</sup>Dept. of Surgery, IJsselland ziekenhuis, Capelle a/d IJssel, <sup>9</sup>Dept. of Surgery, Erasmus Medical Center, Rotterdam, <sup>10</sup>Dept. of Gastroenterology and Hepatology, IJsselland ziekenhuis, Capelle a/d IJssel, <sup>11</sup>Dept. of Gastroenterology and Hepatology, Maastricht Universitair Medisch Centrum, Maastricht, <sup>12</sup>Dept. of Surgery, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Catharina ziekenhuis, Eindhoven, <sup>15</sup>Dept. of Surgery, Catharina ziekenhuis, Eindhoven, <sup>16</sup>Dept. of Gastroenterology and Hepatology, St Franciscus Gasthuis, Rotterdam, <sup>17</sup>Dept. of Surgery, St Franciscus Gasthuis, Rotterdam, <sup>18</sup>Dept. of Gastroenterology and Hepatology, Ziekenhuis Gelderse Vallei, Ede, <sup>19</sup>Dept. of Surgery, Ziekenhuis Gelderse Vallei, Ede, <sup>20</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>21</sup>Dept. of Surgery, Reinier de Graaf Gasthuis, Delft, <sup>22</sup>Dept. of Gastroenterology and Hepatology, Elizabeth TweeSteden Ziekenhuis, Tilburg, <sup>23</sup>Dept. of Surgery, Elizabeth TweeSteden Ziekenhuis, Tilburg, <sup>24</sup>Dept. of Surgery, Leiden Universitair Medisch Centrum, Leiden, <sup>25</sup>Dept. of Gastroenterology and Hepatology, Leiden Universitair Medisch Centrum, Leiden, <sup>26</sup>Dept. of Gastroenterology and Hepatology, University Medical Center Utrecht, Utrecht, <sup>27</sup>Dept. of Surgery, University Medical Center Utrecht, Utrecht, <sup>28</sup>Dept. of Surgery, Maasziekenhuis Pantein, Boxmeer, <sup>29</sup>Dept. of Gastroenterology and Hepatology, Radboud Universitair Medisch Centrum, Nijmegen, <sup>30</sup>Dept. of Surgery, Universitair Medisch Centrum Groningen, Groningen, <sup>31</sup>Dept. of Gastroenterology and Hepatology, Universitair Medisch Centrum Groningen, Groningen, The Netherlands.*

14.30 uur      Einde van deze sessie

## Abstractsessie Sectie Inflammatoire Darmziekten

Woensdag 18 maart - Parkzaal

Voorzitters: J.F. Brandse en N.G.M. Rossen

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

14.40 uur Serum concentrations of infliximab are comparable with and without immunosuppression during subcutaneous infliximab induction treatment for Crohn's disease

*S.I. Anjie<sup>1</sup>, J.M. Jansen<sup>2</sup>, B. Jharap<sup>3</sup>, W.G. Mares<sup>4</sup>, M. Duijvestein<sup>5</sup>, P.W. Maljaars<sup>6</sup>, T. Romkens<sup>7</sup>, B. Oldenburg<sup>8</sup>, I. Boukema<sup>1</sup>, R.J.B.M. Janssen<sup>1</sup>, L. Oldenburg<sup>1</sup>, J.M.G. van Oostrom<sup>1</sup>, I. van Welsen<sup>1</sup>, E. Clasquin<sup>1</sup>, G.R.A.M. D'Haens<sup>1</sup>, K.B. Gecse<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Meander MC, Amersfoort, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Ziekenhuis Gelderse Vallei, Ede, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, <sup>6</sup>Dept. of Gastroenterology and Hepatology, LUMC, Leiden, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, Den Bosch, <sup>8</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, The Netherlands.*

14.48 uur Switching standard dosed intravenous to subcutaneous infliximab leads to similar drug exposure independent of comedication with thiopurines (SHUFFLE study)

*L.M.J. van de Ven-van Dinter<sup>1</sup>, M. Romberg-Camps<sup>2</sup>, D.R. Wong<sup>1</sup>, A.A. van Bodegraven<sup>2</sup>, N.W. Boone<sup>1</sup>, <sup>1</sup>Dept. of Clinical Pharmacy and Toxicology, Zuyderland Medical Centre, Heerlen/Sittard-Geleen, <sup>2</sup>Dept. of Gastroenterology, Zuyderland Medical Centre, Heerlen/Sittard-Geleen, The Netherlands.*

14.56 uur Sustained disease control and patient satisfaction with subcutaneous infliximab in IBD: a dutch multicentre study in clinical practice

*A. Aliu<sup>1, 2</sup>, L.M. Lourens<sup>3</sup>, Z Mujagić<sup>1, 2</sup>, L Verleye<sup>1, 2</sup>, A.E. Van der Meulen- de Jong<sup>3</sup>, M.J. Pierik<sup>1, 2</sup>, L.J.J. Derijks<sup>4, 5</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Maastricht University Medical Center+, MAASTRICHT, <sup>2</sup>Dept. of Gastroenterology and Hepatology, NUTRIM Institute of Nutrition and Translational Research in Metabolism, Maastricht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Leiden University Medical Centre, LEIDEN, <sup>4</sup>Dept. of Clinical Pharmacy and Toxicology, Máxima Medical Centre, Veldhoven, <sup>5</sup>Dept. of Clinical Pharmacy and Toxicology, NUTRIM Institute of Nutrition and Translational Research in Metabolism, Maastricht, The Netherlands.*

15.04 uur Crohn's disease patients respond better to vedolizumab if biologic-naïve

*S.L. Dijkstra<sup>1</sup>, H.P. Schultheiss<sup>1</sup>, W. Mares<sup>2</sup>, B. Jharap<sup>3</sup>, C.S. Horjus Talabur Horje<sup>4</sup>, M.W.M.D. Lutgens<sup>5</sup>, F. van Wijk<sup>1</sup>, H.H. Fidder<sup>1</sup>, B. Oldenburg<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Ziekenhuis Gelderse Vallei, Ede, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Meander Medisch Centrum, Amersfoort, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Elizabeth Tweesteden Ziekenhuis, Tilburg, The Netherlands.*

## Abstractsessie Sectie Inflammatoire Darmziekten - vervolg

Woensdag 18 maart - Parkzaal

- 15.12 uur      Keratinization activity in perianal Crohn's fistulas is associated to long term prognosis – potential as an objective stratification marker  
*M.A. Becker<sup>1</sup>, P.J. Koelink<sup>2</sup>, G.R. D'Haens<sup>1</sup>, W.A. Bemelman<sup>3</sup>, C.J. Buskens<sup>3</sup>, M.E. Wildenberg<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, <sup>2</sup>Tytgat Institute for Liver and Intestinal Research, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Surgery, Amsterdam UMC, Amsterdam, The Netherlands.*
- 15.20 uur      Enhanced fecal protease activity in inflammatory bowel diseases is driven by human proteases and is effectively inhibited by protease inhibitors isolated from potato  
*L.C.M. Herreman<sup>1, 2</sup>, R. Gacesa<sup>1</sup>, P. Pibiri<sup>1</sup>, B.H. Jansen<sup>1</sup>, P. Horvatovich<sup>3</sup>, J. Vandooren<sup>4</sup>, M.C. Laus<sup>5</sup>, G. Dijkstra<sup>1</sup>, K.N. Faber<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, UMCG, Groningen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Avebe Innovation Center, Groningen, <sup>3</sup>Dept. of Analytical Sciences, University of Groningen, Groningen, <sup>4</sup>Dept. of Microbiology and Immunology, KU Leuven Campus Kulak, Kortrijk, België<sup>5</sup>, Avebe Innovation Center, Groningen, The Netherlands.  
\*Presentation in English*
- 15.28 uur      The Immunological Response to Gut-Selective Anti- $\alpha 4\beta 7$  Integrin Therapy in Anti-TNF–Naïve and –Exposed Crohn's Disease Patients Using Flow Cytometry  
*A.S. Bakker<sup>1</sup>, T.E.S. Kusters<sup>2</sup>, S.L. Dijkstra<sup>1</sup>, F. Van Wijk<sup>2</sup>, B. Oldenburg<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Utrecht University Medical Center, Utrecht, <sup>2</sup>Centre for Translational Immunology, Utrecht University Medical Center, Utrecht, The Netherlands.*
- 15.36 uur      Healthy co-twins of Crohn's disease (CD) patients display CD-like peripheral CD4<sup>+</sup> T cell profiles  
*T.E.S. Kusters<sup>1</sup>, E.S. Saager<sup>1</sup>, E.C. Brand<sup>2</sup>, T Van den Broek<sup>1</sup>, B Oldenburg<sup>2</sup>, A Yermanos<sup>3, 4, 5</sup>, F Van Wijk<sup>1</sup>, A.S. Bakker<sup>2</sup>, <sup>1</sup>Centre for Translational Immunology, UMC Utrecht, Utrecht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, <sup>3</sup>UMC Utrecht, Utrecht, The Netherlands, <sup>4</sup>ETH Zurich, Basel, Zwitserland, <sup>5</sup>Botnar Institute of Immune Engineering, Basel, Zwitserland.*
- 15.44 uur      Einde van deze sessie
- 16.00 uur      Gemodereerde postersessies koffie-/theepauze in de expositiehal

## Postersessie I

Woensdag 18 maart - Posterstage

Moderator: R.P. Voermans

- 10.50 uur EUS-guided radiofrequency ablation in pancreatic neoplasms, a single-center observational study  
*T.R. de Wijkerslooth<sup>1</sup>, W.H.M. Verbeek<sup>1</sup>, M.W.J. Versleijen<sup>2</sup>, B. Westerink<sup>3</sup>, J.G. van den Berg<sup>4</sup>, J.M. van Dieren<sup>1</sup>, M.E.T. Tesselaar<sup>1</sup>,<sup>1</sup>Dept. of Gastrointestinal Oncology, Netherlands Cancer Institute, Antoni van Leeuwenhoek, Amsterdam, <sup>2</sup>Dept. of Radiology and Nuclear Medicine, Netherlands Cancer Institute, Antoni van Leeuwenhoek, Amsterdam, <sup>3</sup>Dept. of Radiology, Netherlands Cancer Institute, Antoni van Leeuwenhoek, Amsterdam, <sup>4</sup>Dept. of Pathology, Netherlands Cancer Institute, Antoni van Leeuwenhoek, Amsterdam, The Netherlands.*
- 10.55 uur A comparison of safety and efficacy of endoscopic ultrasound-guided radiofrequency ablation versus surgical resection in patients with sporadic pancreatic insulinoma: an observational cohort study in the Netherlands  
*L. Ye<sup>1</sup>, V.E. de Meijer<sup>2</sup>, M. Stommel<sup>3</sup>, S.A.W. Bouwense<sup>4</sup>, H.C. van Santvoort<sup>5</sup>, R. Haen<sup>6</sup>, W.J. Lammers<sup>7</sup>, J.W. Poley<sup>8</sup>, J. Hofland<sup>9</sup>, L. Latten - Jansen<sup>10</sup>, M.G.H. Besselink<sup>11</sup>, E.J.M. Nieveen van Dijkum<sup>11</sup>, A.F. Engelsman<sup>11</sup>, R.L.J. van Wanrooij<sup>12</sup>, K.M.A. Dreijerink<sup>13</sup>, R.P. Voermans<sup>12</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC/University of Amsterdam, <sup>2</sup>Dept. of Gastrointestinal Surgery, UMC Groningen, Groningen, <sup>3</sup>Dept. of Gastrointestinal Surgery, Radboud UMC, Nijmegen, <sup>4</sup>Dept. of Gastrointestinal Surgery, Maastricht UMC, Maastricht, <sup>5</sup>Dept. of Gastrointestinal Surgery, Utrecht Regional Academic Cancer Center, Utrecht, <sup>6</sup>Dept. of Gastrointestinal Surgery, Erasmus MC, Rotterdam, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>8</sup>Dept. of Gastroenterology and Hepatology, Maastricht UMC, Maastricht, <sup>9</sup>Dept. of Internal Medicine, Erasmus MC, Rotterdam, <sup>10</sup>Dept. of Gastrointestinal Oncology, Maastricht UMC, Maastricht, <sup>11</sup>Dept. of Gastrointestinal Surgery, Amsterdam UMC, Amsterdam, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>13</sup>Dept. of Internal Medicine, Amsterdam UMC, Amsterdam, The Netherlands.*
- 11.00 uur Predictors of neoplastic recurrence after successful endoscopic eradication therapy of Barrett's neoplasia based on long-term follow-up results from the Dutch Barrett's registry.  
*V. Bos<sup>1</sup>, R.E. Pouw<sup>1,2</sup>, B.L.A.M. Weusten<sup>2,3</sup>, A Alvarez Herrero<sup>3</sup>, E.J. Schoon<sup>4</sup>, E. Curvers<sup>4</sup>, W.B. Nagengast<sup>5</sup>, A. Alkhalaf<sup>6</sup>, A.D. Koch<sup>7</sup>, P.J.F. de Jonge<sup>7</sup>, J. Westerhof<sup>8</sup>, M.H.M.G. Houben<sup>9</sup>, J.J. Bergman<sup>1</sup>, S.N. van Munster<sup>1</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, location VUmc, Amsterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, University Medical Center, Utrecht University, Utrecht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Sint Antonius Hospital, Nieuwegein, <sup>4</sup>Dept. of Gastroenterology and Hepatology, Catharina Ziekenhuis, Eindhoven, <sup>5</sup>Dept. of Gastroenterology, University Medical Center Groningen, Groningen, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Isala Ziekenhuis, Zwolle, <sup>7</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, University Medical Center, Rotterdam, <sup>8</sup>Dept. of Gastroenterology and Hepatology, University Medical Center Groningen, Groningen, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Haga Ziekenhuis, Den Haag, The Netherlands.*

## Postersessie I - vervolg

Woensdag 18 maart - Posterstage

- 11.05 uur      Cryoballoon ablation following non-curative endoscopic therapy or a recurrence of Barrett-related dysplasia or esophageal adenocarcinoma in the resection scar: a case series  
*L.S. Boer<sup>1, 2</sup>, S.N. van Munster<sup>2</sup>, R.E. Pouw<sup>2</sup>, B.L.A.M. Weusten<sup>1, 2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Hospital, Nieuwegein, <sup>2</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, The Netherlands.*
- 11.10 uur      Let it snow: a novel hemostatic powder for prevention of delayed bleeding after endoscopic mucosal resection of duodenal adenomas  
*A.D.I. Maan<sup>1</sup>, D. Gerritsen<sup>1</sup>, G. Kemper<sup>2</sup>, V. Rijckborst<sup>1</sup>, A.D. Koch<sup>1</sup>, P.D. Siersema<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC Cancer Institute, University Medical Center Rotterdam, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Radboud University Medical Center, Nijmegen, The Netherlands.*

## Postersessie II

Woensdag 18 maart - Posterstage

Moderator: volgt

- 12.45 uur Distinct production of advanced glycation endproducts by the microbiome of Crohn's disease patients and healthy controls  
*H.A. van der Hout<sup>1</sup>, M. Kolovou<sup>1</sup>, C. Driessen<sup>2</sup>, D.M.A.E. Jonkers<sup>3</sup>, J. Penders<sup>2</sup>, F.J. van Schooten<sup>1</sup>, D.T.H.M. Sijm<sup>1</sup>, M.F. Vrolijk<sup>1</sup>,<sup>1</sup>Pharmacology and Toxicology, Maastricht University, Maastricht, <sup>2</sup>Dept. of Medical Microbiology, Maastricht University Medical Center+, Maastricht, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Maastricht University, Maastricht, The Netherlands.*
- 12.50 uur Overweight, unemployment and work absence are associated with reduced quality of life in patients with perianal fistulizing Crohn's disease  
*M.M. Verweij<sup>1</sup>, M.T.J. Bak<sup>1</sup>, S.C.M. Heemskerck<sup>2</sup>, I. Molendijk<sup>1</sup>, A.C. de Vries<sup>1</sup>, O. van Ruler<sup>3, 4</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus Medical Center, Rotterdam, <sup>2</sup>Dept. of Public Health, Erasmus Medical Center, Rotterdam, <sup>3</sup>Dept. of Surgery, IJsselland ziekenhuis, Capelle a/d IJssel, <sup>4</sup>Dept. of Surgery, Erasmus Medical Center, Rotterdam, The Netherlands.*
- 12.55 uur Epithelial barrier integrity and healing are compromised by luminal content of inflammatory bowel disease patients and effectively restored by protease inhibitors from potato  
*L.C.M. Herreman<sup>1, 2</sup>, D. Parada Venegas<sup>1</sup>, B.H. Jansen<sup>1</sup>, T. Blokzijl<sup>1</sup>, G. Dijkstra<sup>1</sup>, K.N. Faber<sup>1</sup>, M.C. Laus<sup>3</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, UMCG, Groningen, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Avebe Innovation Center, Groningen, <sup>3</sup>Avebe Innovation Center, Groningen, The Netherlands.*
- 13.00 uur Clinical characteristics of twins with Inflammatory Bowel Disease: 7-year follow-up  
*S.L. Dijkstra<sup>1</sup>, E.C. Brand<sup>1</sup>, F. van Wijk<sup>1</sup>, B. Oldenburg<sup>1</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, The Netherlands.*
- 13.05 uur Proteomic Discordance with Clinical and Biochemical Response Filgotinib in Ulcerative Colitis Suggests Residual Inflammatory Signals  
*J.M. Louwers<sup>1</sup>, S.H.C. Veltkamp<sup>2</sup>, P.W. Voorneveld<sup>2</sup>, M. Duijvestein<sup>3</sup>, A.E. van der Meulen-de Jong<sup>2</sup>, F. van Wijk<sup>4</sup>, B. Oldenburg<sup>1</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, Utrecht University Medical Center, Utrecht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Radboud University Medical Center, Nijmegen, <sup>4</sup>Centre for Translational Immunology, Utrecht University Medical Center, Utrecht, The Netherlands.*

## Postersessie III

Woensdag 18 maart - Posterstage

Moderator: volgt

- 16.02 uur      Secretin therapy during ex-situ normothermic liver machine perfusion: A critical factor for restoration of bile duct physiology and the protective “bicarbonate umbrella”  
*R. Broere<sup>1</sup>, S.H. Luijmes<sup>1</sup>, P.C. Groen<sup>1</sup>, J. Willemse<sup>1</sup>, I.E.M. de Jong<sup>2</sup>, M.J.C. Bijvelds<sup>3</sup>, C. den Hoed<sup>4</sup>, S. Darwish Murad<sup>4</sup>, W.G. Polak<sup>1</sup>, L.J.W. van der Laan<sup>3</sup>, J. de Jonge<sup>1</sup>, R.J. Porte<sup>1</sup>, <sup>1</sup>Dept. of Surgery, Erasmus MC Transplant Institute, Rotterdam, <sup>2</sup>Dept. of Pathology, Erasmus MC Transplant Institute, Rotterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Erasmus Medical Center, Rotterdam, <sup>4</sup>Dept. of Hepatology, Erasmus MC Transplant Institute, Rotterdam, The Netherlands.*
- 16.07 uur      Quest for determinants of successful outcome of video-assisted retroperitoneal coeliac artery release in patients with median arcuate ligament syndrome. Retrospective single-centre study based on prospectively collected data.  
*E. Koops<sup>1</sup>, D. Harmankaya<sup>2</sup>, M. Brusse-Keizer<sup>3</sup>, M.J. Bruno<sup>2</sup>, D. Leemreis-van Noord<sup>2</sup>, J.J. Kolkman<sup>1</sup>, R.H. Geelkerken<sup>4</sup>, F.M. Metz<sup>4</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, <sup>3</sup>Dept. of Epidemiology, Medisch Spectrum Twente, Enschede, <sup>4</sup>Dept. of Surgery, Medisch Spectrum Twente, Enschede, The Netherlands.*
- 16.12 uur      Changes in body composition after endovascular stenting in patients with chronic mesenteric ischaemia  
*E.K. Bocharewicz<sup>1, 2</sup>, K.P. Pieterman<sup>3</sup>, K. Lenaerts<sup>4</sup>, F. Toxopeus<sup>5</sup>, J.L. de Bruin<sup>6</sup>, P.D. Siersema<sup>1</sup>, M.J. Bruno<sup>1</sup>, D. van Noord<sup>1, 2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Erasmus Medical Centre, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Franciscus Hospital, Rotterdam, <sup>3</sup>Dept. of Radiology and Nuclear Medicine, Erasmus Medical Centre, Rotterdam, <sup>4</sup>Dept. of Surgery, Maastricht University Medical Center, Maastricht, <sup>5</sup>Dept. of Gastroenterology and Hepatology, University of Technology, Leiden, <sup>6</sup>Dept. of Surgery, Erasmus Medical Centre, Rotterdam, The Netherlands.*
- 16.17 uur      The combined therapeutic potency of class I/IV HDAC inhibitor Mocetinostat and oncolytic reovirus in pancreatic cancer models  
*M.L. Goossen<sup>1,2</sup>, N. Dam<sup>1,2</sup>, T.J. Harryvan<sup>2</sup>, P. Kinderman<sup>2</sup>, B.W. van Os<sup>2</sup>, E.S.M. de Jonge-Muller<sup>2</sup>, D.J.M. van den Wollenberg<sup>1</sup>, L.J.A.C. Hawinkels<sup>2</sup>, V. Kemp<sup>1</sup>, <sup>1</sup>Department of Cell & Chemical Biology, LUMC, Leiden, <sup>2</sup>Department of Gastroenterology & Hepatology, LUMC, Leiden*
- 16.22 uur      Does patient empowerment influence the process of shared decision making in IPMN patients  
*M.M. Garvelink<sup>1,2</sup>, P.J. van der Schaar<sup>3</sup>, <sup>1</sup>Dept. of value improvement, St Antonius ziekenhuis, Utrecht-Nieuwegein, <sup>2</sup>IQ Health, Radboud UMC, Nijmegen, <sup>3</sup>Dept. of Gastroenterology, Dep't of gastroenterology, St. Antonius Ziekenhuis, Utrecht-Nieuwegein, The Netherlands.*

## Ochtendprogramma V&VN MDL algemeen

Donderdag 19 maart - Brabantzaal

Voorzitters: M. van der Ende - van Loon

08.45 uur Welkom door voorzitter  
*M. van der Ende - van Loon, voorzitter V&VN MDL, Catharina Ziekenhuis, Eindhoven*

09.00 uur Rebels verpleegkundig leiderschap  
*E. de Kok, verpleegkundige en adviseur V&VN, UMC Utrecht*

09.45 uur Koffiepauze in de expositiehal

## Vervolg ochtendprogramma V&VN MDL algemeen

Donderdag 19 maart - Brabantzaal

Voorzitters: M. van der Ende - van Loon

10.15 uur Interculturele zorg

*H. Bouyazdouzen, geestelijk verzorger, Zaans Medisch Centrum, Zaandam*

10.45 uur Kwaliteit projecten en abstracts verpleegkundig onderzoek

*T.A. Korpershoek, verpleegkundig specialist, Albert Schweitzer Ziekenhuis, Dordrecht*

11.30 uur Lancering beroepsprofiel MDL-kliniek, kennismaken met nieuwe voorzitter

*J. Peters, verpleegkundig specialist, Bravis Ziekenhuis, Bergen op Zoom*

11.45 uur Ledenvergadering

12.00 uur Lunchpauze in de expositiehal

## Top Abstracts

Donderdag 19 maart - Brabantzaal

Voorzitters: A.E. van der Meulen en P.P.J. van der Veek

*Voordrachten in het Nederlands, 5 minuten presentatie en 3 minuten discussie*

13.00 uur Adenoma detection rate is associated with risk of late-onset post-colonoscopy colorectal cancer

*N.S. van Roermund<sup>1</sup>, J.E.G. Ijspeert<sup>2</sup>, E. Dekker<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam, UMC, Amsterdam, <sup>2</sup>Dept. of Gastrointestinal Oncology, Antoni van Leeuwenhoek, Amsterdam*

13.08 uur Splenic hilum nodal involvement in left-sided pancreatectomy for pancreatic ductal adenocarcinoma (SPLENDID): international multicenter single-arm trial to assess the oncological safety of spleen preservation

*C.E. Baggerman van Houweninge<sup>1, 2</sup>, C.L. Bruna<sup>1, 2</sup>, Y. Miao<sup>3</sup>, H Yan<sup>3</sup>, M. Blomhoff Holm<sup>4</sup>, O. Busch<sup>1, 2</sup>, S Delis<sup>5</sup>, A Fariña Sarasqueta<sup>6</sup>, D Kleive<sup>7</sup>, G Lionetto<sup>8</sup>, G Malleo<sup>8</sup>, T Tholfson<sup>9</sup>, B Bonsing<sup>10</sup>, S Boyd<sup>11</sup>, S.O. Bratlie<sup>12</sup>, G Ferrari<sup>13</sup>, S Grandi<sup>14</sup>, T Hackert<sup>15</sup>, A Iben-Khayat<sup>16</sup>, W Kwon<sup>17</sup>, I Lee<sup>17</sup>, G Marchegiani<sup>14</sup>, M Mazzola<sup>13</sup>, S Mieog<sup>10</sup>, E Moe<sup>12</sup>, J Navez<sup>18</sup>, A Nießen<sup>15</sup>, I Ortiz Tarin<sup>19</sup>, O Saint-Marc<sup>16</sup>, H Seppänen<sup>20</sup>, L Verset<sup>18</sup>, P Antonakis<sup>21</sup>, S Bouwense<sup>22</sup>, S Festen<sup>23</sup>, A Gumbs<sup>24</sup>, N Ikenaga<sup>25</sup>, J Wei<sup>26</sup>, S Dokmak<sup>27</sup>, M Abu Hilal<sup>28</sup>, M.G. Besselink<sup>1, 2</sup>, J. Van Hilst<sup>1, 2, 23</sup>, <sup>1</sup>Dept. of Surgery, Amsterdam UMC, <sup>2</sup>Dept. of Surgery, Cancer Center, Amsterdam, <sup>3</sup>Dept. of Surgery, BenQ Pancreatic, Disease Hospital Affiliated to Nanjing Medical University, Nanjing, China, <sup>4</sup>Dept. of Pathology, Oslo University Hospital, Oslo, Noorwegen, <sup>5</sup>Dept. of Surgery, Konstantopouleio General Hospital, Athens, Griekenland, <sup>6</sup>Dept. of Pathology, Amsterdam UMC, <sup>7</sup>Dept. of Surgery, Oslo University Hospital, Oslo, Noorwegen, <sup>8</sup>Dept. of Surgery, University of Verona, Verona, Italië, <sup>9</sup>Dept. of Surgery, Rikshospitalet, Oslo, Noorwegen, <sup>10</sup>Dept. of Surgery, LUMC, Leiden, <sup>11</sup>Dept. of Pathology, University of Helsinki and Helsinki University Hospital, Helsinki, Finland, <sup>12</sup>Dept. of Surgery, Sahlgrenska University Hospital, Gothenburg, Zweden, <sup>13</sup>Dept. of Surgery, ASST Grande Ospedale Metropolitano Niguarda, Milan, Italië, <sup>14</sup>Dept. of Surgery, University of Padua, Padova, Italië, <sup>15</sup>Dept. of Surgery, University Medical Center Hamburg-Eppendorf, Hamburg, Duitsland, <sup>16</sup>Dept. of Surgery, University Hospital of Orléans, Orleans, Frankrijk, <sup>17</sup>Dept. of Surgery, Seoul National University Hospital, Seoul, Zuid-Korea, <sup>18</sup>Dept. of Surgery, Hôpital Universitaire de Bruxelles, Brussels, België, <sup>19</sup>Dept. of Surgery, Hospital Universitario Doctor Peset, Valencia, Spanje, <sup>20</sup>Dept. of Surgery, University of Helsinki and Helsinki University Hospital, Helsinki, Finland, <sup>21</sup>Dept. of Surgery, Aretaieion Hospital, Athens, Griekenland, <sup>22</sup>Dept. of Surgery, Maastricht University Medical Center+, Maastricht, <sup>23</sup>Dept. of Surgery, OLVG Hospital, Amsterdam, <sup>24</sup>Dept. of Surgery, Hospital Antoine Beclère, Clamart, Frankrijk, <sup>25</sup>Dept. of Surgery, Kyushu University, Fukuoka, Japan, <sup>26</sup>Dept. of Surgery, Nanjing Medical University, Nanjing, China, <sup>27</sup>Dept. of Surgery, Beaujon Hospital, Clichy, Frankrijk, <sup>28</sup>Dept. of Surgery, University of Jordan, Amman, Jordanië*

## Top Abstracts - vervolg

Donderdag 19 maart - Brabantzaal

- 13.16 uur      Additional diagnostic yield of re-evaluating regionally performed high-resolution manometry studies by an expert center  
*N. Warringa<sup>1,2</sup>, G.M.C Masclee<sup>1,2</sup>, A.J. Bredenoord<sup>1,2</sup>, <sup>1</sup>Dept. of Gastroenterology & Hepatology, Amsterdam UMC, <sup>2</sup>Dept. of Gastroenterology, Endocrinology & Metabolism, Amsterdam, The Netherlands.*
- 13.24 uur      MDL Fonds subsidie
- Predicting disease flares in inflammatory bowel disease through non-invasive gut epithelial RNA profiling in fecal samples  
*Prof. dr. R.K. Weersma, MDL-arts, UMC Groningen  
Dr. M. Klaassen, PhD student, UMC Groningen*
- 13.34 uur      Uitreiking Gastrointestinale Proefschriftprijs inclusief voordracht prijswinnaar
- 13.50 uur      Uitreiking inspiratorprijs
- 14.00 uur      Uitreiking Gastrostartsubsidies
- 14.15 uur      Einde van deze sessie

## Symposium Sectie Oncologie en Voeding

Donderdag 19 maart - Brabantzaal

Vorzitters: R.W.M. Schrauwen en D.S.V.M. Clement

14.15 uur Nieuwe richtlijnen in de palliatieve zorg: wat moet de MDL-arts weten

*Dr. F. de Vos, internist-oncoloog, UMC Utrecht*

*H. ten Have, diëtist, Careyn, Utrecht*

14.35 uur EUS geleide gastro-enterostomie in de palliatieve fase

*Prof. dr. F.P. Vleggaar, MDL-arts, UMC Utrecht*

14.55 uur TPV in de palliatieve fase ja of nee?

*Dr. I.A.M. Gisbertz, MDL-arts, Ziekenhuis Bernhoven, Uden*

*Dr. D.S.V.M. Clement, MDL-arts, MUMC+, Maastricht*

15.15 uur Einde van deze sessie

## Symposium Sectie Gastrointestinale Endoscopie

Donderdag 19 maart – Auditorium

Voorzitters: J. Westerhof en R. Voermans

**Titel:** Symposium Endoscopie Therapeutische endoscopische baanbrekende innovaties van de afgelopen 10 jaar met Nederlands wetenschapstintje

08.30 uur Lumen-apposing metal stents (LAMS), de nieuwe basis van therapeutische EUS?  
*Prof. dr. F.P. Vleggaar, MDL-arts, UMC Utrecht*

08.50 uur 10 jaar colorectale eFTR: waar staan we nu?  
*Dr. B.A.J. Bastiaansen, MDL-arts, Amsterdam UMC*

09.10 uur Vacuumtherapie voor slokdarmlekkages, op weg naar de gouden standaard?  
*Dr. W.L. Curvers MDL-arts, Catharina Ziekenhuis, Eindhoven*

09.45 uur Einde van deze sessie

## Symposium MDL Fonds

Donderdag 19 maart - Auditorium

Vorzitters: M. Croon

**Titel: Gerichte zorg bij colorectaal carcinoom: wie screenen, wie vervolgen en wie behandelen?**

- 10.15 uur      Is het tijd voor verandering? Darmkankerscreening op maat  
*Dr. E. Toes-Zoutendijk, epidemioloog, Erasmus UMC*
- 10.45 uur      MSH6 en kankerrisico: wat betekenen nieuwe inzichten voor surveillance?  
Geactualiseerde Nederlandse richtlijnen voor colorectaal carcinoom en het Lynch-  
syndroom  
*Dr. M. Nielsen, klinisch geneticus, LUMC, Leiden*
- 11.15 uur      Pathologie en AI gecombineerd: betere risicostratificatie en inzicht in baat van  
chemotherapie  
*M. Bakker, PhD student, UMC Utrecht*
- 11.45 uur      Einde van deze sessie

## Symposium Crohn en Colitis

Donderdag 19 maart – Auditorium

Vorzitters: M Scherpenzeel

**Titel: Samen vooruit in IBD: Patiëntgerichte keuzes voor morgen**

14.15 uur Co-creatie van betekenisvolle digitale biomarkers voor flare management in IBD  
*E. Godecharle, arts-onderzoeker, Maastricht University, Maastricht*

14.35 uur De nieuwe surveillance richtlijn Aanpassing van de richtlijn surveillance scopie en het patiëntenperspectief  
*Prof. dr. B. Oldenburg, MDL-arts, UMC Utrecht*

14.55 uur Less is more: bij langdurige stabiele remissie uitgaan van gezondheid in plaats van ziekte? Resultaten van de peace studie  
*Dr. M Severs, MDL-arts, Radboud UMC, Nijmegen*

15.15 uur Einde van deze sessie

## Abstracts/battle Sectie Experimentele Gastroenterologie

Donderdag 19 maart – Baroniezaal

Voorzitters: K. Lenaerts en L.J.A.C. Hawinkels

08.30 uur Battle Basale Junior Onderzoekers Prijs/Junior Researcher Award 2026

08.45 uur Intranuclear signaling by calprotectin in intestinal epithelium contributes to the refractory nature of Crohn's disease related fistula

*M.A. Becker<sup>1</sup>, P.J. Koelink<sup>1</sup>, S. Ouahoud<sup>1</sup>, S. Meisner<sup>1</sup>, C.J. Buskens<sup>2</sup>, M.E. Wildenberg<sup>3</sup>,<sup>1</sup>Tytgat Institute for Liver and Intestinal Research, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Surgery, Amsterdam UMC, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, The Netherlands.*

08.55 uur Unraveling the molecular responses of mature and progenitor-type cholangiocytes to ischemia and reoxygenation using an organoid model

*S.H. Luijmes<sup>1</sup>, S. Shi<sup>2</sup>, J. Willemse<sup>1</sup>, H.P. Roest<sup>1</sup>, R. Feng<sup>3</sup>, K. Ober-Vliegen<sup>1</sup>, M.J.C. Bijvelds<sup>4</sup>, M.E. van Royen<sup>5</sup>, L. Wu<sup>2</sup>, M.M.A. Verstege<sup>1</sup>, J. De Jonge<sup>1</sup>, L.J.W. van der Laan<sup>1</sup>,<sup>1</sup>Dept. of Surgery, Erasmus MC Transplant Institute, Department of Surgery, Rotterdam, <sup>2</sup>Dept. of Surgery, Guangdong Provincial People's Hospital (Guangdong Academy of Medical Sciences), Guangzhou, China, <sup>3</sup>Ren Ji Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China, <sup>4</sup>Dept. of Gastroenterology, Hepatology and Endocrinology, Erasmus MC, Rotterdam, <sup>5</sup>Dept. of Pathology, Erasmus MC, Rotterdam, The Netherlands.*

09.05 uur Impact of Urbanization on Mucosal Immunity and Microbial Tolerance in Tanzanian Schoolchildren

*S.H.C. Veltkamp<sup>1</sup>, J. Krijgsman<sup>2</sup>, J.J. Pyuza<sup>3</sup>, A. Geluk<sup>4</sup>, V. van Unen<sup>5</sup>, P.W. Voorneveld<sup>1</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, LUMC, Leiden, <sup>2</sup>Dept. of Immunopathology, LUMC, Leiden, <sup>3</sup>Dept. of Pathology, Kilimanjaro Christian Medical Center, Moshi, Tanzania, <sup>4</sup>Dept. of Infectious Diseases LUMC, Leiden, <sup>5</sup>Dept. of Immunology, LUMC, Leiden, The Netherlands.*

09.15 uur Duodenal mucosal protein turnover exceeds 16% per day in vivo in both young and older adults

*L.M.E. Kuin<sup>1</sup>, J.M. Senden<sup>2</sup>, A.M. Overman<sup>2</sup>, J.P.B. Goessens<sup>2</sup>, A.M. Holwerda<sup>2</sup>, G.A.A. van Lieshout<sup>2, 3</sup>, D. Keszthelyi<sup>1</sup>, D.M.A.E. Jonkers<sup>1</sup>, L.J.C. van Loon<sup>2</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, Maastricht University Medical Center+, <sup>2</sup>Dept. of Human Biology, Maastricht University Medical Center+, <sup>3</sup>Dept. of Human Biology, Friesland Campina, Amersfoort, The Netherlands.*

09.25 uur Dietary impact on infants' gut microbiota and its capacity in SCFA metabolism

*E. Dikareva<sup>1</sup>, M. Skawiński<sup>2</sup>, L. Bervoets<sup>3</sup>, D. Barnett<sup>1</sup>, G. Le<sup>4</sup>, G. Galazzo<sup>1</sup>, C. Driessen<sup>1</sup>, J. Penders<sup>1</sup>, M. Mommers<sup>5</sup>, N. van Best<sup>1, 6</sup>,<sup>1</sup>Dept. of Medical Microbiology, Maastricht University Medical Centre+, Maastricht, <sup>2</sup>Pharmacology and Toxicology, Maastricht University, Maastricht, <sup>3</sup>Laboratory for Brain-Gut Axis Studies, Leuven, België, <sup>4</sup>Biomedical Primate Research Centre, Rijswijk,*

## Abstractsessie Sectie Experimentele Gastroenterologie - vervolg

Donderdag 19 maart – Baroniezaal

<sup>5</sup>Dept. of Epidemiology, Maastricht University, Maastricht, The Netherlands, <sup>6</sup>Dept. of Medical Microbiology, RWTH Aachen University Hospital, Aachen, Duitsland

09.35 uur Targeting the Seed and the Soil: Combining Gemcitabine with a Stromal Targeting Peptide to Overcome Barriers involved in PDAC Treatment  
A.S. Manelkar<sup>1</sup>, R. Valoor<sup>2</sup>, A. Valles-Marti<sup>1</sup>, P. Kinderman<sup>1</sup>, C.R. Simpson<sup>3</sup>, C. Herdman<sup>4</sup>, L. Zhao<sup>3</sup>, N. van Montfoort<sup>1</sup>, M.G.W. de Leeuw<sup>5</sup>, H. Kelly<sup>3, 5</sup>, J. Prakash<sup>2</sup>, L.J.A.C. Hawinkels<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, LUMC, Leiden, <sup>2</sup>Dept. of Medical Oncology, Radboud University Medical Center, Nijmegen, <sup>3</sup>Royal College of Surgeons in Ireland, Dublin, Ireland, <sup>4</sup>Radboud University Medical Center, Nijmegen, <sup>5</sup>Oncolize B.V, Maastricht, The Netherlands.

09.45 uur Koffiepauze in de expositiehal

## Symposium / Abstracts Sectie Inflammatoire Darmziekten en Experimentele Gastroenterologie

Donderdag 19 maart – Baroniezaal

Voorzitters: E.A.M. Festen

- 10.15 uur JAKi in clinical practice  
*Dr. F.D.M. van Schaik, MDL-arts, UMC Utrecht*
- 10.35 uur Influence of the Janus Kinase (JAK) Inhibitor Filgotinib on the Disease-Associated Network of Intestinal Immune Cells in Ulcerative Colitis  
*S.H.C. Veltkamp<sup>1</sup>, G.IJ. Reyneveld<sup>2</sup>, V. van Unen<sup>2</sup>, P.W. Voorneveld<sup>1</sup>, A.E. van der Meulen – de Jong<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, LUMC, Leiden, <sup>2</sup>Dept. of Immunology, LUMC, Leiden, The Netherlands.*
- 10.45 uur Clinical impact of multi-Layered mechanisms of JAKi  
*Dr. M.C. Barnhoorn, Aios MDL, LUMC, Leiden*
- 11.05 uur Detection of in vivo fibrosis and differentiation from inflammation in IBD patients using FAPi PET/CT imaging: the PIMAFI study  
*D.A. Lartey<sup>1</sup>, K van Wijnbergen<sup>2</sup>, B.J. Ke<sup>3</sup>, C Teichert<sup>1</sup>, C.J. Buskens<sup>4</sup>, J.D.W. van der Bilt<sup>4, 5</sup>, G. Matteoli<sup>3</sup>, G. de Hertogh<sup>6</sup>, J. Grootjans<sup>1</sup>, M.E. Wildenberg<sup>7</sup>, S.E. Wiegers<sup>8</sup>, M.M. Yaqub<sup>8</sup>, G.R.A.M. D'Haens<sup>1</sup>, G.J.C. Zwezerijnen<sup>8</sup>, M. Lowenberg<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, <sup>2</sup>Laboratory for Experimental Oncology and Radiobiology (LEXOR), Amsterdam UMC, <sup>3</sup>Dept. of Translational Research Center for Gastrointestinal Disorders (TARGID), Katholieke Universiteit Leuven, België, <sup>4</sup>Dept. of Surgery, Amsterdam UMC, <sup>5</sup>Dept. of Surgery, Flevoziekenhuis, Almere, <sup>6</sup>Dept. of Pathology, UZ Leuven, België, <sup>7</sup>Tytgat Institute for Liver and Intestinal Research, Amsterdam UMC, <sup>8</sup>Dept. of Radiology and Nuclear Medicine, Amsterdam UMC, The Netherlands.*
- 11.15 uur Predictors of response to JAKi with single cell analyses  
*Dr. E.A.M. Festen, MDL-arts, UMC Groningen*
- 11.35 uur Early Intestinal Ultrasound and Elastography Predicts Treatment Persistence of Filgotinib in Ulcerative Colitis Patients: long-term results from the STEER study  
*C Teichert<sup>1</sup>, M.J. Pruijt<sup>1</sup>, F.A. de Voogd<sup>1</sup>, R.J. Janssen<sup>1</sup>, M. Löwenberg<sup>1</sup>, R.L Goetgebuer<sup>1</sup>, G.R.A.M. D'Haens<sup>1</sup>, K.B. Gecse<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, The Netherlands.*
- 12.00 uur Lunchpauze in de expositiehal

## Symposium Sectie Endoscopie en Kinder-MDL

Donderdag 19 maart – Baroniezaal

Vorzitters: T.G.J. de Meij en M. Groenen

Titel: **Certificering en kwaliteitsbewaking in de endoscopie: naar een toekomstbestendige praktijk**

14.15 uur Samen Sterk: Intercollegiale Toetsing en Kwaliteitszorg in Kinder-MDL Endoscopie  
*Dr. T.G.J. de Meij, Kinderarts-MDL, Amsterdam UMC*

14.35 uur Implementatie en kwaliteitsmonitoring ESD: Handvatten en kaders  
*Prof. dr. W.B. Nagengast, MDL-arts, UMC Groningen*

14.55 uur Implementatie en kwaliteitsmonitoring therapeutische EUS: Handvatten en kaders  
*Dr. J.G.P. Reijnders, MDL-arts, Erasmus MC, Rotterdam*

15.15 uur **Algemene Ledenvergadering NVMDL in de Baroniezaal**

## Abstractsessie Sectie Neurogastroenterologie en Motiliteit en Sectie Gastrointestinale Endoscopie

Donderdag 19 maart – Parkzaal

Voorzitter: S. van Doorn en C. Clemens

- 10.15 uur      A Material Flow Analysis of an endoscopy department to identify environmental hotspots  
*B. Vegting<sup>1</sup>, C.B. Izci<sup>1</sup>, J.C. Diehl<sup>2</sup>, W. van den Heuvel<sup>3</sup>, N.G.M. Hunfeld<sup>4</sup>, E.M. van Raaij<sup>5</sup>, M.V. Tietschert<sup>5</sup>, P.J.F. de Jonge<sup>1</sup>, P.D. Siersema<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Gastrointestinal Endoscopy, Erasmus MC, Rotterdam, <sup>2</sup>TU Delft, Delft, <sup>3</sup>Erasmus School of Economics, Erasmus University Rotterdam, <sup>4</sup>Intensive Care, Erasmus MC, Rotterdam, <sup>5</sup>Erasmus School of Health Policy and Management, Erasmus University Rotterdam*
- 10.23 uur      Five-day waste audit in a tertiary endoscopy department: quantifying waste streams and carbon footprint  
*B. Vegting<sup>1</sup>, C.B. Izci<sup>1</sup>, J.C. Diehl<sup>2</sup>, W. van den Heuvel<sup>3</sup>, N.G.M. Hunfeld<sup>4</sup>, E.M. van Raaij<sup>5</sup>, M.V. Tietschert<sup>5</sup>, P.J.F. de Jonge<sup>1</sup>, P.D. Siersema<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Gastrointestinal Endoscopy, Erasmus MC, Rotterdam, <sup>2</sup>TU Delft, Delft, <sup>3</sup>Erasmus School of Economics, Erasmus University Rotterdam, <sup>4</sup>Intensive Care, Erasmus MC, Rotterdam, <sup>5</sup>Erasmus School of Health Policy and Management, Erasmus University Rotterdam*
- 10.31 uur      Implementing sustainability interventions in endoscopy: results from a regional study in the Netherlands  
*B. Vegting<sup>1</sup>, C.B. Izci<sup>1</sup>, G. Bezemer<sup>2</sup>, M.P.J. van den Broek<sup>3</sup>, J.C. Diehl<sup>4</sup>, F. Dirksmeier-Harinck<sup>5</sup>, E.R.C. Halet<sup>6</sup>, W. van den Heuvel<sup>7</sup>, N.G.M. Hunfeld<sup>8</sup>, C.A.W. Konings<sup>9</sup>, E.P.C. Plompen<sup>10</sup>, E.M. van Raaij<sup>11</sup>, P. Ruijtenbeek<sup>12</sup>, M.V. Tietschert<sup>11</sup>, L.M.M. Wolters<sup>13</sup>, S.J.L.B. Zweers<sup>14</sup>, P.D. Siersema<sup>1</sup>, P.J.F. de Jonge<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Gastrointestinal Endoscopy, Erasmus MC, Rotterdam, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Ikazia Ziekenhuis, Rotterdam, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Amphia Ziekenhuis, Breda, <sup>4</sup>TU Delft, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Franciscus Gasthuis, Rotterdam, <sup>6</sup>Dept. of Gastroenterology and Hepatology, Bravis Ziekenhuis, Roosendaal/Bergen op Zoom, <sup>7</sup>Erasmus School of Economics, Erasmus University Rotterdam, <sup>8</sup>Intensive Care, Erasmus MC, Rotterdam, <sup>9</sup>Dept. of Gastroenterology and Hepatology, Admiraal de Ruyter Ziekenhuis, Goes/Vlissingen, <sup>10</sup>Dept. of Gastroenterology and Hepatology, IJsselland Ziekenhuis, Capelle aan den IJssel, <sup>11</sup>Erasmus School of Health Policy and Management, Erasmus University Rotterdam, Rotterdam, <sup>12</sup>Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, <sup>13</sup>Dept. of Gastroenterology and Hepatology, Albert Schweitzer Ziekenhuis, Dordrecht, <sup>14</sup>Dept. of Gastroenterology and Hepatology, Maasstad Ziekenhuis, Rotterdam*

## Abstractsessie Sectie Neurogastroenterologie en Motiliteit en Sectie Gastrointestinale Endoscopie - vervolg

Donderdag 19 maart – Parkzaal

- 10.39 uur      Psychosocial and environmental determinants of nausea in patients with functional dyspepsia: an exploratory experience sampling method (ESM) study  
*F. Veldman<sup>1,2</sup>, M. Bosman<sup>1,2</sup>, T. Klaassen<sup>1</sup>, L. Vork<sup>1</sup>, A. Masclee<sup>1</sup>, C. Leue<sup>3</sup>, D. Keszthelyi<sup>1,2</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Maastricht Universitair Medisch Centrum+, Maastricht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Maastricht University, Maastricht, <sup>3</sup>Dept. of Psychiatry, Maastricht Universitair Medisch Centrum, Maastricht, The Netherlands.*
- 10.47 uur      High risk of avoidant/restrictive food intake disorder [arfid] in adults with eosinophilic esophagitis [eoe]  
*M. Fijnenberg<sup>1</sup>, G.M.C. Masclee<sup>1</sup>, S. Mulkens<sup>2</sup>, A.J. Bredenoord<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, <sup>2</sup>Dept. of Psychiatry, University Maastricht, The Netherlands.*
- 10.55 uur      The incidence and complication rate of pediatric battery ingestion in the Netherlands  
*H. Krom<sup>1,2</sup>, M.A. Benninga<sup>1</sup>, D.K. Bosman<sup>3</sup>, E.K. George<sup>4</sup>, C.R. Meijer<sup>5</sup>, J.H. Oudshoorn<sup>6</sup>, L. Schouwink<sup>1,7</sup>, M.J.M. Smit<sup>8</sup>, A. Kindermann<sup>1</sup>, <sup>1</sup>Dept. of Pediatric Gastroenterology Hepatology and Nutrition, Emma Children's Hospital, Amsterdam UMC, University of Amsterdam, <sup>2</sup>Dept. of Pediatric Gastroenterology Hepatology and Nutrition, GGZ Noord-Holland-Noord, Alkmaar, <sup>3</sup>Dept. of Pediatrics, Emma Children's Hospital, Amsterdam UMC, University of Amsterdam, <sup>4</sup>Dept. of Pediatrics, Northwest Clinics, Alkmaar, <sup>5</sup>Dept. of Pediatric Gastroenterology Hepatology and Nutrition, Willem Alexander Children's Hospital, Leiden University Medical Center, Leiden, <sup>6</sup>Dept. of Pediatrics, Gelre Hospital, Apeldoorn, <sup>7</sup>Dept. of Pediatric Gastroenterology Hepatology and Nutrition, Red Cross Hospital, Beverwijk, <sup>8</sup>Dept. of Pediatrics, Juliana Children's Hospital, Haga Teaching Hospital, Den Haag, The Netherlands.*
- 11.03 uur      Incidence and Management of Sigmoid Volvulus: a Dutch Single-Centre Retrospective Study - the Coffee Bean Study  
*P.F.B. Vernooij<sup>1,2</sup>, B.W.M. Spanier<sup>2</sup>, D.P. Hirsch<sup>2</sup>, B.P.L. Witteman<sup>3</sup>, M.E.J. Pijl<sup>4</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>3</sup>Dept. of Surgery, Rijnstate Ziekenhuis, Arnhem, <sup>4</sup>Dept. of Radiology, Rijnstate ziekenhuis, Arnhem, The Netherlands.*
- 11.11 uur      Remimazolam versus midazolam for sedation during diagnostic gastroscopy: a multicenter, double-blind, randomized controlled trial  
*K. Munters<sup>1</sup>, L. Alvarez Herrero<sup>1</sup>, N.C.M. van Heel<sup>2</sup>, J.P.W. Burger<sup>3</sup>, F.A. Oort<sup>3</sup>, S.N. van Munster<sup>1</sup>, B.L.A.M. Weusten<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, St. Antonius Ziekenhuis, Nieuwegein, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Gelre Ziekenhuizen, Apeldoorn, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Rijnstate, Arnhem, The Netherlands.*

## Abstractsessie Sectie Neurogastroenterologie en Motiliteit en Sectie Gastrointestinale Endoscopie - vervolg

Donderdag 19 maart – Parkzaal

- 11.19 uur      Phenotyping increased urge to defecate in irritable bowel syndrome: analysis of symptom, sensory and psychological profiles  
*S.R. Groen<sup>1, 2</sup>, Z.Z.R.M. Weerts<sup>1, 2</sup>, L. Vork<sup>1, 2</sup>, Z. Mujagic<sup>1, 2</sup>, J.M. Conchillo<sup>1, 2</sup>, A.A.M. Masclee<sup>1, 2</sup>, D.A.E. Jonkers<sup>1, 2</sup>, D. Keszthelyi<sup>1, 2</sup>, <sup>1</sup>Dept. of Gastroenterology, Maastricht University Medical Center+, Maastricht, <sup>2</sup>Dept. of Gastroenterology, Maastricht University Faculty of Health, Medicine and Life Sciences: Maastricht, Maastricht, The Netherlands.*
- 11.27 uur      Development and evaluation of automated CT-based models for quantifying abdominal gas, diaphragm position and abdominal distension in patients with abdominal bloating  
*S.A.J. Bolluijt<sup>1</sup>, G.W.H. Groot Koerkamp<sup>1</sup>, J.M. Kloosterman<sup>1</sup>, M. Lühies<sup>1</sup>, D.E. Vossebeld<sup>1</sup>, T.P.G. Winterman<sup>1</sup>, L.N. Deden<sup>2</sup>, D.P. Hirsch<sup>3</sup>, T. van Kuipers<sup>4</sup>, <sup>1</sup>Universiteit Twente, Enschede, <sup>2</sup>Dept. of Bariatric Surgery, Rijnstate Ziekenhuis, Arnhem, <sup>3</sup>Dept. of Gastroenterology and Hepatology, Rijnstate Ziekenhuis, Arnhem, <sup>4</sup>Rijnstate Ziekenhuis, Arnhem, The Netherlands.*
- 12.00 uur      Lunchpauze in de expositiehal

## Middagprogramma V&VN MDL - Endoscopie

Donderdag 19 maart – Parkzaal

Voorzitters: volgt

12.45 uur De FIT-IN studie: wanneer weer een FIT na een gunstige coloscopie voor darmkankerscreening?  
*S. Spijkerboer, Erasmus MC, Rotterdam*

13.15 uur Endoscopische vacuümtherapie  
*Dr. L.C. Duits, MDL-arts, Amsterdam UMC*

13.45 uur Endoscopische gastro-enterostomie  
*F. van Delft, MDL-arts, Radboudumc, Nijmegen*

14.15 uur AI Update  
*Dr. M. Hadithi, MDL-arts, Maastad Hospital, Rotterdam*

14.45 uur Einde van deze sessie – Anti file borrel Abdijbar

## PhD Netwerk - Carrière na je PhD: hoe nu verder?

Donderdag 19 maart – Zaal 80/81

**Titel:** Carrière na je PhD: hoe nu verder?

10.15 uur M. Gommers en H. Schijf, Doctor Connect

12.00 uur Lunch in de expositiehal

## Postersessie IV

Donderdag 19 maart – Posterstage

Moderator: volgt

- 09.45 uur Characterizing the socioeconomic burden of functional dyspepsia: a cost-of-illness study of direct and indirect health care costs  
*D.H.C.A. Bosch<sup>1, 2</sup>, B.A.B. Essers<sup>3</sup>, A.B. Beckers<sup>1, 2</sup>, J.T.W. Snijkers<sup>1, 2</sup>, B. Winkens<sup>4, 5</sup>, A.A.M. Masclee<sup>1,2</sup>, D. Keszthelyi<sup>1,2</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, Maastricht University Medical Center+,<sup>2</sup>Dept. of Gastroenterology and Hepatology, NUTRIM school of Nutrition and Translational Research in Metabolism, Maastricht University,<sup>3</sup>Dept. of Clinical Epidemiology and Medical Technology Assessment (KEMTA), Department of Clinical Epidemiology and Medical Technology Assessment, Maastricht University Medical Center+,<sup>4</sup>Dept. of Mathematics and Statistics, CAPHRI Care and Public Health Research Institute, Maastricht University,<sup>5</sup>Dept. of Mathematics and Statistics, Department of Methodology and Statistics, Maastricht University, The Netherlands.*
- 09.51 uur Wearable-based monitoring of autonomic and gastrointestinal function in disorders of gut-brain interaction: A systematic review and meta-analyses  
*F. Veldman<sup>1, 2</sup>, M. Bosman<sup>1, 2</sup>, A. Rezaie<sup>3</sup>, S. Moosavi<sup>4</sup>, D. Keszthelyi<sup>1, 2</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, Maastricht Universitair Medisch Centrum, Maastricht, <sup>2</sup>Dept. of Gastroenterology and Hepatology, Maastricht University, Maastricht, <sup>3</sup>Dept. of Gastroenterology, Cedars-Sinai, Los Angeles, Verenigde Staten, <sup>4</sup>Dept. of Gastroenterology, University of British Columbia, Vancouver, Canada*
- 09.57 uur Increased ceftriaxone exposure in hospitalised patients with cirrhosis: external validation of a population pharmacokinetic model (TACTILE study)  
*S. Ezzafzafi<sup>1</sup>, R.M. van Hest<sup>2</sup>, R.A.A. Mathot<sup>2</sup>, M.B. Mulder<sup>3, 4</sup>, B.C.M. de Winter<sup>4</sup>, J.P.H. Drenth<sup>1</sup>, R. Maan<sup>5</sup>, M.A. Lantinga<sup>1</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, <sup>2</sup>Dept. of Clinical Pharmacy, Amsterdam UMC, Amsterdam, <sup>3</sup>Dept. of Clinical Pharmacy, Haaglanden Medisch Centrum, Den Haag, <sup>4</sup>Dept. of Clinical Pharmacy, Erasmus MC, Rotterdam, <sup>5</sup>Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, The Netherlands.*
- 10.03 uur Ex vivo quantification and visualization of fluorescently labeled adalimumab in Inflammatory Bowel Disease (IBD) patients  
*P. Volkmer<sup>1</sup>, R.J. Van Dijken<sup>1</sup>, H.K. Huizinga<sup>1</sup>, W.B. Nagengast<sup>1</sup>, A.M. De Costa da Pina<sup>1</sup>, R.Y. Gabriels<sup>1</sup>, D.J. Robinson<sup>2</sup>, D. Gorpas<sup>3</sup>, G. Kats-Ugurlu<sup>4</sup>, M.C. Visschedijk<sup>1</sup>, G. Dijkstra<sup>1</sup>, M.N. Lub-de Hooge<sup>5</sup>,<sup>1</sup>Dept. of Gastroenterology and Hepatology, University of Groningen, University Medical Center Groningen, Groningen, <sup>2</sup>Dept. of Otorhinolaryngology and Head and Neck Surgery, Erasmus Medical Center Rotterdam, Rotterdam, <sup>3</sup>Institute for Biological and Medical Imaging, Technical University of Munich, Helmholtz Zentrum München, Munich, Duitsland, <sup>4</sup>Dept. of Pathology, University of Groningen, University Medical Center Groningen, Groningen, <sup>5</sup>Dept. of Clinical Pharmacy, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands.*

## Postersessie IV - vervolg

Donderdag 19 maart – Posterstage

10.09 uur      The immunosuppressive effect of Cancer-Associated Fibroblasts on CD8+ T Cell Effector Function in Pancreatic Ductal Adenocarcinoma  
*I. Stouten<sup>1</sup>, B.W. Van Os<sup>1</sup>, M. Cabuta<sup>1</sup>, L.J.A.C. Hawinkels<sup>1</sup>, N. Van Montfoort<sup>1</sup>, <sup>1</sup>Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Gastroenterology - Hepatology, Leiden, The Netherlands.*

## Postersessie V

Donderdag 19 maart – Posterstage

Moderator: volgt

- 12.15 uur      Prospective endoscopic follow-up of patients with T1 esophageal adenocarcinoma with R1 resection margins in ER specimens: an international multicenter study (PREFERENCE)  
*Dr. R.E. Pouw, MDL-arts, UMC Utrecht*  
*V. Bos, arts-onderzoeker, Amsterdam UMC*
- 12.20 uur      Towards Mucosal Application of infliximab in the Therapy of Enterocolitis (TOMATE): a proof of concept study  
*Prof. dr. G. Dijkstra, MDL-arts, UMC Groningen*  
*J.C. Strokap, PhD student, UMC Groningen*
- 12.25 uur      Yield of endoscopy surveillance in unexplained polyposis patients and their relatives: is surveillance needed  
*Dr. M. Nielsen, klinisch geneticus, LUMC, Leiden*  
*Prof. dr. A.M.J. Langers, MDL-arts, LUMC, Leiden*
- 12.30 uur      Modafinil for debilitating fatigue in quiescent inflammatory bowel disease (IBD): a multicenter, randomized, double-blind, placebo-controlled, clinical trial (MODIFI-IBD trial)  
*J. Hendriks, arts-onderzoeker, Radboudumc, Nijmegen*
- 12.35 uur      FMT in PSC; resetting the gut-liver axis  
*R. Stamatiou, PhD student, Amsterdam UMC*
- 12.40 uur      Ensuring efficient nationwide implementation of early celiac detection at the Preventive Youth Health Care Centers by an integrated approach.  
*Dr. C.R. Meijer-Boekel, Kinderarts MDL, LUMC, Leiden*  
*Lucy Smit, Preventive Youth Health Care Centers*

## Abstracts

### Systemic antibody responses against herpesviruses and *Bacteroides* associate with disease progression in Inflammatory Bowel Disease

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**Background:** Biological mechanisms driving disease progression in patients with inflammatory bowel disease (IBD) remain largely unclear. Identification of immune signatures with prognostic value in IBD provides a unique window of opportunity with risk stratification potential and helps unravelling potential immune mechanisms. Here we aimed to define systemic antibody responses associated with disease progression in IBD using a high-throughput phage-display immunoprecipitation sequencing (PhIP-Seq) assay.

**Methods:** Serum samples from 416 patients from the 1000IBD cohort with established IBD and follow-up data were analyzed. Disease progression was defined as requiring IBD-related surgery (both) or developing intestinal stenosis (CD). Systemic antibody repertoires were defined against 344,000 microbial, viral, and immune-derived peptide antigens. Multivariable Cox proportional hazards regression analyses were performed to investigate associations between antibody responses and disease progression risk.

**Results:** Patients were followed for a median of 11 years and 5 months [IQR: 111-157 months]. In total, 100 patients (24%) experienced disease progression during follow-up, 72 of which with CD (17%) and 28 with UC (7%). Distinct groups of antigens were targeted in patients experiencing disease progression in CD, including overrepresented antibody responses (antibody prevalence ratio >1) against *Bacteroides*, *Streptococcus* (both  $P < 0.01$ ), bacterial flagellins, enteroviruses, and underrepresented responses (antibody prevalence ratio <1) against herpesviruses (cytomegalovirus (CMV), Epstein–Barr virus (EBV)) and *Haemophilus* bacteria (all  $P < 0.001$ ). In UC, overrepresented antibody responses were primarily directed at CMV, while underrepresented antibody responses were observed for EBV, *Mycoplasma* ( $P < 0.001$ ), and *Bacteroides* species ( $P < 0.01$ ).

**Conclusion:** Massive parallel serology with epitope-level resolution revealed disease-specific immune reactivities linked to disease progression in IBD, showing divergent signatures between CD and UC. These findings suggest distinct microbial–immune pathways underlying disease progression and highlight potential prognostic biomarkers warranting validation in longitudinal studies.

## Preoperative Evaluation of Lymph Nodes of resectable Cholangiocarcinoma by Endoscopic Ultrasound: the POELH trial

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**Background:** Lymph node (LN) metastases are a poor prognostic factor in intrahepatic (iCCA) and perihilar cholangiocarcinoma (pCCA). Extraregional LN metastases (LNM) preclude surgical exploration, and identifying regional LNM helps weigh the risk and benefits of resection. Endoscopic ultrasound (EUS) offers the possibility of direct tissue acquisition (TA) of LN. This prospective study assessed the yield of preoperative systematic EUS for LN staging in resectable iCCA and pCCA.

**Methods:** In this prospective, multicenter trial, patients with presumed resectable iCCA or pCCA from seven tertiary centers (Netherlands/Belgium) were enrolled. Patients without intrapancreatic tumor ingrowth on imaging underwent systematic EUS with sampling of all LNs  $\geq 5$  mm short-axis, covering abdominal LN stations 8–18 per the Japanese classification. The primary outcome was the clinical impact of EUS, defined as preclusion of surgery or alteration of surgical strategy. Secondary outcomes included EUS-related adverse events and the LNM “miss” rate at surgery.

**Results:** We included 254 patients (59% male, median age of 68 years), consisting of 62 iCCA and 192 pCCA. LNs were identified on cross-sectional imaging in 72%. Across 284 EUS procedures, 1262 LN were identified in 243 patients (96%). EUS-TA was carried out for 418 LN (33%), yielding malignancy in 73 LN (58 regional and 15 extraregional) across 45 patients. Pancreatic ingrowth was detected in 13 patients (5%). Prior cross-sectional imaging had described 43 of these malignant LNs as pathological, 10 as non-pathological, and omitted 20. EUS provided clinically relevant findings in 50 patients (20%): EUS precluded surgery in 43 patients (regional LNM: 21, extraregional LNM: 10, pancreatic ingrowth: 8, or other diagnosis e.g. IgG4 cholangitis, adrenal metastasis: 4), and altered the surgical plan in 7 patients (pancreatic ingrowth). In twelve patients regional LNM were identified but surgery was not precluded. Among the 150 patients who finally underwent surgical exploration without EUS-TA sampled LNM, ‘missed’ LNM were identified in 106 of the 809 retrieved LN (13.1%), in 51 patients (91 regional and 15 extraregional). ‘Missed’ extraregional LNM were identified in 8 patients, regional LNM in 43 patients. EUS related complications occurred in 3 procedures (1%): bleeding requiring embolization and hypotension.

**Conclusion:** EUS with systematic evaluation of regional and extraregional LN is safe and should be offered to all presumed resectable iCCA and pCCA patients. It provides information for clinical decision making in 20% of patients including identifying malignant extraregional lymph nodes precluding resection. (ClinicalTrials.gov, Number: NCT05678218).

## Targeting the JAK-STAT pathway reprograms intestinal fibroblasts and attenuates IBD-associated fibrosis

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**Background:** Intestinal fibrosis is a common complication of inflammatory bowel disease (IBD), resulting from the uncontrolled accumulation of extracellular matrix (ECM) deposited by fibroblasts. Janus kinases (JAK) inhibitors are a relatively novel therapeutic strategy in IBD, which show robust anti-inflammatory effects, but their potential effects on fibrosis have not been investigated. In this study, we explored the effects of JAK inhibition on fibroblasts and intestinal fibrosis.

**Methods:** The spatial distribution of fibroblast subsets in fibrotic tissues from Crohn's disease (CD) patients was mapped using a 40-marker fibroblast-specific panel for imaging mass cytometry (IMC). Next, the activation of the JAK-STAT pathway in primary intestinal fibroblasts was evaluated using western blot and RNA-sequencing. Fibroblast reprogramming by JAK inhibitors (JAKi; upadacitinib, tofacitinib, filgotinib) was further evaluated by functional studies on ECM deposition and remodeling. Finally, the effects of JAK inhibition were tested in two acute colitis models (T cell transfer, IL-10 knockout) and one chronic DSS model for intestinal fibrosis. Intestinal ECM deposition was evaluated by Sirius Red staining, while fibroblast subsets were evaluated by flow cytometry.

**Results:** Analysis of our scRNA-sequencing dataset from fibrostenotic CD tissue identified that ECM-producing fibroblasts expressing fibroblast activation protein (FAP) show high JAK-STAT3 activation. Consistently, IMC confirmed distinct fibroblast subsets with high levels of pSTAT1 and pSTAT3 in fibrostenotic tissues. JAKi strongly suppressed JAK-STAT activation in a concentration-dependent manner in human intestinal fibroblasts. Notably, the three JAK inhibitors differed in their impact on ECM remodeling *in vitro*, with upadacitinib showing the strongest effect on collagen I gel contraction and reduction of FAP expression. In line with these *in vitro* findings, upadacitinib also altered ECM deposition in the colon of mice with chronic DSS-induced fibrosis. Furthermore, in both acute colitis models, intestinal fibroblast subsets (e.g. CD90<sup>+</sup>podoplanin<sup>+</sup> fibroblasts) were reprogrammed following JAKi. Importantly, *in vitro* validation of these findings revealed that podoplanin was decreased in fibroblasts upon JAKi.

**Conclusion:** JAK inhibition effectively suppressed JAK-STAT signaling in intestinal fibroblasts, reprogrammed fibroblast subsets, and decreased ECM remodeling *in vitro* and *in vivo*. Within most assays, upadacitinib showed the strongest antifibrotic activity. Our study highlights the JAK-STAT pathway as a critical regulator of fibroblast plasticity in IBD and supports upadacitinib as a promising therapeutic strategy for intestinal fibrosis.

## Optimizing Pancreatic Cyst Surveillance: A Cost-Effectiveness Analysis Using Microsimulation

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**Background:** Despite widely practiced, pancreatic cyst surveillance lacks clear evidence of benefit or cost-effectiveness. The best strategy remains unclear. We assessed the cost-effectiveness of various pancreatic cyst surveillance strategies.

**Methods :** A microsimulation model was used to simulate a cohort of individuals with pancreatic cysts undergoing surveillance in the Netherlands. The base-case scenario followed the Kyoto guideline. Alternative strategies were modelled by varying minimum cyst size for inclusion, stopping age, surveillance intervals, and discontinuation criteria. Outcomes included pancreatic cancer (PC) incidence, PC mortality, Number Needed to Survey (NNS), Number Needed to Treat (NNT), surgical deaths, and (quality-adjusted) life years gained ([QA]LY). Incremental (ICER) and average (ACER) cost-effectiveness ratios per (QA)LY gained were calculated, assuming a willingness-to-pay threshold (WTP) of €50,000 per (QA)LY. Multiple sensitivity analyses were performed to assess robustness.

**Results:** The Kyoto guideline yielded 81.5 LY gained per 1,000 individuals, at the expense of a NNS 681 and a NNT of 11. This translated into 7.5 QALYs gained at a cost of €21.5 million, per 1,000 individuals. The previous Fukuoka guideline resulted in a net harm of 13.4 QALY at a cost of €10.9 million, per 1,000 individuals. Of the 477 simulated strategies, four approaches—each limiting surveillance to cysts  $\geq 30$  mm—provided the best trade-off between benefits and costs for both QALY and LY outcomes. The most cost-effective strategy at the applied WTP for both QALY and LY gained was stopping surveillance at age 60 and using a 1.5 year surveillance interval for low-risk cysts (ICER €22,688/QALY, €18,468/LY). The other three strategies on the efficient frontier (with stopping ages 55, 65 and 70) had ICERs of €18,982/QALY, €111,890/QALY and €158,785/QALY, respectively. Sensitivity analyses demonstrated that surveillance for cysts  $< 25$ mm or beyond age 70 was never cost-effective.

**Conclusion:** The Kyoto guideline offers no meaningful benefit at substantial costs, indicating that current surveillance practices are economically unjustified. Restricting surveillance to larger cysts in younger individuals would provide greater clinical and economical value.

## Healthcare Expenditures Across the Full Care Continuum of Pancreatic Cancer and Resected Precursor Lesions in the Netherlands: Variations by Patient- and Disease Characteristics

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**Background:** Interest in pancreatic cancer (PC) surveillance is growing, yet data on healthcare expenditures of PC and resected precursor lesions (PLs) are scarce. We evaluated expenditures across the care continuum, stratified by patient- and disease characteristics.

**Methods:** Dutch patients with prevalent PC (n=14.660) or resected PLs (n=492) between 2015-2019 were identified through the Dutch pathology databank (Palga) and cancer registry (NCR) and linked to healthcare claims. Regression models estimated monthly per-person expenditures attributable to initial, continuing and terminal care, stratified by disease stage, age, lesion location (head vs. body/tail), and first-line treatment modality. Annual nationwide expenditures were calculated from these estimates. Expenditures of age- and sex-matched individuals without pancreatic lesions represented baseline healthcare expenditures.

**Results:** Annual expenditures for initial and continuing care amounted to €43 million for individuals with PC and €4.5 million for those with resected PLs, while terminal care costs were approximately €50 million and €283 thousand, respectively. Although per-person costs were lower for PLs, their expenditures were substantially elevated across the full care continuum and approached those of PC. Per-person, total initial care expenditures were lower for PLs and stage IV (€30,341-€33,344) compared to stage I-III PC (€41,611-€45,737). Continuing care expenditures were significantly lower for PLs and stage I-II (€481-€674/month) compared to stage III-IV (€1,123-€1,424/month). Higher initial PC care expenditures were observed in patients with pancreatic head lesions (vs. body/tail), those aged ≥80 (vs.<80), and those receiving best supportive care (vs. oncological treatment). Terminal care expenditures did not differ significantly by stage or cause of death, but were significantly lower among those aged ≥80 with PC stage III/IV (€3,783-€3,909) compared to younger counterparts (€4,715-€5,098). For PLs, no significant differences were observed by lesion location, nor age.

**Conclusion:** This nationwide study provides the first detailed assessment of healthcare expenditures for PC and resected PLs across the care continuum, providing valuable input for (cost-)effectiveness analyses. Expenditures were substantial and varied by age, stage, lesion location, and treatment strategy. The extensive long-term PL healthcare expenditures warrant consideration in PC surveillance, especially as overtreatment is still common.

## Facilitating high quality manual segmentation while minimizing annotation workload: a pilot study on continuous learning for the pancreas in MRI

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**Background:** Accurate pancreas segmentation is necessary groundwork in the development of deep learning algorithms for diagnosing pancreatic cancer. Radiologists play a key role in creating these high-quality annotated datasets. However, their available time for these tasks is constrained. This study aimed to demonstrate that a continuous learning approach can produce high-quality pancreas segmentations while minimizing annotation workload.

**Methods:** A U-Net convolutional neural network was trained on manual segmentations of T2-weighted (T2W) MRI scans (n=53). Split into five iterations, automated segmentation masks were generated, manually corrected, and used to retrain the model. Each model was evaluated on a hold-out test set of five MRIs. Performance was reported as case-based average Dice-Sørensen coefficient (DSC) in percentages, Hausdorff Distance 95th percentile (HD95) in millimeters (mm), and their standard deviations (SD). Manual segmentation time per MRI was recorded.

**Results:** After five training iterations, the final model (Model-4) achieved a DSC of 83.4% (SD  $\pm 6.3$ ) on the hold-out test set, compared to 43.8% ( $\pm 23.1$ ) for Model-0, with the incremental improvements plateauing between Model-3 and -4. HD95 was 8.05mm ( $\pm 6.6$ ) for Model-4 vs 21.7mm ( $\pm 13.8$ ) for Model-0. Segmentation time decreased from 4 hours per MRI (Batch 0) to 15 minutes (Batch 4), demonstrating a 16-fold efficiency gain.

**Conclusion:** A continuous learning approach can facilitate high-quality pancreas segmentation on T2W MRI with a DSC of 83% while minimizing annotation workload. This pipeline allows for the curation of higher quantity and quality data for future diagnostic algorithm development.

## RUBATO-study: Exploring preferences and attitudes of Both patients And doctors TOwards surveillance after local resection of high-risk T1 colorectal cancer

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**Background:** Intensive surveillance instead of completion surgery is being more widely adopted after local resection of high-risk T1 colorectal cancer (T1CRC) for early detection of recurrences. However, due to limited evidence, the optimal surveillance intensity remains unknown. This study examined the preferences and attitudes of high-risk T1CRC patients and their physicians toward surveillance.

**Methods:** In this multicenter cross-sectional questionnaire study, participants completed the Medical Maximizer–Minimizer Scale (MMMS), a validated tool assessing individuals' general tendency to favor more (maximizers) or less (minimizers) medical intervention across all healthcare decisions. They also completed an Adaptive Conjoint Analysis (ACA) to evaluate the relative importance of surveillance attributes (mortality, endoscopy, imaging, laboratory testing and incidental findings) in context of T1CRC follow-up. Based on ACA results, a simulator was developed to predict patient and physician preferences across different surveillance scenarios.

**Results:** In total, 104 patients and 40 physicians participated. Among patients, 55.3% were medical maximizers and 44.7% minimizers. All physicians were minimizers. Mortality was the most important ACA attribute for both groups (relative importance of 31.4 and 32.3, respectively), followed by endoscopy frequency (21.3 and 20.5). Two scenarios were modeled in our simulator: (1) standard surveillance according to Dutch guidelines, with five endoscopies, five imaging sessions, and ten laboratory tests over five years, with 3% mortality and 20% risk of incidental findings; and (2) reduced surveillance, with three endoscopies, three imaging sessions and five laboratory tests over five years, with 6% mortality and 15% risk of incidental findings. Under these assumptions, 91.7% of patients and 83% of physicians preferred the reduced surveillance strategy.

**Conclusion:** Patient and physician preferences favor reduced surveillance strategies, with patients showing stronger preference for reduction, highlighting the need to consider patient perspectives in T1CRC surveillance. Our simulator can help predict and incorporate these perspectives in surveillance guidelines.

## Per-person healthcare costs of colorectal cancer by stage, phase of care and mode of detection: a Dutch nationwide analysis

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**Background:** Treatment strategies for colorectal cancer (CRC) have changed in recent years due to advancements in therapies, affecting the costs of CRC treatment. However, accurate and up-to-date estimates of the financial burden of CRC in Europe are lacking. We aimed to gain insight into costs of CRC care in the Netherlands.

**Methods:** Tumor-level data of 154,769 individuals with prevalent CRC between 2015 and 2019 were retrieved from the Netherlands Cancer Registry and linked to national healthcare claims data from 2015 to 2021. Claims data covered primary health care, hospital care, (extramural) pharmaceutical care, mental health care, and long-term care (e.g. home/residential care). A random-effects regression model was used to estimate cancer-attributable costs across different phases of care: initial care (first 6 months after diagnosis), terminal care (last 6 months) and continuing care (period between initial and terminal care). Healthcare expenditures of age- and sex- matched individuals without CRC were used to define baseline healthcare costs. Results were stratified by cancer stage, mode of detection (screen-detected vs. clinically detected) and cause of death (CRC vs. other).

**Results:** Per-person healthcare costs of CRC care varied widely by phase of care, with highest costs observed for initial and terminal care and lower costs observed for continuing care. Both initial, continuing and terminal care costs increased by cancer stage, with lowest costs for continuing care of stage I CRC (€176 per month, 95% CI: 163-190) and highest costs for the initial care of stage IV CRC (€6,398 per month, 95% CI: 6,282-6,514). Moreover, costs of initial CRC care were consistently higher for clinically detected cancers compared to screen-detected cancers, with differences reaching up to €5,484 (95% CI: 4,608-6,372) for the entire initial care phase of stage I CRC. Differences in healthcare costs between screen-detected and clinically detected cancers were less pronounced for continuing and terminal care.

**Conclusion:** Our results indicate that CRC care is significantly more expensive for late-stage and clinically detected cancers compared to early-stage and screen-detected cancers, highlighting the economic benefits of early detection. Policymakers should consider the potential savings in direct medical costs when evaluating cancer screening programs.

## Mini-tumors, major insights: exploring cancer-associated fibroblasts induced chemotherapy resistance in difficult-to-treat gastrointestinal tumors

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**Background:** Pancreatic ductal adenocarcinoma (PDAC) and gastric cancer (GC) remain challenging diseases mainly due to its heterogeneity and complex tumour microenvironment (TME). Advanced PDAC and GC have both a poor 5-year survival rate of only 5-8%. Current curative treatments consist of surgery and a combination of (neo)-adjuvant chemotherapy, such as gemcitabine/nab-paclitaxel or FOLFIRINOX for PDAC, and peri-operative FLOT for GC. Despite advances, ~50% of patients do not respond to any of these treatments and the majority will develop resistance. Cancer-associated fibroblasts (CAFs), the most abundant component of the TME, have been found to promote drug resistance in PDAC and GC, but underlying mechanisms are not yet understood. Thus, we aimed to establish mini-tumor (MT) models that accurately reflect the characteristics of PDAC and GC, facilitating the evaluation of the role of CAFs upon chemotherapy and therapy resistance. The study focuses on two key objectives: (1) evaluate CAF subsets in MTs and parental tumor tissues, ensuring a reflective model for personalized treatment strategies, and (2) assess drug responses in MTs, identifying the most effective (combination) therapies, and evaluating CAF-tumor interactions in treatment resistance.

**Methods:** Patient-derived tumor organoids and CAFs were established from tumor resection material or biopsies. Mini-tumors were established consisting of co-cultured matched patient-derived organoids and CAFs. MTs histological characteristics were compared to parental tumor tissues and they were used to study CAF subset changes and chemotherapy responses. Control and treated MTs were fixed and stained with proliferation/cell death and tumor/stroma markers, as well as processed for a 5500 spatial transcriptomic panel and an in-house high dimensional Imaging Mass Cytometry stroma panel.

**Results:** Up to date, over 6 patient matched MT models have been established, which recapitulate the primary tumor based on mutation status, transcriptional activity and tumor/stroma features. Interestingly, all patient-derived organoid tumor models showed impairment of chemotherapy response upon CAF co-culture, showcasing CAFs-induced chemotherapy resistance. Although CAF viability remained unaffected by chemotherapy, significant changes in their phenotype were induced. Ongoing analyses will further elucidate CAF subset changes as well as affected (targetable) pathways.

**Conclusion:** Mini-tumor models display tumor-specific features and intertumoral heterogeneity, highlighting the need for tailored models to optimally evaluate therapy responses. Ongoing work explores incorporating immune cells in these mini-tumors.

## De-implementation of routine FDG-PET/CT use in staging locally advanced gastric cancer

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**Background:** The PLASTIC-study demonstrated a limited value of routine FDG-PET/CT in addition to staging laparoscopy in detecting metastases in gastric cancer, while increasing radiation exposure, diagnostic delays and healthcare costs. Since October 2023, the updated Dutch national guideline advised not to use routine FDG-PET/CT. Still, 41% of patients underwent FDG-PET/CT in 2023. The PLASTIC-2 study prospectively advocated a de-implementation strategy for FDG-PET/CT in gastric cancer staging and evaluated its impact, aiming to reduce its use to ≤ of patients by 2024. Secondary aims were to reduce diagnostic delay and healthcare costs, and to identify barriers and facilitators for FDG-PET/CT de-implementation.

**Methods:** This Dutch multicenter, prospective, observational cohort study included patients with surgically resectable, locally advanced gastric or gastroesophageal junction (Siewert type III) adenocarcinoma. The de-implementation strategy engaged healthcare providers via focus group meetings, appointed 'local champions' facilitating FDG-PET/CT de-implementation in participating centers, and ensured publications in medical journals to raise awareness of the limited value of FDG-PET/CT. Monthly newsletters provided competitive feedback on FDG-PET/CT usage rates across centers. Interviews with healthcare providers and patients explored barriers and facilitators for de-implementation.

**Results:** Between January 1<sup>st</sup> and December 31<sup>st</sup> 2024, 109 patients were included. FDG-PET/CT use decreased from 41% (82/198) in 2023 to 24% (26/109) in 2024 in the PLASTIC-2 study. In total 15% (16/109) underwent FDG-PET/CT for another reason, mainly because patients were initially suspected of Siewert type II tumors, leaving 9% (10/109) undergoing FDG-PET/CT for staging of gastric adenocarcinoma. Median time to treatment start was 14 days (IQR 7-21). FDG-PET/CT was not performed in 83 patients, leading to estimated cost savings of €87.814 (€1.058 per patient). Facilitators for de-implementation included the updated guideline (October 4<sup>th</sup> 2023), collaboration within the PLASTIC-consortium, and patients' preference to avoid unnecessary radiation. Referring centers outside the dedicated upper gastro-intestinal centers, unfamiliar with the updated guideline, were the main barrier. Moreover, a lack of staff, especially in peripheral centers, delayed patient inclusion. **Conclusion:** Routine FDG-PET/CT use for gastric cancer staging was monitored and reduced to less than 10% during the PLASTIC-2 study and achieved substantial cost savings. Updated guidelines and strong collaboration were crucial for successful changing previous clinical practice. This project provides learning points for future de-implementation efforts.

## Endoglin loss in Collagen1 $\alpha$ 1-expressing fibroblasts enhances macrophage recruitment and promotes colorectal tumorigenesis

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**Background:** Fibroblast subsets contribute differently to the initiation, progression and metastasis of colorectal cancer (CRC). Endoglin on cancer-associated fibroblasts has been linked to enhanced tumor invasion and metastasis in CRC, yet its role in early tumor development remains unclear. Here, we investigated whether and how fibroblast subset-specific deletion of endoglin influences tumorigenesis in a chemically induced, colitis-associated CRC model.

**Methods:** We generated two tamoxifen-inducible fibroblast subset-specific endoglin (ENG) knockout (KO) mice, *Collagen1 $\alpha$ 1 CreERT2.ENG<sup>fl/fl</sup>* (ENG<sup>Col1 $\alpha$ 1-/-</sup>) and *Collagen1 $\alpha$ 2-CreERT.ENG<sup>fl/fl</sup>* (ENG<sup>Col1 $\alpha$ 2-/-</sup>). Polyp formation was induced by a single injection of azoxymethane, followed by three cycles of dextran sodium sulphate (DSS) to induce colitis. Fibroblast abundance and immune cell infiltration in polyps and colons were assessed by immunohistochemistry or flow cytometry. Neutrophil depletion in mice was performed by intraperitoneal injections of a Ly6G-depleting antibody twice weekly. Bulk RNA sequencing was performed on matched ENG-expressing (ENG<sup>+/+</sup>) and KO (ENG<sup>-/-</sup>) fibroblasts to investigate altered signaling pathways and secretome changes. Conditioned medium (CM) from ENG<sup>+/+</sup> or ENG<sup>-/-</sup> fibroblasts was used to study fibroblast-macrophage interaction *in vitro*.

**Results:** ENG<sup>Col1 $\alpha$ 1-/-</sup> mice developed significantly more colonic polyps than non-induced controls (20 vs. 6;  $P < 0.0001$ ), whereas ENG<sup>Col1 $\alpha$ 2-/-</sup> showed no significant difference in polyp count (16 vs. 13;  $P = 0.1557$ ). Polyps in ENG<sup>Col1 $\alpha$ 1-/-</sup> mice exhibited an increased number of activated fibroblasts, Ly6G<sup>+</sup> neutrophils, and F4/80<sup>+</sup> macrophages, while no changes were observed in ENG<sup>Col1 $\alpha$ 2-/-</sup> mice. Neutrophil depletion indicated that they are not responsible for the observed phenotype in ENG<sup>Col1 $\alpha$ 1-/-</sup> mice. To further investigate the tumor initiation stage, mice were sacrificed after the first DSS cycle. Flow cytometry analysis revealed an increase in F4/80<sup>+</sup> Ly6C<sup>-</sup> and CD206<sup>+</sup> macrophages in ENG<sup>Col1 $\alpha$ 1-/-</sup> colons, suggesting enhanced macrophage recruitment in KO mice during acute colitis. RNA sequencing revealed significant upregulation of *Ccl2*, a monocyte/macrophage chemoattractant, in ENG<sup>-/-</sup> fibroblast. Indeed, *in vitro*, ENG<sup>-/-</sup> fibroblast CM attracted more macrophages than ENG<sup>+/+</sup> fibroblast CM, confirming that ENG<sup>-/-</sup> fibroblasts promote macrophage attraction through their secretome.

**Conclusion:** Endoglin deletion in Collagen1 $\alpha$ 1-, but not Collagen1 $\alpha$ 2-, expressing fibroblasts promotes polyp formation by enhancing stromal expansion and macrophage recruitment, highlighting a protective fibroblast subset-specific role of endoglin in early colorectal tumorigenesis.

## Detection and treatment of peritoneal metastases in colon cancer: COLOPEC trial compared to routine practice

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**Background:** Peritoneal metastases are common and often underdiagnosed in patients with locally advanced colon cancer. Strategies such as adjuvant hyperthermic intraperitoneal chemotherapy and second-look have been proposed to prevent and early detect peritoneal metastases, respectively. The clinical impact of these interventions remains uncertain when compared with routine practice. The aim of this study is to compare 5-year overall and disease-free survival, and detection rates of peritoneal metastases in patients from the COLOPEC trial versus patients who were managed and followed according to routine clinical practice.

**Methods:** This propensity score-matched (1:1) comparative cohort study used data from the randomized multicentral COLOPEC trial (April 2015 and 2017) and a retrospective control cohort (January 2014-December 2015). In the COLOPEC trial, patients who underwent curative resection for pT4 or perforated colon cancer, received adjuvant hyperthermic intraperitoneal chemotherapy in the experimental arm, and a diagnostic laparoscopy at 18-months in both study arms to detect occult peritoneal recurrence. Control patients received standard postoperative surveillance without additional interventions. Matching factors included age, ASA score, pT stage, pN stage, tumor location, surgical strategy primary tumor, perforation, resection margin, and adjuvant systemic chemotherapy. The main outcome was overall survival. Secondary outcomes were disease-free survival, and cumulative incidence of peritoneal metastases. Outcomes were compared using Kaplan-Meier and competing risk analyses.

**Results:** 202 patients from the COLOPEC trial were matched to 202 controls treated in routine practice. No significant differences were found between the COLOPEC trial and control cohort regarding 5-year overall survival (70.2% to 72.8% ( $p = 0.769$ )) and 5-year disease-free survival (62.1% to 65.2% ( $p = 0.305$ )). 5-year cumulative incidence of peritoneal metastases in the COLOPEC trial was 24.4% (95% CI 18.7-30.5) compared to 9.5% (95% CI 5.9-14.2) in the control cohort ( $p < 0.001$ ). Cytoreductive surgery with HIPEC for peritoneal recurrence was performed in 28 (13.9%) and 7 patients (3.5%;  $p < 0.001$ ), respectively.

**Conclusion:** Increased awareness and abdominal re-explorations in the COLOPEC trial resulted in more diagnosed peritoneal metastases, however, 5-year overall and disease-free survival was similar compared to routine clinical practice. Substantially more salvage treatment for peritoneal recurrence seemed not to improve overall survival.

## Influence of relative hospital volume on locoregional recurrence and survival in patients with complex colon cancer

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**Background:** The association between hospital volume and long-term oncological outcomes in colon cancer remains debated, but might be relevant for complex colon cancer (CCC; cT4 or infectious tumour complications). This study assessed the impact of relative hospital volume on locoregional recurrence (LRR) and overall survival (OS) in patients with CCC.

**Methods:** In this cross-sectional retrospective study, patients from 48 hospitals in the Netherlands who underwent resection for non-metastatic colon cancer in 2014 and 2015 were selected. Hospitals were classified into quartiles based on percentage of CCC resections of their annual volume (low Q1, medium Q2-Q3, high Q4). Primary outcome was 5-year LRR, defined as any intra-abdominal recurrence, including peritoneal metastases, which was assessed using competing risk analysis. Secondary outcome was 5-year OS and estimated using Kaplan-Meier analysis.

**Results:** Among 8,164 patients, 977 had CCC (12.0%). Low-volume comprised <11.7% CCC resections, medium-volume 11.7%-18.3%, and high-volume >18.3% CCC resections. Five-year LRR rate after primary resection of CCC was significantly lower in high-volume hospitals: high-volume 20.2% versus medium-volume 29.9% and low-volume 34.6%,  $p=0.004$ . Treatment in high-volume hospitals was independently associated with a reduced risk of LRR (HR 0.59, 95% CI (0.45-0.77)). Five-year OS was highest in high-volume hospitals (67.1%), but not significantly different from low-volume (56.0%) and medium-volume hospitals (58.2%) (log-rank  $p=0.12$ ).

**Conclusion:** Patients treated at hospitals with a high relative volume of CCC resections had a lower risk of LRR, while OS did not differ significantly across hospital volumes.

## Long-term changes in Quality of Life and Bowel Function in Rectal Cancer Patients Managed with a Watch-and-Wait Strategy After Clinical (Near) Complete Response

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**Background:** Organ preservation strategies, including the Watch-and-Wait (W&W) approach, have gained increasing interest in the management of rectal cancer patients achieving a clinical complete response (cCR) following neoadjuvant (chemo)radiotherapy. This development reflects a broader shift towards individualized, less invasive treatment strategies that aim to maintain oncological safety while preserving quality of life (QoL) and functional outcomes. Although short- to mid-term outcomes of W&W have been encouraging, the majority of evidence stems from retrospective studies with limited follow-up and a predominant focus on anorectal function. Moreover, radiotherapy itself may have long-term effects on bowel function and faecal continence, which can adversely impact QoL. Therefore, robust data on long-term outcomes beyond two years remain scarce. This study extends the follow-up of a previously published prospective cohort to five years, aiming to evaluate long-term changes in QoL and bowel function in rectal cancer patients managed with a W&W approach after achieving a clinical (near-) complete response to neoadjuvant (chemo)radiotherapy.

**Methods:** 176 patients from a Dutch prospective cohort (2014-onwards), with both 2 and 5-year follow-up data were included. QoL was assessed using EORTC QLQ-C30 and colorectal cancer-specific QLQ-CR29; bowel function was evaluated using the Low Anterior Resection Syndrome (LARS) score.

**Results:** Of the 176 patients, 91 (67%) were male, with a median age of 64 years (range 44–84). At 5 years, 149 (85%) were still in W&W, 8 (4%) underwent local excision, and 19 (11%) underwent total mesorectal excision. In the W&W group, QLQ-C30 scores remained largely stable between 2 and 5-year follow-up, with only a small decline in physical functioning (mean diff = -1.69,  $p = 0.034$ ). CR29 analyses (available for  $n = 101$ ) revealed significant worsening of flatulence ( $p = 0.038$ ), fecal incontinence ( $p = 0.041$ ) and a substantial decrease in sexual interest in both men and women (all  $p < 0.001$ ). Mean LARS scores increased from 20.2 to 21.4 ( $p = 0.046$ ). However, no statistically significant difference was observed in the distribution of LARS categories between 2 and 5 years (McNemar's test:  $\chi^2(3) = 3.43$ ,  $p = 0.33$ ).

**Conclusion:** At 5 years, rectal cancer patients managed with W&W maintained good QoL and stable bowel function, with no shift in LARS categories. Some deteriorations were observed in selected colorectal-specific domains, which may partly reflect aging effects. Overall, these findings support favorable long-term functional outcomes with W&W.

## The Impact of Post-Cholecystectomy Diarrhoea on Patient-Reported Quality of Life: a Cross-sectional, Comparative Study of Two Independent Cohorts.

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**Background:** Post-cholecystectomy diarrhoea (PCD) affects 8–20% of patients and often persists long-term. While overall quality of life (QoL) following cholecystectomy is generally good, to what extent PCD affects QoL and social functioning remains unknown. This study aims to determine the impact of PCD on QoL and assess decisional regret to undergo cholecystectomy and perceived adequacy of preoperative counseling.

**Methods:** This cross-sectional study combined patient-reported data from a Dutch Facebook community of post-cholecystectomy patients with data from the multicentre SECURE clinical trial. Patients were analysed in three groups: Facebook PCD group (n=148), SECURE PCD group (n=63), and the total SECURE group (n=735). PCD was defined as  $\geq 3$  loose stools/day (Bristol SFS 5–7) lasting  $>4$  weeks postoperatively. QoL was assessed using EQ-5D and the Gastrointestinal Quality of Life Index (GIQLI). Decisional regret and preoperative counselling adequacy were evaluated within the Facebook PCD group.

**Results:** Of 883 included patients, PCD was identified in 8.6% of the total SECURE postoperative population (n = 63/735), alongside 148 cases from the Facebook PCD group, allowing comparison across two independent populations. QoL scores, assessed 1-4 years after cholecystectomy, were lowest in the Facebook PCD group (EQ-5D=0.79; GIQLI=92), intermediate in the SECURE PCD group (EQ-5D=0.84, GIQLI=106), and highest in the total SECURE group (EQ-5D=1, GIQLI=120). QoL differences exceeded established minimal important differences for both measures. The most affected domains were pain/discomfort and social functioning. Among Facebook participants, 32.8% reported decisional regret and 94.9% felt inadequately counselled about postoperative diarrhoea risk.

**Conclusion:** PCD is associated with clinically meaningful reductions in generic and gastrointestinal QoL, persisting years after cholecystectomy. The high prevalence of decisional regret and inadequate counselling underscore the need for improved recognition, patient education, and targeted management of PCD in clinical practice.

## Covered versus bare-metal stenting of the mesenteric arteries in patients with chronic mesenteric ischaemia (CoBaGI): A cost-utility analysis

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**Background:** Chronic mesenteric ischaemia (CMI) is a debilitating vascular disorder causing severe postprandial abdominal pain, fear of eating and weight loss, most frequently caused by an atherosclerotic mesenteric artery stenosis. Until recently, endovascular revascularization with a bare metal stent (BMS) was first-line therapy, but long-term outcomes were limited due to in-stent stenosis and high re-intervention rates. In a recent randomized controlled trial (RCT), primary patency rate of covered stents (CS) was shown to be superior to BMS, but cost-utility of CS remains unknown. Therefore, the aim of this study was to evaluate the 24-month cost-utility of CS versus BMS from a healthcare perspective, expressed in costs and quality-adjusted life years (QALYs).

**Methods:** Data from a multicentre RCT, including 94 patients randomized to receiving a CS or BMS were analysed. Costs included intervention, re-interventions, in-hospital and outpatients resource use. QALYs were derived from utilities. Missing data were handled using multiple imputation. Cost-utility analyses were performed using nonparametric bootstrapping to estimate incremental costs. Incremental cost effectiveness ratio (ICERs) and net monetary benefit (NMB) were calculated and a distribution of bootstrap replicates was visualized in a cost-effectiveness plane.

**Results:** CS were associated with lower mean total costs (€ 27 019 [95% BSI € 15 675 – € 43 056] vs € 36 668 [95% BSI € 17 684 – € 73 052]) and higher mean QALYs (1.26 [95% BSI 1.12 – 1.39] vs. 1.22 [95% BSI 1.08– 1.35]) compared to BMS. Incremental analysis showed a potential cost saving of € 9 716.83 (95% BSI-€ 45 044.68 – € 25 611.01) and a QALY gain of 0.058 (95% BSI- 0.12 – 0.24), with most bootstrap replicates in the southeast quadrant of the cost-effectiveness plane. Positive NMB were observed across commonly used willingness-to-pay thresholds.

**Conclusion:** In conclusion, at 24 months, use of CS in patients with atherosclerotic CMI was associated with QALY gains and reduced costs, suggesting that CS are a cost-utility favourable strategy compared with BMS.

## Sequential Hypo- and Normothermic Perfused Extended Criteria Livers: Two-center Results of 205 Cases

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**Background:** With the current organ shortage, liver machine perfusion is increasingly used to test and select extended criteria donor (ECD)-livers in an attempt to counter decreasing quality of available organs. Combining sequential oxygenated hypothermic and normothermic machine perfusion, linked by one hour of controlled oxygenated rewarming (DHOPE-COR-NMP) can be used to resuscitate donor livers and subsequently perform viability assessment. We aimed to analyze follow-up data from DHOPE-COR-NMP procedures for ECD-livers performed in two centers.

**Methods:** All ECD-livers treated with DHOPE-COR-NMP between March 2019 and October 2024 were included, guaranteeing a minimum follow-up period of 6 months. Livers were classified as ECD based on factors such as elevated laboratory values, or age above 61 years in the case of donation after circulatory death (DCD). The main outcome measure was death-censored graft survival. Secondary outcomes included overall patient- and graft survival, as well as post-transplant complications, such as post-transplant cholangiopathy and anastomotic strictures (AS). Outcome measures were reported at one year and any time post-transplant.

**Results:** Of the 205 DHOPE-COR-NMP procedures that were performed, 143 resulted in a liver transplant (utilization rate 70%) with a majority of ECD-DCD grafts (n=137, 96%). Death-censored graft survival and patient survival at 1 year were both 92%. Primary non function did not occur in this cohort. Portal vein thrombosis occurred 3 times (2.1%) and hepatic artery thrombosis occurred 5 times (3.5%). The 1-year cumulative incidence of post-transplant cholangiopathy was 5%. Of all post-transplant cholangiopathy cases, 2 patients were successfully re-transplanted and one other case resulted in patient death.

**Conclusion:** This study illustrates that graft resuscitation and subsequent viability assessment through DHOPE-COR-NMP allows for safe transplantation of ECD-livers with excellent outcomes. The incidence of post-transplant cholangiopathy is low, especially considering the fact that this cohort mainly consisted of high-risk ECD-DCD livers.

## Cryptoglandular Anal Fistula Core Outcome Measurement Set (AFCOMS): Standardised Definitions and Measurement Instruments

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**Background:** Cryptoglandular anal fistula is a condition that significantly impairs quality of life in patients. Despite the recent development of the Anal Fistula Core Outcome Set (AFCOS), which identified ten key outcomes, variation in outcome definitions and measurement instruments hampers comparability across studies and limits evidence synthesis. An essential final step to improve future comparability is the development of a Core Outcome Measurement Set (COMS) aligned with AFCOS; this study aimed to establish such a COMS through an international, consensus-driven process.

**Methods:** This study was conducted in three phases according to the Core Outcome Measures Effectiveness Trials (COMET) methodology. Phase 1 included a scoping review to identify definitions and measurement instruments for all AFCOS outcomes. Phase 2 involved summarising available evaluation of psychometric properties and overall feasibility of each instrument according to the COSMIN criteria. Phase 3 consisted of an international two-round Delphi survey and final consensus meeting with patients and healthcare professionals to agree on definitions, measurement instruments and timepoints.

**Results:** In Delphi round 1, 92 of 110 participants (85 health professionals, 7 patients, from 18 countries) completed the survey (84% overall response). Many instruments had insufficient content validity when evaluated by patients. In round 2, 70 of 76 participants (63 professionals, 7 patients) completed the survey (92% response). A final consensus meeting was attended by 27 participants (26 clinicians and 1 patient representative). Clinical fistula healing was defined as the absence of discharge symptoms, abscess, infection or inflammation, with no recurrence or persistence for  $\geq 6$  months. Recurrence was defined as the reappearance of symptoms after this healing period. Radiological healing was defined as complete resolution of any visible fistula tract and inflammatory mass, +/- fibrosis on MRI. Development of an additional fistula was defined as a separate, anatomically distinct tract. Complications were classified according to the Clavien-Dindo system, and reinterventions were limited to surgical or radiological procedures. The Anal Fistula Quality of Life Scale was selected to assess quality of life, fistula symptoms and psychological impact, the Vaizey score to assess continence, and a numerical rating scale to assess patient satisfaction. Timepoints were set at 3- and 12-months post-treatment.

**Conclusion:** AFCOMS provides standardised outcome definitions and measurement tools for use in future cryptoglandular anal fistula research, enhancing reporting consistency and enabling evidence synthesis.

## Low recurrence rates after endoscopic eradication therapy with RFA of Barrett's neoplasia: Long-term follow-up results from the Dutch Barrett's registry

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**Background:** Endoscopic eradication therapy (EET) with RFA ± endoscopic resection, is the recommended treatment of Barrett's esophagus (BE) with early neoplasia. We report long-term results of our cohort of BE patients, successfully treated with EET between 2008-2018 in a centralized setting in BE expert centers in the Netherlands.

**Methods:** All patients who underwent successful EET (i.e. complete eradication of BE and dysplasia/cancer) were included. Data was collected up to September 2025. Endoscopic FU was defined as time from treatment until last FU endoscopy. Vital FU was defined as time from treatment until recurrence, vital status data collection, or death. Primary outcome was recurrent dysplasia/cancer. Recurrences were defined as low-grade dysplasia (LGD) in random biopsies from a normal appearing gastroesophageal junction (GEJ), dysplasia/cancer in recurrent BE eligible for endoscopic treatment, or advanced cancer ineligible for endoscopic treatment.

**Results:** We included 1269 patients (1038 male, median age 66 yrs, median BE of C2M4) with baseline LGD in 27%, and high-grade dysplasia (HGD)/cancer in 73%. Median endoscopic FU was 65 mo. Endoscopic FU was already discontinued in 58% due to: guideline recommendation to stop (20%), limited life expectancy (18%), or death (14%). Recurrent dysplasia/cancer was detected in 91/1269 (annual risk 1.3%). In total, 73 endoscopies were needed to find one recurrence. In 9/91 recurrences were diagnosed after the guideline-recommended time point at which FU can be discontinued. Overall, 84% of recurrences was amenable for curative endoscopic treatment, while 16% (1% of cohort) was advanced cancer. Cancer-related death occurred in 11/1269 (0.9%). In contrast, during a median vital follow-up of 101 months, 319 patients (25%) had unrelated death. In patients with baseline LGD, recurrent dysplasia/cancer was detected in 5% (annual risk 0.7%). The majority was amenable for curative endoscopic treatment (84%). The majority (89%) of recurrences were found during routine FU. The remaining were detected in patients presenting with symptoms. In patients with baseline HGD/cancer, recurrent dysplasia/cancer was found in 8% (annual risk 1.0%). Overall, 83% were amenable for endoscopic treatment. Most (90%) recurrences were found during routine FU. The remaining were detected in patients presenting with symptoms.

**Conclusion:** Successful EET in an expert setting, yields a long-term durable effect, with low recurrence risks, and <1% cancer related death after median vital FU of 8 yrs. The risk of developing symptomatic cancer recurrence after guideline advised cessation of FU is extremely low.

## Low rates of lymph node metastases and recurrence following radical endoscopic resection of T1b adenocarcinoma in Barrett's esophagus: Evidence from the PREFER study supports a strict endoscopic surveillance strategy with annual CT/PET.

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**Background:** Strict follow-up (FU) after radical (RO) endoscopic resection (ER) is gaining recognition as a valid strategy for submucosal (T1b) esophageal adenocarcinoma (EAC). However, the optimal FU is still unclear. We report results of the first prospective study (PREFER, NCT03222635) on strict FU of T1b EAC after RO ER, now that all patients have reached  $\geq 2$  yrs FU.

**Methods:** T1b patients treated with RO ER were included at 19 centers in Europe and Australia. Submucosal invasion  $\geq 500\mu\text{m}$ , poor differentiation, and lymphovascular invasion were considered risk factors for lymph node metastases (LNM). Lesions were low-risk (LR) in case of only superficial submucosal invasion ( $< 500\mu\text{m}$ ), and high-risk (HR) when  $\geq 1$  risk factors for LNM was present. All underwent baseline re-staging with gastroscopy, endoscopic ultrasound (EUS) and (PET-)CT 6-8 weeks after ER, and entered FU in case of cT1bN0M0: gastroscopy and EUS 3-monthly during the first 2 yrs, 6-monthly during yr 3 and 4, and once in yr 5. (PET-)CT was repeated at 1 yr FU. Primary outcomes were survival; secondary outcomes were LNM, intraluminal recurrence ineligible for endoscopic treatment, and distant metastasis.

**Results:** We included 157 patients (128 male, median age 70 yrs). In LR-T1b patients (n=54), 3/54 (6%) developed LNM, 1/3 died of EAC. Intraluminal recurrence ineligible for endoscopic treatment developed in 2/54 (4%), both treated curatively.

In HR-T1b patients (n=103), 10/103 (10%) developed LNM, all detected at curable stage. In 8/103 (8%) intraluminal recurrences ineligible for endoscopic treatment developed: all detected at a curable stage but 5/8 were unfit for or refused curative treatment, of which 3/8 died of EAC. Furthermore, 4/103 (4%) developed distant metastases, all without intraluminal recurrence/LNM: 2/4 developed liver metastases, one died of EAC, and the other died of heart failure; 1/4 underwent resection of lung metastasis but developed new distant metastases after 2 years and now receives palliative care; 1/4 developed non-regional LNM (i.e. cervical and sacral) with policy pending. Only 1/4 was detected with (PET-)CT at 1 year FU, 3/4 were detected in year 3 with CT due to symptoms or during regular FU EUS. In this cohort, non-EAC mortality (14/157; 9%) exceeded EAC-related mortality (5/157; 3%).

**Conclusion:** The interim results show most T1b patients have event-free FU, are more likely to die of non-EAC cause, and show the majority of LNM/intraluminal recurrences were diagnosed at a curable stage. Moreover, 3/4 distant metastases were detected after the (PET-)CT at 1 yr FU. Given the unknown incidence after yr 1 and improved treatment options, we advise annual (PET-)CT.

## Evaluation of a real-time Computer-aided Detection and Diagnosis system for Barrett's neoplasia during live endoscopic procedures: A multicenter prospective study

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**Background:** Computer-aided detection (CADE) systems have the potential to improve endoscopic detection of early neoplasia in Barrett's esophagus (BE). Additionally, computer-aided diagnosis (CADx) systems may assist in subsequent characterization of detected lesions. We aimed to test a recently developed combined CADE/CADx system for BE neoplasia during live endoscopic procedures.

**Methods:** CADE and CADx were evaluated during endoscopic procedures of BE patients in 3 tertiary centers by expert endoscopists. First, ground truth for CADE (i.e. the presence or absence of a visible lesion requiring targeted biopsy) was established by the endoscopist using white light endoscopy (WLE). If a visible lesion was identified, it was subsequently characterized using narrow band imaging (NBI) as either normal or suspicious of neoplasia, serving as ground truth for CADx. Then, the CADE/CADx study protocol was initiated, involving endoscopic examination in 2cm intervals throughout the BE segment, with real-time support of CADE. Any lesion identified by CADE was evaluated by CADx after which targeted biopsies were obtained or the lesion was resected. Primary outcomes were stand-alone sensitivity of CADE, and the mean number of false-positive CADE detections per patient. Secondary outcomes were stand-alone sensitivity of CADx for characterizing CADE-detected lesions, and the reduction of CADE false-positive detections by CADx.

**Results:** In total, 182 patients were enrolled. In 74 patients, a visible lesion was found in WLE by the endoscopist. The CADE system detected 67/74 lesions, resulting in a sensitivity of 91%. Of all detected lesions, 63% contained neoplasia (i.e. LGD, HGD, or EAC). In 108 procedures, no visible lesion was identified by the endoscopist in WLE. In these procedures, CADE generated 69 false-positive detections in total (0.63 false-positives per procedure). Of all 67 CADE-detected lesions, 58 were considered suspicious for neoplasia in NBI by the endoscopist. All 58 lesions were correctly classified as neoplastic by CADx, resulting in a sensitivity of 100%. Furthermore, CADx discarded 35/69 CADE false-positive detections, reducing the mean number of false positives per procedure from 0.63 to 0.31. Extrapolated to clinical practice, this would result in one additional targeted biopsy every 3 patients.

**Conclusion:** This is the largest study to date to evaluate a combined CADE/CADx system for real-time detection of BE neoplasia. The CADE system demonstrated a per-patient sensitivity of 91%, with an acceptable number of false positive detections. The CADx system showed potential to further reduce false-positives, without discarding any prior CADE true positive detections.

## 10-year trends in the proximal serrated polyp detection rate in a FIT-based colorectal cancer screening program

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**Background:** The proximal serrated polyp detection rate (PSPDR) has been introduced as a quality indicator for endoscopist' performance. However, longitudinal data on PSPDR and its influencing factors remain limited.

**Methods:** Colonoscopy data from the Dutch FIT-based screening program were linked with corresponding pathology records (2014-2023). PSPDR was defined as the proportion of colonoscopies in which at least one serrated polyp proximal to the descending colon was detected. Mixed-effects logistic regression analysis was used to identify factors associated with higher odds of detecting a proximal serrated polyp, including patient age, sex, and year of colonoscopy. Secondly, endoscopists who began screening colonoscopies in 2014 or 2015 were grouped into quartiles based on their baseline PSPDR, and changes in PSPDR over subsequent two-year intervals were evaluated for each group. Endoscopists who performed <75 procedures were excluded. Thirdly, all endoscopists were grouped based on the period in which they began performing screening colonoscopies (2014-2015, 2016-2019, and 2020-2023). PSPDR of these groups was compared within colonoscopies performed between 2020-2023, using mixed-effects logistic regression.

**Results:** We included 468.320 quality-assured colonoscopies for the calculation of PSPDR, performed by 521 endoscopists. Endoscopists had a median overall PSPDR of 12.7% (IQR 9.2-16.9). Median PSPDR increased from 10.0% (6.3-14.0) in 2014 to 14.3% (10.1-19.2) in 2023. Colonoscopy year (OR 1.04 CI95%1.04-1.05), female sex (OR 1.06 (1.00-1.08)), and older age (OR 1.01 (1.00-1.01)) were significantly associated with higher odds of detecting a proximal serrated polyp. In total 323 endoscopists started performing colonoscopies in 2014-2015, 124 in 2016-2019 and 74 in 2020-2023. Baseline PSPDR of endoscopists who started in 2014-2015 was <6.4% (group 1), 6.4-10.4% (group 2), 10.5-13.9% (group 3), and >13.9% (group 4). In the final two-year interval, 5% had an PSPDR <6.4%, 23% between 6.4-10.4%, 27% between 10.4-13.9% and 45% >13.9%. Compared with endoscopists who started in 2014-2015, the odds of detecting a proximal serrated polyp in 2020-2023 were 1.23 (1.12-1.36) for those who started in 2016-2019 and 1.21 (1.07-1.36) for those who started in 2020-2023.

**Conclusion:** Median PSPDR among participating endoscopists increased from 10% in 2014 to 14.3% in 2023, with higher rates seen in women and older participants. Endoscopists who started in 2014 showed substantial improvement over time, reflecting growing awareness and evolving best practices.

## Comparing outcome of enteroscopy-assisted ERCP for benign hepaticojejunostomy stenosis following pancreatoduodenectomy versus Roux-en-Y reconstruction

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**Background:** Enteroscopy-assisted ERCP (EA-ERCP) is an established, minimally invasive treatment for benign hepaticojejunostomy (HJ) stenosis and is safer than percutaneous or endosonography-guided alternatives. Technical outcomes of EA-ERCP may be lower in anatomically complex cases, such as Roux-en-Y (RY) reconstruction compared to pancreatoduodenectomy (PD). Optimal therapy for HJ stenosis, balloon dilatation alone or combined with stenting, remains uncertain. This study evaluated efficacy and safety of EA-ERCP in PD versus RY patients and assessed outcomes of balloon dilatation and stent placement.

**Methods:** This single-center retrospective study included patients treated with EA-ERCP for suspected benign HJ stenosis between 2018–2025. Eligible patients had undergone PD or HJ with RY reconstruction; post-gastric bypass anatomy was excluded. Procedures were performed using short- or long-type double-balloon enteroscope. Stenoses were treated with balloon dilatation alone or, if insufficient, with stent placement (covered metal Nagi stent when feasible, otherwise multiple plastic stents). Recurrence was typically managed with repeat balloon dilatation plus stenting. Primary outcome was technical success. Secondary outcomes were clinical success (symptom-free 14 days post-EA-ERCP), adverse events (AGREE classification) (AE), recurrence rate and need for reintervention.

**Results:** A total of 192 patients underwent 320 EA-ERCPs. Benign HJ stenosis was confirmed in 102/192 (53%) index EA-ERCPs. Median total follow-up was 17 months [IQR: 8-35]. Overall technical success was 279/320 (87%): 194/220 (88%) in PD group and 85/100 (85%) in RY group [p=0.16]. Technical failures in PD vs RY included failure to reach the HJ, cannulate the bile duct, or complete therapy (6%, 6%, 1% vs 13%, 2%, 0%). Overall clinical success was 84% (PD 86% vs RY 78%, p=0.35). AE rate was 5% in both groups, with no severe AEs. Balloon dilatation was performed in 79 patients; recurrence requiring reintervention occurred in 37/79 (47%) at a median of 8 months [IQR: 2-29]. One-, two- and three-year balloon dilated HJ patency was 68%, 59% and 40%. Stenting was initiated in 33 patients (24 plastic, 9 Nagi). Stent dysfunction occurred in 21% of plastic stents and 44% of Nagi stents. Recurrence after stent therapy required reintervention in 8/33 (26%) cases at a median of 8 months [IQR 1-14], with equal recurrence in PD and RY.

**Conclusion:** EA-ERCP achieves high and comparable technical and clinical success in PD and RY anatomy with a low AE rate, supporting its role as first-line therapy for benign HJ stenosis in both anatomical reconstructions. Future studies should focus on optimizing therapeutic strategies to reduce recurrences.

## Three-prong asymmetric tip FNB needle to obtain tissue specimens of pancreatic ductal adenocarcinoma for personalized based chemotherapy

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**Background:** Patients with pancreatic ductal adenocarcinoma (PDAC) are increasingly being treated with chemotherapy, either as (neo-)adjuvant or palliative treatment. Histological confirmation is often required prior to treatment, with fine needle biopsy (FNB) being the preferred diagnostic approach. However, current FNB-needles achieve a diagnostic accuracy ranging from only 67 to 87%. Furthermore, the guidelines of the European Society of Gastrointestinal Endoscopy do not provide specific recommendations regarding the optimal number of passes during a FNB procedure with a three-prong asymmetric tip FNB-needle. The aim of this study was to investigate the diagnostic accuracy of a novel three-prong asymmetric tip FNB needle (Micro-Tech, Nanjing, China) and to determine after how many passes PDAC was diagnosed. Additionally, the study evaluated the added value of rapid on-site evaluation (ROSE).

**Methods:** We performed an investigator-initiated prospective cohort study in three hospitals in The Netherlands. Patients with suspected PDAC and an indication for EUS-FNB were included. During each procedure, three biopsies were obtained and placed in separate formalin containers. ROSE was performed until ROSE was representative.

**Results:** In 125 of 138 included patients the diagnosis PDAC could be confirmed by using the three-prong asymmetric tip FNB needle (diagnostic accuracy of 90.6%). Following the second and third pass, the diagnostic confirmation rate was 92.0% and 96.8%, respectively. Although ROSE was not representative after the first pass in 48 patients, a positive histological result was still obtained in 30 of these cases (62.5%). A total of 14 complications were seen; 10 patients developed an acute pancreatitis; two patients after only EUS-FNB, and eight after a combination of EUS-FNB with Endoscopic Retrograde Cholangiopancreatography (ERCP).

**Conclusion:** The three-prong asymmetric tip FNB needle demonstrated a high diagnostic accuracy, with a diagnostic confirmation rate of 92.0% after two passes. However, ROSE had no additional diagnostic value in this group with high-likelihood PDAC, it can be considered in atypical difficult cases.

## EUS-guided Choledochoduodenostomy with EC-LAMS is a Cost-Effective Alternative to ERCP for Malignant Distal Biliary Obstruction

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**Background:** Endoscopic ultrasound-guided choledochoduodenostomy (EUS-CDS) with electrocautery-enhanced lumen-apposing metal stent (EC-LAMS) is increasingly considered as an alternative to endoscopic retrograde cholangiopancreatography (ERCP) for malignant distal biliary obstruction (MDBO). Although the high cost of EC-LAMS currently limits its use as first-line therapy, its higher technical success, reduced need for re-interventions, and shorter procedure time may offset these costs. This study compares intramural costs of EUS-CDS with EC-LAMS versus ERCP in management of MDBO. **Methods:** In this single-center retrospective cohort study, 200 patients underwent ERCP (n = 156) or EUS-CDS (n = 44). Primary outcomes were total intramural and post-procedural costs ≤30 days of the procedure. Secondary outcomes included technical and clinical success, adverse events (AEs), re-interventions, hospital stay, and procedure time.

**Results:** Mean total intramural costs did not differ significantly between patients undergoing EUS-CDS and ERCP (€8654.47 vs €8046.04, p = 0.644). EUS-CDS demonstrated significantly higher technical (93% vs 75%, p = 0.009) and clinical success rates (93% vs 69%, p = 0.001) than ERCP. Patients undergoing EUS-CDS had lower rates of acute pancreatitis (0% vs 13%, p = 0.009), lower re-intervention rates (11% vs 39%, p < 0.001), and shorter procedure times (EUS-CDS: 21 minutes [IQR: 14-37]; ERCP: 33 minutes [IQR: 26.5-40.5], p = 0.002). Trends toward fewer AEs (16% vs 29%, p = 0.084) and shorter hospital stay (EUS-CDS: 1 day [IQR: 1-3]; ERCP: 2 days [IQR: 1-5], p = 0.067) in EUS-CDS patients were also observed.

**Conclusion:** EUS-CDS with EC-LAMS is a cost-effective alternative to ERCP in management of MDBO due to superior clinical outcomes, including higher technical and clinical success rates, lower incidence of pancreatitis, lower re-intervention rates, and shorter procedure time, while maintaining comparable total intramural costs.

## Combination of NSAIDs and prophylactic pancreatic duct stent is superior in preventing post-endoscopic retrograde cholangiopancreatography pancreatitis in patients with one or more unintentional pancreatic duct cannulations (FLUYT-2)

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**Background:** Post-endoscopic retrograde cholangiopancreatography (ERCP) pancreatitis (PEP) has an incidence of ~10%. Both the European and American Society of Gastrointestinal Endoscopy recommend a 100 mg diclofenac or indomethacin suppository before ERCP as primary PEP prophylaxis, and suggest inserting a pancreatic duct (PD) stent following multiple unintentional PD cannulations. However, it remains unclear whether PD stent placement after a single unintentional PD cannulation, combined with NSAIDs, offers additional benefit in preventing PEP. The FLUYT-2 trial aimed to determine whether this combination is more effective than NSAIDs alone in preventing PEP in patients with one or more unintentional PD cannulations.

**Methods:** This study was designed as an additional arm of the initial FLUYT trial, comparing aggressive hyperhydration and rectal NSAIDs with NSAIDs alone in preventing PEP. This trial found no significant difference. In the FLUYT-2 trial, 275 patients who underwent PD stent placement after one or more unintentional PD wire cannulations were included from four academic and 18 community hospitals in The Netherlands. This cohort was compared with a subgroup of 262 patients from the FLUYT-trial who did not receive PD stent placement after unintentional PD cannulation. The PD stents were 5cm, 5 French, single pigtail or straight stents without an internal flange. The primary endpoint was the PEP incidence. Secondary endpoints included severity of PEP, ERCP-related complications, and the spontaneous PD stent migration rate

**Results:** Of the 275 included patients, 217 had a successfully placed straight or pigtail PD stent that remained in place during the procedure. PEP incidence was 19.8% in the no-PD stent group vs 12.4% in the PD stent group ( $p=0.03$ ). In the subgroup of 19 patients with a dislocated stent during the procedure, the PEP incidence was 15.8%. PEP severity and hospital stay did not differ between both groups (1 night [IQR 1-4] in the no-PD stent group vs 1 night [IQR 1-3] in the PD stent group). The incidence of other ERCP-related complications were also comparable. Pigtail stents had a lower PEP incidence compared to straight stents (10.8 vs 13.5%) and were more likely to dislocate spontaneously within two weeks after ERCP (76.7% vs 64.6%). A total of 53 PD stents had to be removed by gastroscopy after abdominal X-ray, with no cases of pancreatitis following.

**Conclusion:** Insertion of a plastic PD stent following unintentional PD cannulation in combination with rectal NSAIDs is superior to NSAIDs alone in preventing PEP. We recommend placement of a 5cm 5Fr single pigtail PD stent after common bile duct intervention in patients with even a single unintentional PD cannulation.

## Endoscopic Ultrasound guided Hepatico-gastrostomy: a real-life cohort from the Netherlands

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**Background:** In patients with altered surgical anatomy, inadequate drainage of the left hepatic duct, or duodenal obstruction, endoscopic ultrasound-guided hepaticogastrostomy (EUS-HGS) enables internal biliary drainage via the stomach. This may reduce bile salt loss and improve quality of life compared to percutaneous transhepatic drainage. However, real-world outcomes remain unclear and are likely overestimated in existing literature due to selection and reporting bias. We evaluated nationwide, routine-practice outcomes of this technically demanding procedure.

**Methods:** In this multicenter retrospective cohort study, all consecutive patients undergoing attempted EUS-HGS between 2009 and 2025 in nine Dutch hospitals were included. The primary outcome was technical success, defined as adequate stent positioning confirmed endoscopically and fluoroscopically. Secondary outcomes included clinical success (no need for additional biliary drainage during follow-up), procedural and post-procedural complications (AGREE criteria), and time to recurrent biliary obstruction (RBO), defined as symptoms and/or interventions indicating renewed obstruction. Predictors of RBO were assessed using competing-risk regression, and overall survival by Kaplan-Meier analysis.

**Results:** A total of 107 procedures in 105 patients were included. Median age was 68 years [IQR 59–76], and 55% were male. Overall technical success was 77% (81/105). Bile duct puncture was attempted in 98/105 patients (93%); succeeded in 95/98 (97%); deep guidewire insertion in 92/95 (97%); tract dilation in 88/92 (96%); and stent placement in 85/88 patients (97%), with final technical success in 81/85 (95%). Most patients (62%) received a dedicated partially covered SEMS; 36% received a dual-stent configuration (uncovered SEMS for anchoring + a covered SEMS to prevent leakage). Procedural and post-procedural complications occurred in 15% and 17% of patients, respectively, including one procedure-related death. Among technically successful cases, clinical success was achieved in 63/81 (78%), corresponding to an intention-to-treat clinical success rate of 60% (63/105). RBO occurred in 23/81 patients (28%) during a median follow-up of 61 days [IQR 23-131]. No significant predictors of RBO were identified. Median overall survival was 91 days [IQR 66-155], with no survival differences between stent types ( $p=0.81$ ).

**Conclusion:** EUS-HGS was technically successful in nearly four of five patients, and adequate drainage was achieved in over three-quarters of these. These real-world outcomes are lower than those typically reported, underscoring the need for prospective studies to refine patient selection, standardize stent strategies, and reduce complications.

## The effect of intensive physical exercise on fatigue and quality of life in patients with quiescent inflammatory bowel disease: a multicentre randomised controlled trial (ENERGIZE-IBD trial)

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**Background:** Inflammatory bowel disease (IBD) is a chronic relapsing–remitting condition that impairs health-related quality of life (HRQoL), even in remission. Beyond physical symptoms, IBD is associated with anxiety, depression, and persistent fatigue, affecting up to 70% of patients during flares and 40% in remission. Despite its impact, specific therapies for chronic fatigue in IBD are lacking. Physical exercise has shown benefits in other immune-mediated diseases, but data in IBD are limited. A previous pilot study from our research group of a 12-week supervised exercise programme improved fatigue, HRQoL, and fitness. This study, a randomised controlled trial, was needed to validate these findings.

**Methods:** In a multicentre, randomised trial, adults (18–67 years) with quiescent IBD and chronic fatigue ( $\geq 3$  months; IBD-F section I  $\geq 11$ ) were randomised 1:1 either to intervention or control group. The intervention comprised a 12-week supervised exercise programme with three one-hour personalised sessions per week of 30 min aerobic training and 30 min resistance training and included cardiopulmonary exercise testing pre- and post-intervention. Controls received standard care and written advice about daily exercise. Primary outcomes were fatigue (IBD-F) and HRQoL (IBDQ) at 12 weeks. Secondary outcomes included anxiety and depression (HADS), sleep quality (PSQI), cardiorespiratory fitness, body composition, disease activity, and adverse events.

**Results:** In total, 100 patients were randomised. Of them, 93 participants completed the study and were included in the analysis (mean age  $43.5 \pm 11.4$  years; 73% female; 61% CD, 37% UC, 2% IBD-U). Fatigue decreased more in the intervention group as compared to the control group (adjusted mean 36.6 (31.3–41.9) vs 46.0 (40.8–51.1);  $p = 0.014$ , respectively) and HRQoL increased more in the intervention group as compared to the control group (adjusted mean 175.6 (169.8–181.4) vs 166.3 (160.6–172.0);  $p = 0.024$ , respectively), both remaining significant after Bonferroni correction. Anxiety (HADS-A) decreased ( $p = 0.02$ ). Cardiorespiratory fitness improved in the intervention group as compared to pre-intervention measurements ( $VO_2\max$   $p < 0.001$ , maximum power  $p < 0.001$ , heart rate recovery after 2 min  $p = 0.014$ ) and body fat decreased ( $p = 0.024$ ). Depressive symptoms (HADS-D) and sleep quality showed no group differences.

**Conclusion:** This 12-week personalised, supervised exercise programme significantly reduced fatigue and improved HRQoL in patients with quiescent IBD and chronic fatigue. Significant improvements were also observed in anxiety and physical fitness. Exercise appears to be an effective strategy for managing IBD-related fatigue.

## Effectiveness of Lifestyle Care Counters in Gastrointestinal Patients: A Prospective Observational Cohort Study

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**Background:** Lifestyle factors play a substantial role in gastrointestinal (GI) disorders, yet achieving and maintaining lifestyle change remains challenging for many patients. In-hospital Lifestyle Care Counters (LCCs) provide structured, personalized support, but evidence of their effectiveness in GI patients is limited. This study evaluated the impact of a LCC on lifestyle behavior, health-related quality of life (HrQoL), and healthcare utilization.

**Methods:** This prospective observational cohort study included adults with GI diseases referred to the LCC at Radboud University Medical Center (September 2023–September 2024). Baseline data were collected at the initial consultation; follow-up assessment occurred at 3, 6, and 12 months. The primary outcome was self-reported perceived lifestyle improvement after 12 months. Secondary outcomes included program adherence, change in BMI, HrQoL (EQ-5D-5L, EQ-VAS), and healthcare utilization.

**Results:** Of the 268 patients referred to the LCC, 199 (74.3%) consented to participate (median age 51 years, IQR 35–64; 58.8% female; median BMI 28.6 kg/m<sup>2</sup>, IQR 24.3–33.7; 26.3% current smokers). At baseline, 188 (94.5%) reported being motivated to improve their lifestyle habits. A total of 144 (70.9%) were referred to a lifestyle intervention, most commonly dietary counselling (N=65, 32.7%) or a combined lifestyle intervention (33, 16.6%). After 12 months, 123 participants (76.1%) adhered to their lifestyle intervention, and 108 (65.1%) reported perceived lifestyle improvement. HrQoL improved in the dimensions usual activities ( $P = 0.03$ ), pain/discomfort ( $\Delta = -1$ ;  $P < 0.01$ ), and anxiety/depression ( $P = 0.01$ ), as well as in overall health (EQ-VAS) ( $P < 0.01$ ). Median BMI decreased from 28.6 to 24.6 kg/m<sup>2</sup> ( $P < 0.01$ ).

**Conclusion:** Participation in the (in-hospital) LCC resulted in high adherence and improvements in lifestyle behavior, BMI, and quality of life. These findings highlight the potential of structured lifestyle support to enhance standard care for patients with GI diseases.

## Feasibility of a multimodal lifestyle intervention program for patients with ulcerative colitis

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**Background:** Although individual lifestyle interventions have shown promise in improving well-being in patients with ulcerative colitis (UC), the feasibility and impact of a combined, multimodal approach remain unclear. This study assessed the feasibility of a multimodal lifestyle program combining exercise, dietary counselling, and psychological support.

**Methods:** A prospective, single-arm pilot study was conducted, including adult patients with UC in remission or with active disease. Participants completed a 24-week multimodal lifestyle program comprising exercise three times per week, personalized dietary counselling focusing on reducing intake of red meat, processed foods and sweetened drinks, while promoting a more plant-based diet, and IBD-specific cognitive-behavioural therapy when indicated. Feasibility was the primary outcome, assessed through accrual, attrition, adherence, satisfaction, and safety.

**Results:** A total 30 patients (15 in remission, 15 with active disease) were included in the study. The accrual rate was 42.3%, and attrition was low (6.7%). Adherence to the exercise program was low, only 3.3% of the participants completed all 72 prescribed trainings, and the median total amount of trainings performed was 8 (IQR 0 – 28). Non-completion was mainly related to health, time constraints, alternative form of exercise, and lack of motivation or enjoyment. Adherence to the dietary advice was 59.1%, with the highest adherence reported for avoiding red meat (77.3%), and processed foods (68.2%). Of all participants, 60.0% had an indication for psychological therapy, and 26.7% started the psychological intervention. However, 50.0% of the participants who started the psychological intervention discontinued prematurely. Most participants were satisfied with the full program (75.0%), and planned to maintain lifestyle changes, 88.9% intending to continue exercising, and 73.9% continuing the dietary adjustments. Overall, 26.7% experienced a disease flare, and no unexpected or intervention-related adverse events were observed during the study.

**Conclusion:** This pilot study shows that patients are interested in a multimodal lifestyle program for UC. Although most participants were satisfied, adherence varied: adherence to the exercise program was low, while dietary adherence was better, especially to reducing red meat and processed foods. Additionally, psychological support was often indicated but not consistently completed. These findings highlight that an alternate approach is necessary to improve adherence across all components.

## Patient-centred de-escalation of routine care for IBD in enduring remission: the PEACE survey

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**Background:** The current NVMDL “Less is More kennisagenda” highlights a knowledge gap in the monitoring of patients with inflammatory bowel disease (IBD). Our goal is to form a future-proof care pathway for IBD by assessing patient preferences for monitoring during enduring remission.

**Methods:** From May to October 2025, adults ( $\geq 18$  years) with Crohn’s disease (CD) or ulcerative colitis (UC) under care at an Dutch academic centre, in stable remission  $\geq 1$  year, off IBD medication, were consecutively invited to complete a one-time digital survey (PEACE: Patient Engagement and Care for IBD in Enduring remission). The ethics committee deemed the study non-WMO (file 2025-18092).

**Results:** Of 96 invited patients, 78 completed the survey (response 81%): 56 CD and 22 UC; mean age 57 years; mean disease duration 26 years. All reported  $\geq 1$  year of stable remission. Among 67 patients with a documented remission date, 53 (79%) had  $>5$  years of clinical remission; in 29/67 (43%), self-reported remission duration was shorter than recorded in the medical file. More than half were open to scaling down routine hospital visits, provided a specialist “safety net” remained accessible; 96% endorsed direct access to their established gastroenterology team as a prerequisite. Lack of confidence in general-practitioner IBD expertise was common (38%, 30/78), making routine transfer to primary care unattractive. Feeling clinically well was cited by 82% as evidence of disease control; 62% perceived added value of periodic blood tests. Patients wishing to continue routine visits mainly sought reassurance through dialogue with the gastroenterologist. Notably, 15% reported they no longer considered themselves to have IBD.

**Conclusion:** A majority of IBD patients in stable remission support de-escalation of routine outpatient visits if an agile, trusted specialist safety net is guaranteed. Straight transfer to primary care appears misaligned with patient preferences. Priorities should be safeguarding access, reassurance, and clear communication, while reallocating freed clinic capacity to symptomatic patients for faster access to care.

## The societal burden of perianal fistulizing Crohn's disease: high costs driven by absenteeism in a prospective nationwide Dutch cohort study

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**Background:** Perianal fistulizing Crohn's disease (pCD) is associated with higher direct medical costs compared to luminal CD. Data on indirect costs, including productivity losses, are scarce, limiting our understanding of the full societal burden of pCD. Therefore, we evaluated the societal impact of active pCD by quantifying both direct and indirect costs to explore how these costs change with disease duration.

**Methods:** A prospective study was performed in which patients with active pCD (draining fistula, visible external fistula orifice and/or an active fistula on imaging) were included within 41 hospitals in the Netherlands between September 2022 and March 2023. Follow-up duration was one year. The medical (direct) in-hospital costs, including IBD medication, hospital visits, radiological and endoscopic procedures, and surgical interventions, were extracted from electronic medical records. Out-of-hospital (direct) costs were assessed with an the iMTA Medical Consumption Questionnaire (iMCQ). Indirect costs, comprising absenteeism and presenteeism, were measured with the iMTA Productivity Cost Questionnaire (iPCQ). Both were collected at baseline, 3, 6, and 12 months. The Dutch costing manual was used to determine cost prices. Missing cost were imputed in the long format data using multilevel multiple imputation by a linear mixed model based fully conditional specification (FCS-2L) using predictive mean matching for imputation. Costs were presented as mean annual costs per patient in the year 2023 derived from 20 imputed datasets using Rubin's rules.

**Results:** A total of 440 patients were included (mean age 40 (SD 13.4); 53% female; median pCD duration 3.2 years [IQR 1.2-7.5], 66% were treated with anti-TNF agents). Mean annual costs per patient were €40.515 (95% confidence interval [CI]: €36.801 – €44.229) of which 60% were direct medical costs (€24.256 [95% CI: €22.224-€26.286]) and 40% were indirect costs (€16.260 [95% CI: €13.255-€19.264]). Biologicals were the main driver of medical costs (€14.469, 36% of the total) followed by surgical interventions including treatment with Darvadstrocel (€5.417, 13%) and hospital visits (€3.206, 8%). Indirect costs consisted of absenteeism (€12.414, 31%) and presenteeism (€3.846, 9.5%) and remained stable across disease duration.

**Conclusion:** The total annual costs per patient with active pCD are substantial and remain high independent of disease duration. Costs are primarily driven by biological therapies and productivity loss due to absenteeism. Absenteeism consistently accounts for more than 25% of total costs, underscoring the impact of active pCD on the ability to work and the overall societal burden.

## Serum concentrations of infliximab are comparable with and without immunosuppression during subcutaneous infliximab induction treatment for Crohn's disease

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**Background:** Subcutaneous (SC) infliximab (IFX) is available for maintenance treatment of Crohn's disease (CD) following intravenous induction. In DIRECT-CD, a prospective randomised controlled international trial, CD patients with active disease initially received SC IFX induction at 240 mg at week (W)0 and 2, followed by 120 mg every other week (eow). As early pharmacokinetic data indicated suboptimal IFX exposure, the protocol was amended to a higher first dose (480 mg at W0) for all patients and a doubled maintenance dose (240 mg eow from W4) for patients  $\geq 80$  kg. We compared IFX pharmacokinetics between SC IFX with and without immunomodulator (IMM), different induction schemes, and pharmacogenomic profiles.

**Methods:** Patients with moderate-to-severe CD (CD activity index  $>220$  and endoscopic ulceration) received SC IFX induction according to either the original regimen (240 mg at W0 and W2, then 120 mg eow) or the amended regimen (480 mg at W0 and 240 mg at W2), followed by weight-based maintenance dosing (120 mg eow for patients  $<80$  kg and 240 mg eow for patients  $\geq 80$  kg). Patients were randomized to SC IFX mono- or combination therapy with an IMM (thiopurine or methotrexate). Serum IFX and anti-drug antibodies (ADA) against IFX were measured at W2, 4, 8 and 14. HLA-DQA1\*01:06 genotyping was performed at W0.

**Results:** Sixty patients were randomized (53% female, median age 30 years, median body weight 70.9kg, 62% ileocolonic disease, 70% non-stricturing/non-penetrating disease, 8% active perianal disease, 72% biologic-naïve). 31/60 patients received the original induction, 50/60 received standard maintenance (120 mg eow), 31/60 patients received a concomitant IMM. Patients receiving 480 mg at W0 had higher serum IFX concentrations at W2, W4, and W8, but not W14, compared to original induction (Figure 1A). No differences in serum IFX concentrations were observed between SC IFX mono- and combination therapy (Figure 1B). Across all time points, ADA against IFX ( $>12$  AU/mL) were detected 15 times in 9 patients; none occurred at W2. At W14, 8 monotherapy patients and 1 combination therapy patient were ADA-positive ( $P=0.048$ ). The HLA-DQA1\*05 allele (31/60, 52%) was associated with lower serum IFX concentrations and higher ADA levels ( $P=0.035$ ).

**Conclusion:** In CD patients receiving SC IFX, intensified induction (480-240 mg) resulted in higher early serum concentrations. Combination therapy with IMM did not increase IFX concentrations, yet was associated with a lower proportion of ADA-positive patients at W14. Carriers of HLA-DQ5 showed lower IFX exposure and higher immunogenicity. These data suggest limited added benefit of concomitant IMM for IFX pharmacokinetics during intensified SC IFX induction.

## Switching standard dosed intravenous to subcutaneous infliximab leads to similar drug exposure independent of comedication with thiopurines (SHUFFLE study)

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**Background:** Intravenously applied infliximab (IFX) is commonly used for Inflammatory Bowel Disease (IBD) treatment. Recently, subcutaneous (SC) flat-dose IFX biosimilar was introduced offering potential advantages over intravenous (IV) weight-based dosing. Prospective pharmacokinetic-data and clinical outcomes in IBD practice are scarce, since drug approval was primarily based on a rheumatoid-arthritis study-population concomitantly using methotrexate. The main objective of this prospective study was to compare IFX exposure and clinical outcomes when switching IV to SC IFX therapy in IBD remission patients, also addressing the effect of concomitant immunomodulators.

**Methods:** In this single-centre, prospective study, 38 adult IBD patients in clinical remission on a 6-8 weekly IFX IV-dosing interval were switched to biweekly dosed SC IFX and followed for 24 weeks. The primary endpoint was the comparison between Area Under the Concentration-time curves (AUCs) at steady state before and after switching. AUCs were calculated using MwPharm ++ (version 2.4.0; Hanzel 2021).[1] Secondary endpoints included trough levels, generation of anti-drug antibodies (ADABs), time burden for application, and quality of life (IBDQ-NL). Additionally, twelve-month trough levels were compared across IFX monotherapy, combination, and thiopurine-discontinuation groups.

**Results:** A total of 35 patients were evaluated, of whom 20 received IFX monotherapy and 15 received IFX combination therapy. The cohort comprised 11 patients with ulcerative colitis and 24 with Crohn's disease. Mean AUCs<sub>6-8 weeks</sub> were comparable between IV and SC administration [ $27,662 \pm 7,116$  mg·h/L vs  $29,320 \pm 10,505$  mg·h/L ( $p=0.278$ ), independent of immunomodulator use. IFX trough levels increased on SC IFX (median [IQR] 4.6 [3.0-6.1] mg/L vs 16.1 [11.6–20.6] mg/L,  $p<0.001$ ), independent from immunomodulator use [ $p=0.347$ ]. These results were consistent at month 12, regardless of continued monotherapy, combo, or withdrawal of thiopurines at month 6. Time burden decreased substantially (median reduction 9,3 hours/6 months,  $p<0.001$ ) and IBDQ-NL score increased (189 to 197,  $p=0.01$ ). ADABs were detected in 9% without clinical impact. During the follow-up period, no patient had an exacerbation or required escalation of treatment. The percentage still being treated with IFX SC after 6 months was 97%.

**Conclusion:** Switching from IV to SC IFX in quiescent IBD patients maintained equivalent drug exposure with higher trough levels, without a higher risk of ADAB formation, reduced considerably time of application and improved quality of life, regardless of immunomodulator co-use.

## Sustained Disease Control and Patient Satisfaction with Subcutaneous Infliximab in IBD: A Dutch Multicentre Study in clinical practice

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**Background:** Randomised controlled trials have demonstrated the efficacy of subcutaneous (SC) infliximab and its non-inferiority to intravenous (IV) infliximab in patients with IBD. However, real-world evidence on its effectiveness in improving disease control from a patient perspective remains limited. An increasing number of patients prefer SC medications, which can be self-administered, rather than IV therapies requiring regular hospital visits. Therefore, the aim of the present study was to analyse real-world data from patients with IBD who transitioned from IV to SC infliximab therapy. In addition to objective clinical outcomes, patient-reported outcome measures (PROMs) were evaluated.

**Methods:** Prospective, observational healthcare data were collected from the telemonitoring tools (*myIBDcoach*, *Luscii*) and from patients' medical records. Patients were eligible if they had received IV infliximab as maintenance therapy for at least three months and switched to SC infliximab. The first SC infliximab dose was administered at the end of the regular IV dosing interval. Maintenance therapy consisted of 120mg SC infliximab administered every two weeks in accordance with the drug label or every week based on physician's clinical judgement. The primary endpoint was sustained remission for at least one year after switch to SC infliximab. Sustained remission was defined as biochemical (C-reactive protein [CRP]  $\leq 10$  mg/L and faecal calprotectin [FCP]  $\leq 250$   $\mu$ g/g), clinical (Monitor IBD At Home [MIAH] score  $\geq 3.5$ , Harvey-Bradshaw Index [HBI]  $< 5$ , or Simple Clinical Colitis Activity Index [SSCAI]  $< 3$ ), and corticosteroid-free remission. The secondary endpoint was sustained positive perceived disease control, defined as an IBD Control score  $\geq 13$ . We also measured the infliximab through levels at the different timepoints.

**Results:** A total of 77 patients from five Dutch hospitals were included in this study. As not all participating centres had implemented telemonitoring as part of their standard care pathway, disease control from patient perspective was not available for all participants. Median baseline CRP and FCP levels were 3 mg/L and 87  $\mu$ g/g, respectively. At baseline, 53% of patients were in clinical remission according to either the HBI/SSCAI or MIAH score. At the end of one year follow-up, 82% of patients remained in sustained remission, while 71% achieved sustained positive perceived disease control. During follow-up, no corticosteroids were started.

**Conclusion:** Our findings demonstrate that SC infliximab is effective in maintaining biochemical remission as well as subjective disease control in clinical practice.

## Crohn's disease patients respond better to vedolizumab if biologic-naïve

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**Background:** Vedolizumab is effective and safe for induction and maintenance of remission in Crohn's disease, but responses vary widely (22-47% in mild-to-moderate disease). Real-world, prospective data on the effectiveness of vedolizumab in biological-naïve patients with Crohn's disease is scarce. Here, we report the 1-year clinical outcomes from the prospective BullsEye study of vedolizumab response in both biologic-exposed and biologic-naïve patients.

**Methods:** This observational longitudinal multicentre study enrolled both anti-TNF therapy naïve and exposed Crohn's disease patients and collected demographic and disease-specific characteristics at baseline. At fixed timepoints over a period of a year, Harvey-Bradshaw Index (HBI) and Simple Endoscopic Score for Crohn's Disease (SES-CD) were scored. At baseline and 52 weeks a colonoscopy was performed, consistent with standard care. Response rates were defined as a reduction of the HBI of at least 3 points, or a HBI score lower than 4 at week 20. Endoscopic remission was defined as a SES-CD of 2 or lower.

**Results:** A total of 76 patients was enrolled, 57 biologic-naïve and 19 biologic-exposed. At 20 weeks, 58 patients (76.3%) responded, 47 out of 57(82.4%) versus 11 out of 19 (42.1%) of the biologic-naïve and exposed group, respectively. The mean HBI reduction in responders was 6.69 (SD 2.92) and in non-responders 0.636 (SD 1.86). Of the patients with a follow-up endoscopy at 52 weeks, 16/28 (57.1%) of the naïve and 3/8(37.5%) of the exposed patients showed endoscopic response. After 1 year, the drug survival was 84.2% in biologic-naïve versus 42.1% in biologic-exposed patients, regardless of clinical or endoscopic response.

**Conclusion:** Our study shows higher response rates and subsequent drug survival of vedolizumab in biologic-naïve patients in comparison to biologic-exposed patients. This study was sponsored by Takeda Pharmaceutical Company Limited.

## Keratinization activity in perianal Crohn's fistulas is associated to long term prognosis – potential as an objective stratification marker

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**Background:** Perianal fistulas remain a major complication in Crohn's disease, profoundly impacting quality of life. Although often therapy refractory, strong heterogeneity exists between patients, both in clinical behaviour and therapy response. In this study we aimed to identify biological factors involved in the clinical behavior of perianal fistulas, allowing better stratification.

**Methods:** Forty-nine fistula tracts patients were included (Crohn's n=36, cryptoglandular n=13). Gene expression was analyzed by whole transcriptome RNA sequencing. An integrated gene-module score for keratinization activity was calculated and correlated to the Crohn's disease TOpClass fistula classification as well as to long-term fistula outcomes.

**Results:** Perianal fistulas overall were associated with development of stratified squamous epithelium, expressing specific keratins (e.g. *KRT5*, *KRT7*, *KRT13*). A gene-module score was developed based on the keratinization-associated markers and calculated for each individual sample. This score clearly separated Crohn's related fistulas from cryptoglandular fistulas (median 0.448 vs -0.321, p=0.0018). Interestingly, within the Crohn's-related fistulas keratinization was significantly lower in the more severe phenotypes (TOpClass 2c/3) when compared to those more amenable to surgical intervention ( TOpClass 2a/b, median -0.448 vs - 0.125, p<0.05). Interestingly, the score was also predictive of long-term outcomes: After a follow-up receiving routine care for a median of 63 months, the group with low keratinization scores showed severe disease in a large proportion of patients (14/20 patients), versus none of the patients with a high keratinization score (0/16, p<0.001).

**Conclusion:** We show here that fistula pathology is marked by epithelial changes, including altered keratin expression. The extent of this process not only distinguishes Crohn-related from cryptoglandular fistulas, but also aligns with disease severity and healing potential. These findings provide a mechanistic explanation for the heterogeneity observed in Crohn's disease associated perianal fistulas and establish a foundation for biomarker-driven stratification and better targeted therapeutic strategies.

## Enhanced fecal protease activity in inflammatory bowel diseases is driven by human proteases and is effectively inhibited by protease inhibitors isolated from potato

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**Background:** Enhanced intestinal proteolytic activity contributes to the pathophysiology of inflammatory bowel disease (IBD) through multiple mechanisms, including increased intestinal barrier permeability and activation of immune responses. The relative contribution of host- and microbe-derived proteases to total fecal protease activity, and the specific identity of the overactive proteases, are not sufficiently understood. Moreover, limited therapeutic strategies targeting these proteases exist. Potatoes naturally produce pathogen-defensive protease inhibitors and current technologies enable the production of a high-yield protease inhibitor (PI) rich fraction. The aim of this study is to identify the overactive fecal proteases present in IBD and to assess the inhibitory capacity of potato PI fraction.

**Methods:** Fecal water from 17 healthy controls (HC), 15 Crohn's disease (CD), and 14 ulcerative colitis (UC) patients were prepared from frozen stools. Protease activity of fecal water was assessed against gelatin, elastin, fibronectin and OmniMMP, and was further characterized by gelatin zymography. The human and bacterial protein composition was determined by label-free quantitative LC-MS/MS analysis. Correlation analyses between protease activity and proteomic profiles were performed to identify overactive human and bacterial proteases. The anti-protease activity of potato PI fraction on IBD fecal water was compared to aprotinin, elafin and  $\alpha$ 1-antitrypsin.

**Results:** Compared to HC, protease activity was significantly enhanced in IBD fecal water against all substrates tested and caused by serine proteases of 25-30, 37-50 and 100-150 kDa. While human versus bacterial protein counts were approximately equal in HC fecal water, the human protein fraction was significantly increased to ~80% in CD and UC and were 2.5- and 4.2-fold higher than in HC, respectively. Thirty-one (31) proteases were differentially abundant in IBD fecal water. Human proteases strongly correlated ( $r \geq 0.60$ ) with protease activity, most significantly for CELA2A, ELANE, CPA5, PRTN3, CTRC, CPA1, CTSC and PRSS2 in CD, and PRSS2, CELA2A, CTRC, PRSS1 and CTSC in UC. Only 5 bacterial proteases correlated moderately with protease activity in CD ( $r = 0.48-0.57$ ), while none were found in UC. Of the four protease inhibitors evaluated, potato PI fraction demonstrated the strongest inhibitory effect, reducing the gelatinolytic activity to HC levels.

**Conclusion:** The enhanced protease activity in IBD feces is mainly driven by human proteases and is efficiently suppressed by a protease inhibitor-rich fraction from potato, which may have therapeutic potential to reduce intestinal inflammation in IBD patients by restoring proteolytic homeostasis.

## The Immunological Response to Gut-Selective Anti- $\alpha 4\beta 7$ Integrin Therapy in Anti-TNF–Naïve and –Exposed Crohn’s Disease Patients Using Flow Cytometry

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Background: Vedolizumab, a gut-selective monoclonal antibody targeting the  $\alpha 4\beta 7$  integrin, has been shown to be effective in inducing and maintaining remission in Crohn’s disease. Its mechanism of action is thought to involve the inhibition of immune cell trafficking from the bloodstream into the intestinal tissue, thereby reducing local inflammation. Despite the observed benefits, a substantial proportion of patients fail to respond to vedolizumab, underscoring the unmet need for biomarkers that could facilitate personalized therapeutic strategies.

Methods: We conducted a study involving both anti-TNF–naïve and anti-TNF–experienced Crohn’s disease patients (trialcode: NL-004608 & NL-006475, n = 37) to investigate immunological mechanisms underlying vedolizumab (non-)response and to identify predictors of therapeutic efficacy. Peripheral blood mononuclear cells (PBMCs) were analyzed by flow cytometry to quantify T- and B-cell subsets and assess the expression of a variety of markers, including Ki-67, CCR9, and  $\alpha 4\beta 1$ .

Results: Lower memory B cell percentages at baseline were associated with non-response across both patient groups. Although memory B cell frequencies differed between responders and non-responders, both groups showed increased IgA and CCR9 expression on memory B cells at week 20 post-treatment. Reduced expression of the proliferation marker Ki-67 on effector memory CD4<sup>+</sup> T cells was associated with response in both anti-TNF–naïve and anti-TNF exposed patients, whereas decreased  $\alpha 4\beta 1$  expression at baseline and week 6 correlated with non-response. Increased expression of CCR9, a small intestinal homing marker, was detected on effector memory CD4<sup>+</sup> T cells after treatment irrespective of response status or prior anti-TNF exposure but was significantly higher in non-responders than responders at week 6 in patients with ileal disease.

Conclusion: Vedolizumab response in Crohn’s disease is characterized by preserved memory B-cell frequencies, lower proliferative activity of effector memory CD4<sup>+</sup> T cells, and higher baseline  $\alpha 4\beta 1$  expression, whereas non-response is linked to reduced memory B cells and altered integrin and homing profiles. These findings suggest that baseline integrin profiles and lymphocyte activation states may serve as useful biomarkers for predicting vedolizumab efficacy and highlight distinct immune trajectories in responders versus non-responders.

## Healthy co-twins of Crohn's disease (CD) patients display CD-like peripheral CD4<sup>+</sup> T cell profiles

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Background: Crohn's disease (CD) is thought to result from a complex interplay between genetic susceptibility, environmental factors, gut dysbiosis, and aberrant immune activation, in which T helper (CD4<sup>+</sup>) cells play a central pathogenic role. This multifactorial nature makes it challenging to disentangle the contribution of each component to disease pathogenesis and pathophysiology, especially in clinical studies. Twin studies provide an opportunity to partially overcome these limitations, as twins share a nearly identical genetic background and similar early-life environmental exposures. Furthermore, healthy co-twins of CD-discordant twins are at increased risk of CD development, providing a powerful framework to investigate early or preclinical disease-associated alterations.

Methods: In this study, samples from the IBD-TWIN cohort were used to study CD4<sup>+</sup> T cells in CD. Several CD4<sup>+</sup> T cell subsets were isolated from peripheral blood mononuclear cells (PBMCs) of CD-concordant and discordant monozygotic twin pairs and unrelated healthy controls using fluorescence-activated cell sorting (FACS), followed by single cell immune profiling, bulk RNA sequencing, and DNA methylation profiling. Sorted subsets included naïve (CD45RA<sup>+</sup>CCR7<sup>+</sup>) and gut-homing (integrin  $\beta$ 7<sup>+</sup>) memory (CD45RA<sup>-</sup>) CD4<sup>+</sup> T cells.

Results: CD4<sup>+</sup> memory T cells with gut-homing capacity were found to be transcriptionally different between CD patients and unrelated healthy controls. Interestingly, there were no differences between the transcriptomes of healthy co-twins and CD patients, suggesting that healthy co-twins have a CD-like CD4<sup>+</sup> transcriptome resembling that of their CD co-twin. Comparable findings were obtained for DNA methylation profiles between these groups. Strikingly, these CD-like signatures were even identified in naïve CD4<sup>+</sup> T cells of healthy co-twins. Transcriptional differences were associated with pathways such as apoptosis, T cell activation and proliferation, and TCR signalling and were not highly specific to certain subsets of naïve or memory CD4<sup>+</sup> T cells. Moreover, public T cell clones with identical  $\alpha$ - and  $\beta$ -chain CDR3 nucleotide sequences were present within twin pairs, while absent in other comparisons.

Conclusion: The findings of this study suggest that genetically predisposed healthy co-twins present with a CD-like CD4<sup>+</sup> T cell transcriptome and DNA methylation profile. This might either point towards skewing of the CD4<sup>+</sup> T cell compartment to a CD-like phenotype, possibly preceding CD development, or reflect the shared genetic and environmental background.

## EUS-guided radiofrequency ablation in pancreatic neoplasms, a single-center observational study

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**Background:** Pancreatic neuroendocrine tumors (PanNET) are rare neoplasms and often detected incidentally. Parenchyma-sparing surgery may be considered as first-line therapeutic approach; however, morbidity and the potential survival benefit must be carefully weighed. EUS-guided Radio Frequency Ablation (EUS-RFA) is a promising organ preserving endoscopic technique that can be performed in an outpatient setting and has the potential to serve as an alternative to surgery. We aimed to evaluate the safety and efficacy of pancreatic EUS-RFA.

**Methods:** We retrospectively reviewed all consecutive patients with solid pancreatic neoplasms who were scheduled to undergo EUS-RFA between 2020 and 2023 at a single tertiary center. Safety outcomes were analyzed for all included patients. Clinical outcomes were assessed in all patients with somatostatin receptor-positive PanNETs, who completed one year of follow-up with both EUS/MRI and <sup>68</sup>Ga-Dotatate PET-CT. Serious adverse events were defined as those classified as AGREE grade  $\geq 3$  (requiring surgical, endoscopic or radiological intervention). Radiological response was evaluated by MRI and categorized as complete (no residual lesion), partial ( $> 75\%$  volume reduction) or no response ( $< 75\%$  reduction) at 9 months of follow-up. Nuclear imaging complete response rate was defined as the absence of <sup>68</sup>Ga-Dotatate uptake at 1-year of follow-up.

**Results:** A total of 23 patients were scheduled for EUS-RFA; in 2 cases the procedure was deemed not feasible due to the lesion's close proximity ( $< 1$  mm) to the pancreatic duct or a vessel. Adverse events consisted of one (5%) intraprocedural bleed that resolved spontaneously, and mild pancreatitis occurred in 5 patients (24%). No serious adverse events occurred. Sixteen patients had SSTR-positive PanNETs, of whom 14 completed full follow-up. Their median age was 67 years (IQR 64-77), and 9 patients (64%) were male. The median tumor diameter was 15 mm (IQR 11-18). Patients underwent a median of one RFA procedure (IQR 1-1) with a median of 3 ablations (IQR 3-4) per session. Radiological response was complete in 86% (12/14), partial in 7% (1/14) and absent in 7% (1/14). Patients with incomplete radiological response had PanNET located in uncinete process. A total of 8 patients (57%) demonstrated complete response on nuclear imaging.

**Conclusion:** Pancreatic EUS-RFA demonstrated an acceptable safety profile. More than 8 out of 10 patients with SSTR-positive PanNETs achieved complete radiological response, while almost 6 out of 10 patients achieved complete response on nuclear imaging following a single EUS-RFA session. In selected patients, EUS-RFA represent a feasible therapeutic alternative to pancreatic surgery.

## A comparison of safety and efficacy of endoscopic ultrasound-guided radiofrequency ablation versus surgical resection in patients with sporadic pancreatic insulinoma: an observational cohort study in the Netherlands

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**Background:** Surgery is the standard treatment for pancreatic insulinoma, but it is associated with substantial morbidity. Endoscopic ultrasound-guided radiofrequency ablation (EUS-RFA) is a promising minimally invasive alternative. This study compared the safety and efficacy of EUS-RFA with conventional surgery for the treatment of insulinoma.

**Methods:** A retrospective, observational cohort study was conducted, including patients treated for insulinoma with EUS-RFA or surgery between 2016 and 2025. Surgical data from the DPCA (n = 45, 8 centers) dataset were used for the analysis of the primary outcome. A single-center cohort was used for analysis of both primary and secondary outcomes for this abstract since data from other centers are expected at beginning of 2026. The primary outcome was the post-procedural (serious) adverse event rate, defined by Clavien-Dindo and AGREE classifications. Secondary outcomes included technical and clinical success, hospital stay, recurrence, reinterventions, 30- and 90-day mortality, and long-term complications (after 30 days post-procedure).

**Results:** For the primary outcome, 60 patients were included, of whom 8 in the EUS-RFA cohort and 52 in the surgery cohort. EUS-RFA patients were older (median 81.1 years; IQR 47.3 – 85.7 vs. 53 years; IQR 37 – 64; p=0.015) and had higher Charlson Comorbidity Index scores (p=0.004). Overall adverse events occurred in 1/8 (12.5%) after EUS-RFA versus 32/52 (62.5%) after surgery (p=0.018). No serious adverse events occurred after EUS-RFA compared vs. 21/52 (40.4%) after surgery (p=0.042). Preliminary results of secondary outcomes are based on 8 EUS-RFA and 10 surgery patients. Technical and clinical success rates were 7/8 (87.5%) for EUS-RFA and 10/10 (100%) for surgery (p=0.444). The hospital stay was significantly shorter after EUS-RFA, with a median of 1 day (IQR 1-1) vs. 6 days (IQR 4.75–9) (p<0.001). The median follow-up was 12.09 months (IQR 5.31–41.66) for EUS-RFA and 18.88 months (IQR 4.21–55.5) for surgery. Two recurrences occurred after EUS-RFA, and none after surgery. One recurrence was treated successfully with a second EUS-RFA, while the other was managed with watchful waiting. No long-term complications occurred after EUS-RFA cohort versus 4 after surgery (p=0.092).

**Conclusion:** Our preliminary findings suggest that EUS-RFA appears substantially safer than surgery for sporadic pancreatic insulinoma, while providing acceptable efficacy. An ongoing Dutch multicenter observational study will expand on these findings before March 2026. Neuroendocrine tumor expert centers should consider EUS-RFA as a treatment alternative to surgery for referred insulinoma patients, particularly those with increased surgical risk.

## Predictors of neoplastic recurrence after successful endoscopic eradication therapy of Barrett's neoplasia based on long-term follow-up results from the Dutch Barrett's registry.

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**Background:** The optimal follow-up (FU) after endoscopic eradication therapy (EET) for Barrett's esophagus (BE) with early neoplasia is unknown. We previously developed a recurrence prediction model. Continued data collection has yielded an expanded cohort with longer FU. We report a reassessment of risk factors for recurrent dysplasia/cancer, and specific risk factors for advanced cancer. **Methods:** We included all BE patients with successful EET from the BEC registry. Primary objectives were to identify independent predictors of recurrent high-grade dysplasia (HGD)/cancer, and of advanced cancer. Cancer was regarded advanced when exceeding curative endoscopic therapy. Data were analyzed using Cox proportional hazards regression, with variables first assessed in univariate analysis and subsequently entered into a multivariable model using backward elimination. Selected variables were: age, gender, BE-length, baseline pathology, poor healing after RFA with treatment delay, persisting esophagitis at the end of the treatment phase, number of endoscopic resection treatment (ER) sessions, new visible lesion (VL) occurring during ablation, and endoscopic FU in BEC vs in non-BEC.

**Results:** In total, 1269 patients (1038 male, median age 66 yrs, median BE C2M4) were included with baseline low-grade dysplasia in 27% and HGD/cancer in 73%. During a median FU of 65 months (IQR 42-93), 53/1269 (annual risk 0.8%) developed recurrent HGD/cancer. Of these, 15/53 patients (annual risk 0.2%) had progressed to advanced cancer. In univariate analysis, we found a significant association with an increased risk for recurrence of HGD/cancer for longer baseline BE, new VL during ablation, and more ER sessions. The following were independently associated with an increased risk for recurrent HGD/cancer: new VL during ablation phase, more ER sessions, and longer baseline BE. For advanced cancer, we found a significant association in univariate analysis for longer baseline BE, persisting esophagitis at the end of treatment phase, new VL during ablation phase, more ER sessions, FU performed in a BEC vs in a non-BEC. In multivariate analysis, more ER sessions and longer baseline BE were independently associated with advanced recurrence.

**Conclusion:** Recurrent HGD/cancer was uncommon, and progression to advanced cancer was rare. Despite adding new patients and extended FU, predictors of recurrent HGD/cancer were consistent with our previous model. Although external validation is still required, both longer baseline BE and more ER sessions were independent risk factors advanced cancer recurrence. These findings strengthen evidence for individualized FU.

## Cryoballoon ablation following non-curative endoscopic therapy or a recurrence of Barrett-related dysplasia or esophageal adenocarcinoma in the resection scar: a case series

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**Background:** Following non-curative endoscopic therapy for Barrett esophagus (BE)-related dysplasia or esophageal adenocarcinoma (EAC), or in case of a local recurrence at the endoscopic resection (ER) scar for which additional ER is not feasible, step-up treatment with esophagectomy and/or chemo/radiotherapy is typically considered. However, this may not always be suitable due to comorbidities, age or patient preference. This case series evaluates the use of endoscopic focal cryoballoon ablation (CBA) as potential alternative therapy.

**Methods:** This retrospective case series was conducted at two Dutch tertiary referral centers. Patients with BE-related dysplasia or EAC were included if they underwent focal CBA between January 2018 and July 2025 for two indications: 1) prophylactic therapy following non-curative endoscopic treatment defined as a macroscopically incomplete ER, or an ER with vertical tumor-positive resection margins, and 2) an endoscopically visible neoplastic lesion <1 cm from the ER scar for which additional ER was not deemed feasible. Outcomes were technical success, safety, endoscopic remission — defined as the absence of any endoscopically visible lesions suspected of dysplasia or cancer during endoscopic follow-up — and survival.

**Results:** In total, 11 patients underwent focal CBA after a non-curative ER or an endoscopically visible lesion <1cm from the resection scar. Patients had a median age of 77 years (p25-p75 68-81), and the majority was male (9/11; 82%). Reasons for not undergoing additional treatment with esophagectomy and/or chemo/radiotherapy included severe comorbidity or advanced age (n=5) and patient preference (n=6). Seven patients (7/11; 64%) underwent prophylactic CBA following non-curative endoscopic treatment, and four patients (4/11; 36%) had treatment for an endoscopically visible lesion in the ER scar. CBA was technically feasible in all cases, and no serious adverse events occurred. In patients who underwent prophylactic CBA after non-curative endoscopic therapy, endoscopic remission was retained in 71% of patients (5/7) for median 14 months (range 3-51). Among patients with recurrence at the resection scar, 50% (2/4) achieved endoscopic remission for median 7 months (range 6–8). Overall, 45% of patients (5/11) died median 26 months (range 12-36) after CBA, including three deaths attributable to esophageal cancer.

**Conclusion:** In expert hands, focal CBA is feasible and safe following non-curative endoscopic therapy for BE-related dysplasia or EAC and for local recurrences in the ER scar. However, efficacy is limited, and therefore CBA should not be regarded as reliable alternative to esophagectomy and/or chemo/radiotherapy.

## Let it snow: a novel hemostatic powder for prevention of delayed bleeding after endoscopic mucosal resection of duodenal adenomas

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**Background:** Endoscopic mucosal resection (EMR) is a standard technique for removing duodenal adenomas but carries a relatively high risk of clinically significant delayed bleeding (CSDB), reported in 8–18% of cases. CSDB contributes to patient morbidity and increased healthcare utilization. Preventive measures such as clip closure and prophylactic coagulation can reduce this risk but are technically demanding and time-consuming. In contrast, topical hemostatic agents are quick and easy to apply. Novel hemostatic powders may therefore offer a simpler and more efficient strategy to reduce CSDB following duodenal EMR. The aim of this study is to evaluate the efficacy of a novel hemostatic powder to prevent delayed bleeding after removal of duodenal adenomas.

**Methods:** A multicenter study was conducted at two Dutch tertiary centers. Patients were consecutively included if they were aged  $\geq 18$  years, had a non-ampullary adenoma of  $\geq 10$  mm, and had signed informed consent. The primary outcome was delayed bleeding, defined as a hemoglobin drop  $\geq 1.5$  mmol/L and/or the occurrence of hematemesis, hematochezia, or melena. The secondary outcome was successful application of the hemostatic powder.

**Results:** A total of 34 duodenal EMRs were performed using the novel hemostatic powder. Of these patients, 55.9% were male, with a mean age of 61 years. Most polyps were located in the second part of the duodenum (D2; 41.2%) and had a median size of 20 mm (IQR 20). Piecemeal resection was performed in 88.2% of cases. Application of the hemostatic agent was successful in 33 procedures (97.1%). Delayed bleeding occurred in 6 patients (17.6%) at a median of 19 hours post-EMR (IQR 110). Among these, a hemoglobin drop of  $\geq 1.5$  mmol/L was observed in 3 patients (8.8%), hematemesis in 2 (5.9%), hematochezia in 3 (8.8%), and melena in 5 (14.7%). Two patients required no intervention, one was observed for one additional night after EMR, and three underwent successful endoscopic hemostasis with clip placement.

**Conclusion:** The hemostatic agent was easy to use and had a high rate of successful application. However, compared with previous studies, it does not appear to reduce the risk of CSDB.

## Distinct production of advanced glycation endproducts by the microbiome of Crohn's disease patients and healthy controls

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Background: Diet plays a role in the onset and development of Crohn's disease (CD), e.g. by exposing the intestinal tract to inflammatory compounds or via the intestinal microbiota. Dietary factors of interest are advanced glycation endproducts (AGEs). AGEs can form during cooking or endogenously, but also in the microbiome. AGEs and their receptor RAGE are associated with inflammation, and CD specifically. Which AGEs are involved, and the contribution of the microbiome are not clear. We therefore studied AGE production by the fecal microbiome of CD patients and healthy controls, to identify AGEs associated with CD.

Methods: Feces (1% w/v in simulated ileal efflux medium) from four CD patients and four healthy controls were incubated anaerobically at 37°C with one of four carbohydrate sources (1% w/v): glucose, fructose, galacto-oligosaccharides (GOS) fructo-oligosaccharides (FOS), or with medium only. Samples were collected before (T0), after 4h (T4) and 24h (T24) incubation and were diluted 1:10 in PBS, sonicated for 30min and spun down at 18.000g for one hour, while kept cold. Concentrations of 23 AGEs were measured in the supernatant with UPLC-MS/MS. Incubations were run without feces to correct for non-microbial AGE formation.

Results: Eight AGEs were identified in the samples, seven (CMC, CML, CEL, CMA, MG-H, pyrraline and furosine) increased over time, ranging between 2- and 4-fold for most, to a 44-fold increase in CMC. The exception was 2-SC, which increased 2- to 6-fold at T4 and decreased to T24, for CD and controls. CMC, CML, CEL, CMA, pyrraline and 2-SC were more abundant in CD patients than controls. Only MG-H was higher in control samples. Furosine was produced by one control sample only. Differences in AGE production, while prominent, were not statistically significant, possibly due to high intra-group variability. Exceptions were CEL and MG-H after 24h incubation with glucose (mean difference: 103 µg/L, p<0.01) and fructose (mean difference: -36.6 mg/L, p<0.05) respectively. Principal component analysis showed clustering based on CD status (p<0.001). When stratified by exposure, FOS showed most apparent separation between CD patients and controls while medium incubations were most similar.

Conclusion: The results show distinct AGE production by the microbiome of CD patients and healthy controls, with high interindividual variability. Interestingly, a subset of AGEs appears to be produced more by CD patients, indicating functional differences in the microbiome. Future work involves microbial sequencing, providing insight into bacterial taxa responsible for AGE production, and investigating effects of microbial AGEs on the immune response and intestinal barrier.

## Overweight, unemployment and work absence are associated with reduced quality of life in patients with perianal fistulizing Crohn's disease

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**Background:** Quality of life is an important treatment outcome measure in perianal fistulizing Crohn's disease (pCD), as healing rates remain low. Identifying determinants of impaired health-related quality of life (HRQoL) may support more patient-centered care. This study aimed to explore these determinants in patients with active pCD.

**Methods:** Patients with active pCD were included in a prospective national cohort performed in 41 Dutch academic and non-academic hospitals between September 2022 and March 2023. For this study, patients who completed the validated disease-specific Crohn's Anal Fistula-Quality of Life (CAF-QoL) scale and EuroQoL-5 Dimension-5 Level (EQ-5D-5L) questionnaire, at baseline, 3, 6 or 12 months follow-up, were included. Multivariable linear regression models were used to identify potential predictors associated with an impaired HRQoL, as measured by the CAF-QoL. An additional analysis was performed to examine the association between fistula disease severity and HRQoL. In this model, Domain A of the CAF-QoL, representing self-reported severity of fistula-related symptoms, was used to assess the impact of fistula severity on HRQoL as measured by the EQ-5D-5L.

**Results:** In total, 440 patients with active pCD were included in the cohort of which 293 (66.6%) patients were included in this study (56% female, median age 39 years [interquartile range [IQR] 30–51], median pCD duration 3.2 years [IQR 1.1–7.5]). The mean CAF-QoL scale score was 47 (SD 22.2) and mean EQ-5D-5L utility score was 0.73 (SD 0.23). Overweight or obesity ( $\beta$  7.7,  $p=0.01$  and  $\beta$  6.9,  $p=0.04$ ), active proctitis ( $\beta$  8.4,  $p=0.04$ ), a prior surgical intervention (between diagnosis and inclusion) aiming for fistula closure ( $\beta$  8.6,  $p=0.002$ ), and unemployment ( $\beta$  6.4,  $p=0.01$ ) or work absence (at least one day of sick leave within the lookback period of 4 weeks) ( $\beta$  14.2,  $p<0.001$ ) were significantly associated with reduced HRQoL as measured by the CAF-QoL. Active luminal disease was reversely associated with HRQoL as measured by CAF-QoL ( $\beta$ -6.0,  $p=0.03$ ). In the additional analysis unemployment ( $\beta$ -0.09,  $p<0.001$ ) or work absence ( $\beta$ -0.10,  $p=0.003$ ) and fistula severity ( $\beta$ -0.02,  $p<0.001$ ) were independently associated with a worse EQ-5D-5L utility score.

**Conclusion:** Increased body weight and employment status are independently associated with reduced generic and pCD-related-HRQoL in patients with active fistula(s). In the additional analysis, severity of fistula symptoms was also associated with reduced HRQoL, underscoring the substantial burden of disease on daily functioning. Incorporating weight management and work-related support into clinical practice may enhance HRQoL and promote a patient-centered approach to IBD care.

## Epithelial barrier integrity and healing are compromised by luminal content of inflammatory bowel disease patients and effectively restored by protease inhibitors from potato

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**Background:** Mucosal healing and restoration of a tight intestinal epithelial barrier are primary treatment goals in inflammatory bowel disease (IBD). These regenerative mechanisms are compromised by high gut luminal proteolytic activity in IBD that may break the epithelial layer, remodel the underlying extracellular matrix and activate the immune system. Despite its established involvement in IBD, therapeutic strategies directly targeting the high protease activity remain limited. Potatoes naturally produce protease inhibitors that defend against pathogens, and current technologies allow for the production of a high-yield fraction rich in these protease inhibitors (PI). The aim of this study is to evaluate the effect of PI from potatoes on the intestinal epithelial barrier exposed to IBD fecal water.

**Methods:** Fecal water from healthy controls (HC, n=17) and patients with Crohn's disease (CD, n=15) or ulcerative colitis (UC, n=14) was prepared from frozen stool samples. The protease activity in fecal water was assessed using collagen and elastin substrates in presence and absence of potato PI. Human colon organoids and Caco-2 cells were cultured in 2D monolayers and exposed to fecal water with or without potato PI. Epithelial barrier integrity was measured by transepithelial electrical resistance (TEER) and fluorescein isothiocyanate–dextran (FITC) leakage across the cell layers. Tight junction proteins were analyzed by Western blotting and epithelial barrier wound healing was analyzed using a real-time impedance-sensing ECIS system.

**Results:** CD and UC fecal water showed significantly increased proteolytic activity on both collagen (5.9-fold and 4.7-fold enhanced, respectively) and elastin (5.5-fold and 3.0-fold enhanced) compared to HC fecal water. Potato PI reduced the proteolytic activity of IBD fecal water to HC levels on both substrates. IBD fecal water caused a strong disruption of both the Caco-2 and colon organoid monolayers, which was not observed for HC fecal water. Co-treatment with potato PI prevented IBD fecal water-induced epithelial barrier damage. In line, potato PI prevented the proteolytic degradation of tight and adherent junction proteins, as well of extracellular matrix proteins. IBD fecal water severely impaired epithelial wound closure, which was fully restored by co-treatment with potato PI.

**Conclusion:** The high luminal proteolytic activity in the colon of IBD patients markedly compromises epithelial barrier integrity and regeneration. Protease inhibitors from potato effectively reduce this proteolytic activity and restore epithelial barrier integrity and wound healing, revealing a therapeutic potential for patients with IBD.

## Clinical characteristics of twins with Inflammatory Bowel Disease: 7-year follow-up

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**Background:** Non-affected co-twins of twins with Inflammatory Bowel Disease (IBD) have an increased risk of developing Crohn's disease (CD) or ulcerative colitis (UC). Twins in particular share genetic and environmental factors, especially early in life when the immune system matures. The Dutch twin cohort was established in 2017 to study the complex interplay of genetic, immune and environmental factors in the pathogenesis of IBD as well as pre-clinical signatures of disease. The present report describes the set-up of the cohort and the clinical characteristics of the twins included so far.

**Methods:** Twin pairs with IBD were recruited through clinical referral, patient organisations and promotion online. At baseline, patients and their co-twin were asked to fill-out a questionnaire on zygosity, disease characteristics, environmental factors, medication use and quality of life. Medical records of IBD twins were scrutinized to confirm diagnosis and disease classification. Blood, saliva, urine, faeces and rectal biopsies were collected, every 6 months for up to 2 years, regardless of disease status. In October 2025, all participants were contacted for an update on current disease status.

**Results:** A total of 64 twin pairs (128 individuals) in which at least 1 member had IBD were recruited (34 monozygotic, 30 dizygotic). Thirty-nine pairs included at least one individual diagnosed with CD, 26 with UC, and 2 with IBD-unclassified. Within monozygotic pairs, 9 out of 34 were concordant for CD, 2 for UC, and 1 pair combined UC in one twin with IBD-unclassified in the other. Among dizygotic twins, concordance was observed in only one pair with CD, while no pairs were concordant for UC; and one pair was discordant with one twin diagnosed with IBD-unclassified. The median age at inclusion was 38.4 years (IQR 26.2), and the median age at diagnosis was 22.6 years (IQR 13.6). At baseline, all concordant CD twins shared the same Montreal age classification. Sixty percent had identical location and behaviour classifications, and 70% shared the presence or absence of perianal disease. In contrast, the two concordant UC pairs differed in their extent of disease. During follow-up, two previously unaffected twins were diagnosed with IBD: one developed CD 5.5 years after her twin sister's diagnosis, and the other developed UC 18 years later, making both pairs concordant. Across all concordant pairs, the median time between diagnoses within a twin pair was 2 years, ranging from 0-18 years.

**Conclusion:** This cohort is thoroughly phenotyped and provides information about the aetiology of IBD, pre-clinical biomarkers and supports the stronger genetic influence in Crohn's disease than in ulcerative colitis.

## Proteomic Discordance with Clinical and Biochemical Response Filgotinib in Ulcerative Colitis Suggests Residual Inflammatory Signals

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**Background:** Filgotinib, a Janus Kinase (JAK)-1-preferential inhibitor, provides rapid symptom relief in ulcerative colitis (UC)<sup>1</sup>, but its effects on the inflammatory proteome are incompletely defined. We profiled proteomic trajectories in an observational cohort of 39 patients with moderate-to-severe UC initiating filgotinib.

**Methods:** We quantified serum cytokines and chemokines at baseline and follow-up with Multiplex Luminex, and assessed Mayo score, C-reactive protein (CRP), and fecal calprotectin. Healthy controls (HC) provided reference ranges. Corticosteroid-free response at week 24, defined by improvement in the clinical Mayo score relative to baseline, was evaluated. For responders, follow-up was at week 24, for non-responders, therapy failure determined the follow-up timing. Analyses assessed within-patient change and concordance between clinical, biochemical and proteomic relative to HC.

**Results:** Responders (n = 23) showed improvement in the total Mayo score, CRP and calprotectin. Several inflammatory mediators demonstrated longitudinal changes that correlated with clinical and biochemical improvement, indicating partial concordance between proteomic and clinical trajectories. However, several inflammatory mediators, including soluble receptors (TNFR1/2), chemokines (CCL2, CCL18), cytokines (IL-18), and lectins (Galectin-1, Galectin-3), remained elevated despite clinical improvement. Non-responders (n = 16) exhibited similar analyte profile trajectories, despite absent clinical benefit. Persistently elevated mediators spanned multiple molecular classes, suggesting a broader residual inflammatory program rather than isolated pathway escape. This clinical–proteomic discordance implies that JAK1 inhibition may uncouple symptom and acute-phase readouts from persistent immune activation, potentially reflecting pathway redundancy, incomplete upstream driver coverage, or tissue-compartmentalized inflammation not captured by standard biomarkers.

**Conclusion:** Our findings indicate that while filgotinib improves clinical and biochemical endpoints, elements of the inflammatory proteome remain sustained relative to HC and appear only partially aligned with clinical, endoscopic and traditional biochemical responder status. These data should be corroborated using tissue-resolved endpoints in the inflamed mucosa, alongside peripheral immunophenotyping to map compartment-specific effects. If validated, proteomic readouts could refine treat-to-target strategies beyond CRP and fecal calprotectin, and clarify whether JAK1 inhibition primarily suppresses symptom-generating downstream signaling or achieves deeper resolution of mucosal immune activity.

## Secretin therapy during *ex-situ* normothermic liver machine perfusion: A critical factor for restoration of bile duct physiology and the protective “bicarbonate umbrella”

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**Background:** *Ex-situ* normothermic machine perfusion (NMP) is increasingly used for preservation and assessment of donor livers prior to transplantation. Cholangiocytes modify bile composition by secretion of bicarbonate ( $\text{HCO}_3^-$ ), creating alkalotic bile that protects against bile salt toxicity (known as the “bicarbonate umbrella”). Low biliary  $\text{HCO}_3^-$  during NMP indicates cholangiocellular injury and contributes to additional injury. Secretin is a hormone that stimulates biliary  $\text{HCO}_3^-$  secretion *in-vivo*. We hypothesized that administration of secretin during NMP is required to restore biliary physiology and the protective bicarbonate umbrella, and could be a novel test of biliary viability.

**Methods:** The effect of secretin administration during liver NMP was evaluated in a preclinical study using discarded human livers. Moreover, the effect of secretin was studied in an *in-vitro* model using intrahepatic cholangiocyte organoids (ICO). Next, we performed a clinical study with secretin therapy during sequential hypo- to normothermic perfusion, linked by controlled oxygenated rewarming (DHOPE-COR-NMP). Secretin was added at the start of the rewarming phase and after hepatobiliary viability assessment at 2.5 hours of NMP. The primary outcome was the response in biliary  $\text{HCO}_3^-$  secretion. Secondary outcomes included other changes in bile composition, bile flow and early post-transplant outcomes, in comparison to a historical cohort.

**Results:** Secretin administration resulted in a significant swelling of *in-vitro* ICO and increased signal in Ussing chamber experiments, indicating increased ion and water excretion. In the preclinical study, secretin during NMP led to increased biliary  $\text{HCO}_3^-$  secretion in viable livers, but not in non-viable livers, indicating that biliary viability testing was not camouflaged. In the clinical study, secretin therapy was added during 15 DHOPE-COR-NMP's, which resulted in 10 liver transplants. In livers that met viability criteria for transplantation, secretin resulted in significantly higher biliary  $\text{HCO}_3^-$  levels, compared to historical controls without secretin. Increase in biliary  $\text{HCO}_3^-$  after secretin administration was higher in viable compared to non-viable livers (10.1 mmol/L vs. 2.2 mmol/L;  $p = 0.03$ ). Recipient outcomes in the first 90 days were similar to historical controls.

**Conclusion:** Secretin therapy during *ex-situ* NMP increased biliary secretion of  $\text{HCO}_3^-$  in livers with viable bile ducts. Secretin appeared to be a missing component in NMP that is required for restoration of normal biliary physiology and a functioning bicarbonate umbrella. Moreover, response to secretin administration could serve as novel tool to assess biliary viability.

## Quest for Determinants of Successful Outcome of Video-assisted Retroperitoneal Coeliac Artery Release in Patients with Median Arcuate Ligament Syndrome. Retrospective Single-Centre Study based on Prospectively Collected Data.

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**Background:** To diagnose Median Arcuate Ligament Syndrome (MALS) evaluation of the classic chronic mesenteric ischemia (CMI) symptoms is the only tool available in the absence of a validated and easily available function test. Furthermore, the effectiveness of video-assisted retroperitoneal Coeliac Artery Release (vaCAR) is disputed. Reported outcomes are diverse and guidelines allow space for interpretation. This study is aimed at finding determinants associated with a successful outcome of vaCAR, with the ultimate goal to improve patient selection. Secondly, it seeks to determine the effect of vaCAR on symptoms and quality of life (QoL).

**Methods:** Questionnaires at intake and follow-up were prospectively collected of MALS patients diagnosed between 2014 and 2021 who underwent vaCAR. Patients were selected by a multidisciplinary mesenteric ischemia expert team based on current CMI guidelines. Data was retrospectively analyzed. A successful outcome of vaCAR was defined as  $\geq 50\%$  reduction in abdominal pain on a Visual Analogue Scale and/or when patients reported "a lot less pain" on a 5-point Likert scale. Pre-intervention characteristics of patients with a successful outcome were compared with patients with an unsuccessful outcome. The effect of vaCAR was evaluated by comparing symptoms and QoL before and after vaCAR.

**Results:** 98 patients treated for MALS with vaCAR were included. No significant differences in patient characteristics were found between the successful and unsuccessful outcome groups. Two thirds of patients had significant improvement of abdominal pain after vaCAR according to our definition of a successful outcome. Furthermore, vaCAR lead to significant improvement in all reported symptoms including a decrease in abdominal pain (79%) and improved QoL (77%).

**Conclusion:** In this highly selected MALS cohort, no characteristics could predict a successful outcome of vaCAR. Nevertheless, significant and clinically relevant symptom reduction and improved QoL were measured after vaCAR substantiating vaCAR could be an effective treatment for MALS patients.

## Changes in body composition after endovascular stenting in patients with chronic mesenteric ischaemia

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**Background:** Chronic mesenteric ischaemia (CMI) is a vascular disorder where mesenteric perfusion is insufficient for the increased metabolic demands, particularly after meals. This inadequate blood flow leads to debilitating postprandial abdominal pain, which often causes fear of eating and subsequent weight loss. Although endovascular stenting effectively restores blood flow, it is unknown how body composition evolves after treatment. Therefore, the aim of this study was to investigate how body composition changes in patients with CMI after endovascular stent placement.

**Methods:** This retrospective study used data from the CoBaGI trial by Terlouw et al, which enrolled 94 patients with a consensus diagnosis of atherosclerotic CMI of whom only definitive CMI patients were analyzed. Computed tomography angiography (CTA) was performed at baseline and at 6, 12, and 24 months after stenting. Body composition was assessed using Mosamatic™ on a single third lumbar vertebra (L3) slice. Skeletal muscle index (SMI), visceral adipose tissue index (VATI) and subcutaneous adipose tissue index (SATI) were calculated to quantify muscle and fat mass, while muscle radiation attenuation (MRA) was derived as a measure of muscle quality.

**Results:** A total of 236 CTA scans from 66 patients were included. VATI and SATI increased over 24 months in both sexes ( $p < 0.001$ ). SMI remained stable in males ( $p = 0.714$ ) and females ( $p = 0.492$ ). MRA significantly declined in males ( $p = 0.005$ ) and females ( $p < 0.001$ ), indicating reduced muscle quality.

**Conclusion:** In conclusion, in patients with definitive CMI, body composition changes after stent placement were characterized by recovery of fat mass, while skeletal muscle mass remained unchanged and muscle quality declined. These findings suggest that symptom relief after endovascular intervention in patients with CMI may restore caloric intake, but does not necessarily improve muscle health, highlighting that body weight alone may not reflect true physiological recovery.

## The combined therapeutic potency of class I/IV HDAC inhibitor Mocetinostat and oncolytic reovirus in pancreatic cancer models

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**Background:** Pancreatic cancer is the fourth most common cause of cancer in The Netherlands, and has a 5 year-survival rate of less than 10% in The Netherlands. The most prevalent kind of pancreatic cancer, pancreatic ductal adenocarcinoma (PDAC), contains a considerable immunosuppressive tumour stroma with a major component being cancer-associated fibroblasts (CAFs). CAFs critically affect tumour progression and therapy response, and the desmoplastic stromal barrier they are a part of plays a large role in the therapy-unresponsiveness of PDAC. Oncolytic reovirus offers an interesting therapeutic opportunity by targeting the stromal barrier as well as the pancreatic tumour. CAFs expressing Junctional Adhesion Molecule-A (JAM-A) are sensitive to oncolytic reovirus infection. However, JAM-A is absent or lowly expressed on the majority of PDAC CAFs. We previously discovered that Mocetinostat, a histone deacetylase (HDAC) I/IV inhibitor, potently upregulates JAM-A on CAFs. This project aimed to determine the effect of treatment with Mocetinostat on JAM-A expression, reovirus infection efficiency, and reovirus-mediated cell death of PDAC tumour cells, CAFs, and their co-culture.

**Methods:** Various mono- and co-cultures were (pre-)treated with Mocetinostat and subsequently infected with wildtype reovirus strain *R124* before read-outs such as viability via an WST assay, or viral replication via flow cytometry.

**Results:** Mocetinostat treatment resulted in an upregulation of JAM-A on cells with inherently low or absent JAM-A expression. Furthermore, Mocetinostat treatment increased the replication of reovirus. Lastly, the viability of both the PDAC and CAF monoculture, as well as their co-culture, decreased the fastest using both Mocetinostat and reovirus, indicating a higher sensitivity to the combinatory treatment compared to either mono-treatments.

**Conclusion:** To conclude, Mocetinostat treatment increased reovirus replication and consequently cell death of PDAC tumour cells, CAFs, and their co-culture thus potentially contributing to the anti-tumour effectiveness of reovirotherapy.

## Does patient empowerment influence the process of shared decision making in IPMN patients

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Background: IPMN (intraductal papillary mucinous neoplasm) is a premalignant condition with a small chance of progression to malignancy, Shared decision making (SDM) is important to decide whether or not to start surveillance. It may not always be clear to patients and health care providers (HCP) what is important to patients in the decision process. We initiated a patient coaching program (Patient Empowerment and Preparation; PE&P) to support patients in SDM.

Methods: Single-blind, randomized controlled trial with two arms (usual care vs. PE&P). The primary outcome is "perceived efficacy in patient-physician interactions" (PEPPI). Secondary outcomes were: quality of SDM as perceived by patients, HCPs and observers and decisions made after consultation with staff or residents. Data were collected with questionnaires, audiotaped consultations and patient files. Mann Whitney U tests (medians) and chi square tests (categories) were performed to compare groups (intention to treat).

Results: Fifty-eight patients were randomized to control (n=24) or intervention (n=34) group. There were no differences between groups in PEPPI (p=.922), however patients indicated to feel more empowered after coaching (open responses). Observed and HCP-reported quality of SDM tended to be higher in the intervention group but did not reach statistical significance. The difference between intervention and control group in observed quality of SDM was higher in residents compared to staff. In the intervention group, it was more often decided to stop FU or deviate from the protocol.

Conclusion: Although there was no difference in patient's sense of control and participation in SDM, patients felt more empowered after participation in an empowerment coaching program. Quality of SDM as perceived by HCP and observers was increased after empowerment coaching. The benefit of a patient coaching program may be higher when consulting with a resident compared to consulting experienced staff. In IPMN patients a patient empowerment coaching program may change the decision to participate in a surveillance program and may increase patient satisfaction. The empowerment coaching program is not disease specific. Further studies are needed to evaluate the effect of empowerment coaching on quality of SDM in other patient groups.

## Adenoma detection rate is associated with risk of late-onset post-colonoscopy colorectal cancer

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**Background:** Endoscopists' adenoma detection rate (ADR) is inversely associated with post-colonoscopy colorectal cancer (PCCRC) risk. The World Endoscopy Organization (WEO) posits that PCCRCs detected beyond 4 years most likely arise from new polyps, while earlier cases largely reflect inadequate quality. **Methods:** We analyzed quality-assured baseline colonoscopies from the Dutch FIT-based screening program (2014-2023) with linked polyp and colorectal cancer data from the national pathology database up to March 2025. We calculated the ADR for each endoscopist who conducted 75 procedures. To minimize surveillance bias, we included only individuals whose endoscopist recommended return to screening after 10 years. Our primary analysis included individuals with at least 4 years of follow-up (FU); time-to-event was measured starting at the 4-year landmark. We estimated the association between ADR and PCCRC risk using a shared-frailty Cox proportional hazards model, adjusting for patient age and sex, with endoscopist included as a random effect. For subgroup analyses, endoscopists were stratified into quintiles based on ADR. PCCRC timing was analyzed in individuals with at least 8 years of FU within a 10-year timeframe, using 2.5-year intervals.

**Results:** In total, 420.356 colonoscopies were included for ADR and PCCRC-risk analysis. These procedures were performed by 521 endoscopists. The median ADR was 61.3% (IQR 57-66). Over the decade, 1.013 PCCRCs were detected (incidence: 4.42 per 10.000 person-years of follow-up (PYFU)). In total, 188.730 individuals received advice to return to screening after 10 years. Among this group, 138 PCCRCs were detected beyond 4 years after baseline (4.35 per 10.000 PYFU 3.65-5.14), with a median FU of 7 years (5.75-8.50). Endoscopist's ADR was significantly associated with PCCRC risk beyond 4 years (HR 0.97 CI95% 0.95-0.99). Compared to individuals scoped by endoscopists in the highest ADR category (>66.8%), those scoped by endoscopists in category 1-4 had significantly higher PCCRC-risk beyond 4 years, with HRs of 3.30 (1.54-7.08), 2.52 (1.14-5.58), 3.16 (1.47-6.80) and 2.78 (1.26-6.13), respectively. Among individuals with 8 years FU, 171 PCCRCs were detected: 19% in years 0-2.5, 30% in years 2.5-5, 36% in years 5-7.5, and 15% in the final 2.5 years.

**Conclusion:** While high endoscopist ADR is known to reduce PCCRC risk within 3 years, our findings demonstrate this protective effect persists beyond 4 years. This challenges the WEO assumption that late PCCRCs mainly reflect cancers developing from new polyps.

## Splenic hilum nodal involvement in left-sided pancreatectomy for pancreatic ductal adenocarcinoma (SPLENDID): international multicenter single-arm trial to assess the oncological safety of spleen preservation

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**Background:** Splenectomy is routinely performed during left pancreatectomy for pancreatic ductal adenocarcinoma (PDAC) to facilitate full splenic hilum lymphadenectomy. However, a survival benefit for splenectomy in this setting has not been demonstrated. Furthermore, splenectomy increases the risk of short- and long-term morbidity, and the spleen is essential for novel adjuvant vaccination immunotherapy. Therefore, the SPLENDID study focuses on the oncological safety of spleen-preservation in patients with left-sided PDAC by objectifying the rate of lymph node (LN) metastases in the splenic hilum.

**Methods:** International multicenter single-arm trial conducted in 31 centers across 15 countries. Patients undergoing left pancreatectomy with splenectomy for PDAC were included. After resection, a Warshaw procedure was simulated on the back table by transecting the specimen into a pancreas-part, and a spleen-part containing the peri-splenic tissue. Both parts are analyzed separately. The primary endpoint was the rate of LN metastases in the spleen-part with the hypothesis that if this rate was <9% a randomized trial would be initiated. Because recruitment continues until January 2026, these are preliminary results.

**Results:** Overall, 141 patients undergoing left pancreatectomy with splenectomy for PDAC were included, mostly in the pancreatic body or tail (85.9%). Median tumor size was 28mm (IQR 18-35). The median distance between PDAC and spleen was 51mm (IQR 30-80). Median LN yield was 21 nodes (IQR 13-31), with 17 (IQR 10-26) in the pancreas-part and 3 (IQR 1-6) in the spleen-part. Seven patients (5.0%) had LN metastases in the spleen-part.

**Conclusion:** The 5.0% rate of LN metastases in the peri-splenic hilum supports the potential oncological safety of spleen-preservation in patients undergoing surgical resection for left-sided PDAC, and provides a rationale for a randomized trial comparing spleen-preservation versus splenectomy. This research was supported by the NVGE research prize.

## Additional diagnostic yield of re-evaluating regionally performed high-resolution manometry studies by an expert center

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**Background:** Despite advances in software, accurate interpretation of esophageal High-Resolution Manometry (HRM) still relies on well-trained and experienced personnel. The aim of this study was to evaluate the added value of re-evaluating regionally performed HRM studies at an esophageal motility expert center.

**Methods:** It is standard practice in our center to re-assess all measurements of patients that underwent HRM elsewhere and are referred to our clinic for second opinion. This evaluation is routinely performed by at least two expert esophagologists. We retrospectively identified all consecutive HRM measurements that had been performed and evaluated elsewhere and re-assessed at our center between January 1, 2017, and December 31, 2022. The outcome of the re-assessment was compared with the initial conclusion. For discrepant outcomes, potential sources of discrepancy were identified and impact on clinical management was evaluated.

**Results:** A total of 315 HRM measurements from 311 patients (mean age 52 years; 55.3% female) were included. Re-evaluation revealed discrepant conclusions in 45.4% of cases. In 35.5% (n=112) the change in conclusion has likely affected patient clinical management. In Figure 1 concordance of conclusions and discrepancies are shown. The Cohen's Kappa between outcomes was 0.482 (95% CI [0.42, 0.54],  $p < 0.001$ ), indicating a moderate level of agreement between referral centers and the expert center. Discrepancies occurred most frequently after initial diagnoses of achalasia type III (n=18), Esophagogastric Junction Outflow Obstruction (EGJOO) (n=29) and Distal Esophageal Spasm (DES) (n=28) (Figure 2). In 48.5% (65/134) of discrepancies, incorrect marker placement at the initial analysis appeared to be the main cause. Additional causes included: technical errors (e.g., abdomen not reached, catheter looped, excessive double swallows) in 15.7% (21/134), difficult interpretation due to factors such as borderline IRP values or artifacts in 16.4% (22/134), uninterpretable measurement due to artefacts in 4.5% (n=6/134), failure to adhere the Chicago Classification in 11.9% (16/134), catheter defects in 1.5% (2/134), in 0.7% (1/134) not taking opioid use into account and in 0.7% (1/134) there was no clear source for discrepancy. A total of 534 symptoms were extracted from the referral indications. (multiple symptoms per patient possible) No association was found between symptoms and discrepant conclusions. ( $p > 0.05$  for all symptoms)

**Conclusion:** Re-evaluation of HRM studies by an expert center frequently changed conclusions, with significant implications on patient management.

## Intranuclear signaling by calprotectin in intestinal epithelium contributes to the refractory nature of Crohn's disease related fistula

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Background: Crohn-related perianal (CD) fistulas are often refractory to therapy and not amenable for surgical interventions, in particular in comparison to cryptoglandular fistula. However, the etiology of this difference remains largely unclear. We identified epithelial redifferentiation into keratinized epithelium as a physiological response in fistula healing. Although present, this activity was decreased in CD fistulas. In this study we aimed to identify the biology underlying this phenomenon.

Methods: The epithelial compartment of 30 fistula tracts (20 CD, 10 cryptoglandular) was analyzed by single cell RNA-sequencing and pseudotime analyses. Data was confirmed by IHC and functional effects validated in cell line and organoid cultures. Analysis included chromatin immunoprecipitation (CHIP), rt-pcr and protein analysis.

Results: The fistula tracts contained all stages of normal intestinal epithelium (*LGR5+* stem cell to *BEST4+* late enterocyte) as well as the keratinized epithelium we described earlier (*KRT19+*, *KRT5+*, *KRT15+*). Pseudotime analysis indicated differentiation from intermediate *OLFM4+* colonocytes to the keratinized subset. Interestingly, the developmental trajectory showed a branching point with divergent tracts for cells derived from cryptoglandular versus CD fistulas with the CD-derived trajectory expressing more inflammatory genesets. Close-up analysis of the branching point indicated epithelial calprotectin (S100A8/9) as a key factor in the aberrant development of keratinized tissue in CD. Immunohistochemistry not only confirmed calprotectin protein expression in intestinal epithelium, but also showed that in particular in CD, expression was largely intranuclear. This was further validated using epithelial cell lines and organoids, where a mix of cytokines (TNF- $\alpha$ , IFN- $\gamma$ , IL22 and IL17), all known to be present in fistula tracts, was able to induce intracellular but not secreted calprotectin. The nuclear localization suggested a potential role in transcription, and CHIP analysis indeed showed binding of calprotectin to the loci of various inflammatory genes including *C3*, *CXCL17* and *LCN2* as well as their subsequent upregulation in response to the cytokine mixture. Knockdown of either subunit abrogated this response, showing calprotectin is a crucial mediator of inflammatory signals in inflammatory epithelium in CD related fistula.

Conclusion: These data show a novel role for calprotectin in IBD. In fistula derived epithelium, calprotectin functions as a transcriptional regulator, relaying cytokine signals resulting in an inflammatory phenotype of epithelium not amenable to surgical closure. Interventions in this pathway may improve therapy responsiveness in Crohn-related fistula.

## Unraveling the molecular responses of mature and progenitor-type cholangiocytes to ischemia and reoxygenation using an organoid model

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**Background:** Ischemia-reperfusion injury leads to damage of cholangiocytes in the biliary tree, which can progress into developing post-transplant cholangiopathy. Mature biliary epithelial cells are sensitive to ischemia, leading to shedding and loss of epithelial barrier function. Progenitor cells in the peribiliary glands (PBG), non-proliferative cells that can repopulate or repair damaged biliary epithelium, are however relatively spared upon ischemic injury. The exact mechanism underlying this difference in response is poorly understood. We therefore investigated the response of human mature intrahepatic cholangiocyte organoids (mICO) and progenitor-type ICO (pICO) to ischemia and reoxygenation (IR).

**Methods:** Human pICO were derived from liver biopsies during liver transplantation (n=5). Functional mICO were generated and transcriptionally characterized. To simulate IR, mICO and pICO were subjected to 72 hours of ischemia (1% oxygen), followed by 72 hours of reoxygenation (21% oxygen) at 37 °C. Transcriptomics and immunofluorescent samples of both organoid phenotypes were analyzed.

**Results:** pICO relate to the cell phenotype found in PBG, while mICO represent the mature phenotype that shares a core transcriptional profile with cholangiocytes lining the bile duct. Upon ischemia, pICO showed limited signs of (apoptotic) injury, while disruption of the actin cytoskeleton was seen in mICO, as revealed by fluorescent microscopy. Consistently, genes related to hypoxia, immune and cell stress responses, complement, and apoptosis were significantly lower in pICO compared to mICO after ischemia (p<0,05). After reoxygenation, pICO but not mICO were able to restore cell proliferation. Consistently, genes related to oxidative phosphorylation, proliferation, and cellular repair were upregulated in pICO whereas genes related to inflammation and apoptosis were upregulated in mICO (p<0.05).

**Conclusion:** This study demonstrates that pICO and mICO respond differently to IR. The *in vitro* response of progenitor-like and mature cholangiocyte organoids upon IR recapitulates the *in vivo* response on ischemia-reperfusion injury. We thus provide a framework to study the pathophysiology of biliary IR and identified signaling pathways, offering potential therapeutic targets.

## Impact of Urbanization on Mucosal Immunity and Microbial Tolerance in Tanzanian Schoolchildren

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**Background:** Environmental and lifestyle changes accompanying rapid urbanization are thought to contribute to immune dysregulation and chronic inflammation, partly by reducing childhood exposure to microbes and parasites. In sub-Saharan Africa, these transitions may shape mucosal immune maturation, barrier function, and tolerance to intestinal microbes, with potential consequences for disease risk. For example, elevated antibody levels against the bacterial flagellin cBir1, indicating reduced microbial tolerance, are associated with Crohn's disease. Here, we investigated how rural *versus* urban living relates to helminth exposure, type 2 immunity, mucosal inflammation, and serological responses to microbial agents in Tanzanian schoolchildren.

**Methods:** Finger prick blood and fecal samples were collected from 194 urban and 150 rural children (aged 12-19 years). Socioeconomic status, hygiene practices and environmental exposures were assessed using a questionnaire. Plasma IgE, IL-8, IL-1RN (IL-1 receptor antagonist), and anti-Cbir1 IgG, and fecal calprotectin and zonulin were measured using ELISA. Helminth infection was determined by Kato-Katz. IgE was categorized as not detectable, detectable, or above detection limit, and IL-8 as detectable vs. undetectable. Anti-Cbir1 IgG was measured in a subset of 87 children.

**Results:** Helminth prevalence was overall low but significantly higher in rural than urban children (7.4% vs. 0%,  $p = 0.002$ ), paralleled by a shift towards higher IgE categories in rural participants ( $p = 0.002$ ). In contrast, urban children showed significantly higher anti-Cbir1 IgG levels (median 428.43 vs 181.15 ng/ml;  $p = 0.002$ ). Urban children also reported higher hygiene standards, more consumption of bottled water, more frequent access to indoor toilets, and reduced exposure to livestock and farm animals. However, within the cohort, higher fecal calprotectin, and to a lesser extent higher zonulin, was associated with poorer hygiene practices and unsafe water sources, suggesting subclinical intestinal inflammation and increased intestinal permeability in environmentally exposed children. IL-8 also tended to be more frequently detectable in rural children ( $p = 0.06$ ).

**Conclusion:** Thus, rural children exhibited stronger type 2 immunity compared to urban children, while urban children seemed to have reduced microbial tolerance, reflected by elevated anti-Cbir1 IgG levels. These immune signatures may represent early imprinting events that predispose to later immune-mediated gastrointestinal disease, including IBD, in rapidly urbanizing regions. The stronger type 2 immune response observed in rural children may be protective, although prospective studies are required to assess causality.

## Duodenal mucosal protein turnover exceeds 16% per day *in vivo* in both young and older adults

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**Background:** The intestine is one of the more highly regenerative organs in the human body, with complete renewal of epithelial cells in three to five days under physiological conditions. So far, no data are available on duodenal tissue protein turnover rates under free-living conditions *in vivo* in young and older adults. The objective of this study was to assess daily duodenal mucosal protein synthesis rates under free-living conditions *in vivo* in young and older adults.

**Methods:** In this cross-sectional, non-therapeutic intervention design, 24 healthy young ( $n=12$ , 5M/7F; age  $26\pm 5$  y; BMI  $24.3\pm 4.4$  kg/m<sup>2</sup>) and older ( $n=12$ , 7M/5F; age  $74\pm 5$  y; BMI  $24.4\pm 2.9$  kg/m<sup>2</sup>) males and females consumed a two-day standardized diet ( $8.9\pm 1.5$  MJ; 15 energy% provided as protein). Deuterium oxide (<sup>2</sup>H<sub>2</sub>O) ingestion with frequent saliva and blood sampling were applied to assess body water <sup>2</sup>H and serum [<sup>2</sup>H]-alanine enrichments, respectively. Duodenal biopsies were obtained during gastroduodenoscopy to allow assessment of duodenal mucosal protein synthesis rates throughout the two-day assessment period.

**Results:** Daily integrated duodenal mucosal protein synthesis rates averaged  $16.8\pm 2.7$  %/day, ranging between 13.4 and 24.3 %/day, with serum [<sup>2</sup>H]-alanine enrichments being used to estimate precursor pool enrichment. Duodenal mucosal protein synthesis rates averaged  $16.5\pm 2.6$  and  $17.2\pm 2.9$  %/day in young and older adults, respectively, with no differences between groups ( $P=0.54$ ).

**Conclusion:** Duodenal mucosal protein synthesis rates exceed 16 %/day under free-living conditions *in vivo* in both healthy young and older adults. Age does not seem to impact daily duodenal mucosal protein synthesis rates in healthy humans.

## Dietary impact on infants' gut microbiota and its capacity in SCFA metabolism

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**Background:** The infant's gut microbiome undergoes sequential maturation throughout the first years of life, a process with lasting consequences for health. Birth mode and infant feeding type play crucial roles during microbiota assembly. Subsequently, the introduction of complementary foods, triggers a profound microbial shift towards an adult-like microbiota. Despite these insights, our understanding of diet-microbe interactions in early life remains incomplete.

**Methods:** Within the Lucki Birth Cohort Study, we explored associations between early-life questionnaire-based dietary patterns and infant microbiome development in 105 infants. Analysis involved profiling of 389 fecal samples at six time points collected during weaning, using whole metagenome shotgun sequencing. Contigs created were mapped to the polysaccharide degrading enzyme database resulting in fibre degradation profiles.

**Results:** Infants who were introduced earlier to a more diverse range of solid foods showed a more mature and diverse gut microbiota as early as 4 months of age, including higher levels of butyrate-producing taxa such as *Flavonifractor plautii*. Their microbiomes also had greater capacity to degrade dietary fibers (e.g., xylan and rhamnogalacturonan). Functional profiling further showed early enrichment of genes involved in butyrate synthesis, linking greater early feeding diversity to increased short chain fatty acid producing potential.

**Conclusion:** The current study unveils the complex relationship between diet, gut microbiota, and fibre degradation capacity. Introducing a diverse range of solids enhances fibre degradation capacities and microbiome functionality, underscoring the ongoing adaptability of the infant's microbiome to its environment.

## Targeting the Seed and the Soil: Combining Gemcitabine with a Stromal Targeting Peptide to Overcome Barriers involved in PDAC Treatment

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**Background:** A major component leading to treatment resistance in Pancreatic Ductal Adenocarcinoma (PDAC) involves its dense tumor stroma consisting primarily of cancer-associated fibroblasts (CAFs). The crosstalk between tumor cells and CAFs maintains a chemo-resistant and immunosuppressive tumor microenvironment (TME) in PDAC. Inactivation of this pro-tumorigenic stroma might therefore be the key to improving PDAC prognosis. In this regard, we aim to target integrin  $\alpha 5$  (ITG $\alpha 5$ ), highly expressed in CAFs, using a peptide cyAV3.3. To further enhance the delivery of this treatment, we developed a thermosensitive hydrogel (ChemoGell™) incorporating both the cyAV3.3 peptide and Gemcitabine (Gem) for local, intratumoral (i.t.) delivery.

**Methods:** cyAV3.3 peptides were custom-synthesized, and purity was determined by reverse HPLC. The efficacy of cyAV3.3 was established on primary CAFs using histology and a qPCR panel for stromal activation markers. Next, the combination of Gem and cyAV3.3 was assessed *in vitro* in 3D co-cultures involving human PDAC (MiaPaCa-2 and Panc-1) cell lines and Pancreatic stellate cells (PSCs), and patient-derived organoids (PDOs) and CAFs using microscopic analyses and an ATP-based viability assay. The release kinetics of ChemoGell™ was evaluated *in vivo* by live imaging using a fluorescent dextran-loaded ChemoGell™ in a syngeneic, KPC3, murine PDAC model.

**Results:** Treatment with the cyAV3.3 peptide shows an *in vitro* reduction of stromal activating markers Col1,  $\alpha$ SMA, TGF $\beta$ , FAP, and FN-1 on CAFs and PSCs by qPCRs and histology. *In vitro* co-cultures of human PDAC cell lines with PSCs show a ~50% reduction in size and viability on the combination of cyAV3.3 and Gem compared to untreated controls. We further corroborate this using primary CAF-PDO co-cultures, showing an ~87% reduction in viability after incubation with ChemoGell™ loaded with a combination of Gem and cyAV3.3. Furthermore, cyAV3.3 significantly reduced stromal invasion (~5x) into the surrounding gel matrix. We also noted increased retention of small molecule compounds by ChemoGell™ compared to free i.t. injections *in vivo* and on *ex vivo* tumor.

**Conclusion:** We show that cyAV3.3 has the capacity to inactivate CAFs in the TME and warrants further research into working as a potential adjuvant therapy in combination with established chemo- and immunotherapies. We further developed ChemoGell™ as a form of localized treatment to utilize these novel combinations; a major advantage being the possibility for minimally invasive endoscopic delivery of ChemoGell™ as an i.t. drug depot. Ongoing work involves assessing treatment effect on tumor burden, survival, and stromal and immune compositions *in vivo*.

## Influence of the Janus Kinase (JAK) Inhibitor Filgotinib on the Disease-Associated Network of Intestinal Immune Cells in Ulcerative Colitis

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**Background:** Ulcerative colitis (UC) is an inflammatory bowel disease characterized by chronic inflammation of the colon. Despite the availability of several therapeutic options, a significant proportion of patients fails to respond. Although JAK inhibitors such as filgotinib induce a response in around 70% of patients<sup>1-3</sup>, predictors of response and tissue-level mechanisms remain unclear. Here we used 40-plex imaging mass cytometry to profile paired colonic biopsies from patients with UC before and after filgotinib treatment (n=20) and from non-IBD controls (n=8), assessing response based on endoscopic Mayo score at the sampled site.

**Methods:** At baseline, full responders exhibited a lower relative abundance of B cells and CD4+ T cells, and a higher relative abundance of HLA-DR- epithelial cells compared to non-responders, while partial responders displayed intermediate levels of these cell populations. In responders, the relative abundances of cell populations more closely resembled the relative cell abundances in control patients after filgotinib treatment.

**Results:** In full responders, the most obvious changes were in the HLA-DR- epithelial cells, which increased after treatment, and plasma cells, which decreased after treatment. In partial responders, relative HLA-DR- epithelial cell abundance also increased after filgotinib treatment (only after 24 weeks), but relative plasma cell abundance did not change. However, relative B cell and CD4+ T cell abundance decreased after 24 weeks of filgotinib treatment in these patients. In non-responders, relative abundance of B cells, CD4+ T cells, and plasma cells decreased after 10 weeks of filgotinib treatment, and relative HLA-DR- epithelial cell abundance increased.

**Conclusion:** These findings suggest that baseline immune cell abundances and epithelial HLA-DR status distinguish future responders from non-responders, and that filgotinib normalizes mucosal immune cell abundances in full responders, and to a lesser extent in partial responders. Specific epithelial and lymphocyte subsets may therefore serve as tissue biomarkers for stratifying patients and for pharmacodynamic monitoring of JAK-targeted therapy.

## Detection of *in vivo* fibrosis and differentiation from inflammation in IBD patients using FAPi PET/CT imaging: the PIMAFI study

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**Background:** Lack of reliable intestinal fibrosis imaging modalities hampers the development of anti-fibrotic agents. Gallium-68 Fibroblast Activation Protein inhibitor (FAPi) PET/CT demonstrates potential for *in vivo* fibrosis assessment through the visualization of Fibroblast Activation Protein (FAP). We performed the first in-human study to investigate FAPi PET/CT to detect fibrosis in IBD patients using pharmacokinetic modelling.

**Methods:** Patients with active Crohn's disease (CD) or ulcerative colitis (UC) awaiting surgical resection were included. Patients underwent a 60-minute dynamic FAPi PET/CT scan, followed by 12 minutes of static imaging within 12 weeks before surgery. Two blinded readers independently assessed the PET/CT images, which were validated by a third non-blinded reader. Bowel segment uptake was analyzed using standardized uptake values (SUV) and uptake kinetics over time using time-activity-curves (TAC). Resection specimens were selected based on high FAPi uptake bowel segments. In parallel, intestinal ultrasound (IUS) was performed to measure bowel wall thickness (BWT). To allocate samples to fibrotic, inflamed or combined phenotype, hematoxylin and eosin and Masson's trichrome stainings were performed for inflammatory and fibrosis scoring by a blinded pathologist.

**Results:** Out of 23 participants, 15 CD and 4 UC patients underwent FAPi PET/CT and IUS prior to surgery. In total, 36 bowel regions of interest were identified and 52 transmural surgical samples were acquired. FAPi tracer uptake was markedly increased in inflamed and fibrotic regions in 18/19 patients compared to non-pathologic bowel segments (reference standard) with a median SUV ratio of 3.183. TACs showed distinct phenotypes for inflamed, fibrotic or combined bowel segments. In inflamed segments, a high peak uptake of the FAPi tracer was seen followed by a decline in uptake, indicating potentially non-specific or low-binding affinity uptake. In contrast, fibrotic segments showed low peak uptake followed by a relatively stable plateau, suggesting more irreversible or higher binding affinity uptake. SUVs were moderately correlated to BWT ( $r=0.42$ ), FAP protein expression ( $r=0.55$ ) and histological scoring for inflammation ( $r=0.53$ ) and fibrosis ( $r=0.67$ ).

**Conclusion:** FAPi uptake, detected by means of FAPi PET/CT, is associated with histological fibrosis scoring, FAP protein expression and BWT on IUS. Pharmacokinetic modelling shows different FAPi tracer uptake kinetics between predominantly fibrotic versus inflamed segments, underscoring its potential to differentiate fibrosis from inflammation in IBD patients.

## Early Intestinal Ultrasound and Elastography Predicts Treatment Persistence of Filgotinib in Ulcerative Colitis Patients: long-term results from the STEER study

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**Background:** A recently published study in patients with ulcerative colitis (UC) showed that reduction in intestinal ultrasound (IUS) parameters were early predictors of endoscopic response to filgotinib, a preferential JAK-1 inhibitor [1]. We investigated whether IUS parameters, including shear-wave elastography (SWE) and the ultrasonographic IBUS-SAS score after 4 weeks of treatment predict long-term treatment persistence.

**Methods:** UC patients with confirmed endoscopically active disease (endoscopic Mayo score (EMS)  $\geq 2$ , extending beyond the rectum) starting with filgotinib 200 mg once daily were included. In the sigmoid colon, one blinded reader assessed IUS parameters including BWT, CDS, bowel wall stratification, fat wrapping and SWE. Based on the IUS parameters, the IBUS-SAS score was calculated at baseline and week 4. After 52 weeks, treatment persistence – defined as continuous clinical remission (simple clinical colitis activity index  $\leq 2$ ) without treatment change or escalation – was evaluated. Receiver operating characteristic (ROC) curve analysis was performed, and the optimal cutoff for predicting treatment persistence was selected by maximizing the Youden index.

**Results:** In total 23 patients were included in the STEER study; one patient was lost to follow-up after six months. At week 52, 7/22 patients (32%) had treatment persistence, while 15/22 (68%) patients had lost treatment persistence (median time to losing persistence: 126 days [IQR 25-290]). At week 4 in the sigmoid, the area under the ROC curve (AUROC) showed an optimal cut-off for BWT of 3.8mm (AUROC 0.83, 95%CI 0.652-1.000; sens 86%, spec 67%; OR 9.0, PPV 86%, NPV 60%), IBUS-SAS of 20.5 (AUROC 0.88, 95%CI 0.722-1.000; sens 71%, spec 93%, OR 35.0, PPV 71%, NPV 93%), and SWE value of 32.6 kPa (AUROC 0.91, 95%CI 0.779-1.000; sens 100%, spec 73%, PPV 100%, NPV 73%) for treatment persistence on week 52. The optimal cut-offs for change at week 4 compared to baseline were -40% in BWT (AUROC 0.80, 95%CI 0.548-1.000; sens 71%, spec 93%, OR 35.0, PPV 71%, NPV 93%), -66% in IBUS-SAS (AUROC 0.91, 95%CI 0.763-1.000; sens 71%, spec 100%, PPV 71%, NPV 100%), and +6% in SWE values (AUROC 0.77, 95% CI 0.568-0.975; sens 86%, spec 67%, OR 12.0, PPV 86%, NPV 67%).

**Conclusion:** This prospective study shows that BWT, IBUS-SAS and SWE after 4 weeks of treatment with filgotinib are surrogate markers for long-term treatment persistence in UC. These findings underscore the clinical value of early ultrasound assessment as a practical tool to guide treatment decisions.

## A Material Flow Analysis of an endoscopy department to identify environmental hotspots

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**Background:** In the Netherlands, healthcare accounts for 7% of national greenhouse gas emissions and 13% of raw material extraction. Endoscopy services, which rely heavily on single-use items and material-intensive workflows, contribute substantially to this footprint. Understanding material flows within an endoscopy department is therefore essential to support a transition toward circular endoscopic care. This study aimed to conduct a comprehensive material flow analysis (MFA) of an academic endoscopy department by quantifying the material composition of products and packaging and identifying hotspots for targeted sustainability interventions.

**Methods:** We performed an MFA using 2023 procurement data to map all materials and medication inflows and outflows in an academic endoscopy unit. Products, packaging, and information leaflets were weighed on a precision scale, and material composition was determined through manufacturer contact and desk research. Mass and material contributions were analyzed to identify products and material types with the highest mass contribution. Outflows were quantified across the department's established waste streams.

**Results:** In total, 416 products and 55 medications were included. In 2023, the department processed 13,927 kg of material, with medications and related packaging accounting for 47% of total mass. Packaging and information leaflets accounted for 19% of total mass; 73% consisted of synthetic plastics and rubbers, 24% of biobased materials, and 3% of glass. Across all inflows, synthetic plastics and rubbers dominated (60%), followed by biobased materials (24%). Outflows comprised general hospital waste (8,041 kg, 65%), hazardous waste (3,340 kg, 27%), and recycled paper (990 kg, 8%). An additional 1,557 kg consisted of materials directly used in patients, such as medications and intravenous fluids. Eight products accounted for 61% of total annual material mass and were identified as hotspots: irrigation (3,774 kg) and intravenous solutions (1,063 kg), gloves (948 kg), tubing (suction/irrigation/insufflation; 784 kg), absorption pads (734 kg), biopsy jars (419 kg), kidney dishes (390 kg), and aprons (380 kg).

**Conclusion:** This MFA of an academic endoscopy department shows that material use is dominated by a small number of high-impact products. Identifying these hotspots provides targets to support a shift towards more circular endoscopy services. Future research should translate material flows into environmental impacts, such as carbon emissions and resource depletion, to guide comprehensive sustainability strategies in endoscopy.

## Five-day waste audit in a tertiary endoscopy department: quantifying waste streams and carbon footprint

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**Background:** Endoscopy units are the third largest emitters of carbon dioxide (CO<sub>2</sub>) within hospitals. A substantial part of these emissions result from waste. Improving waste segregation and reducing waste in endoscopy units requires detailed insights into current waste streams. We aimed to quantify waste generation in an academic endoscopy department and to estimate the associated carbon footprint.

**Methods:** We performed a five-day waste audit of the pre-, post- and procedure phases of an eight-room gastrointestinal endoscopy department. Waste from the reprocessing area was excluded. All waste streams were collected twice daily and subsequently weighed and categorized into preidentified waste streams. The total mass (kg) per waste stream and per procedure was calculated. Procedure numbers during the study period were recorded, and waste-related carbon emissions (carbon dioxide equivalents (CO<sub>2</sub>e)) were estimated using national carbon emissions factors.

**Results:** Over the five-day period, 243 endoscopic procedures were performed: 64 colonoscopies, 107 esophagogastroduodenoscopies, 13 endoscopic retrograde cholangiopancreatographies, 31 endosonographies, and one video capsule endoscopy. In addition, 27 procedures were pulmonary endoscopies. Given that gastrointestinal endoscopy constituted nearly 90% of activity during the audit, these findings mainly reflect waste patterns in gastrointestinal endoscopy workflows. On average, 49 procedures were performed per day (range 44-54). A total of 317.6 kg of waste was generated. Most waste consisted of general waste (184.9 kg, 58%), followed by hazardous waste (78.6 kg, 25%), recycled paper (24.8 kg, 8%), recycled plastic (22.6 kg, 7%), and sharps (6.6 kg, 2%). Each procedure generated approximately 1.3 kg of waste. Waste-related carbon emissions amounted to 1,465 kg CO<sub>2</sub>e over the five-day period, corresponding to 6 kg CO<sub>2</sub>e per procedure and an estimated 58,820 kg CO<sub>2</sub>e annually of endoscopy waste in this center, which is equivalent to driving a conventional car for 266,000 km, or six times around the earth.

**Conclusion:** This is the first five-day comprehensive waste audit of pre-, post- and procedure phases in an endoscopy department in a Dutch academic hospital, providing a baseline for targeted sustainability interventions. It highlights substantial opportunities for waste reduction and segregation, improved recycling, and can guide environmental improvement efforts in endoscopy units.

## Implementing sustainability interventions in endoscopy: results from a regional study in the Netherlands

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**Background:** Gastrointestinal endoscopy is resource-intensive and contributes substantially to healthcare's environmental footprint. While the ESGE position statement on green endoscopy highlights the need for a more sustainable practice, concrete guidance on implementation remains limited. This study explored sustainability efforts in endoscopy departments in the south-west of the Netherlands and examined barriers and facilitators influencing their adoption.

**Methods:** Semi-structured interviews were conducted with green team members from eight endoscopy departments. Transcripts were thematically analyzed to map sustainability initiatives and implementation factors. A second interview round validated the initiative list, and sustainability coordinators provided additional hospital-wide information.

**Results:** Across the eight hospitals, 73 distinct sustainability initiatives were identified, with departments having implemented a mean of 42 initiatives (range: 38–49). Frequently reported measures included reducing suction tubing and canisters (n=8), oxygen catheters (n=8), sterile water bottles (n=7), and absorption pads (n=6). All departments used strict triage protocols to prevent unnecessary procedures and addressed patient and staff travel through telemedicine and cycling incentive programs. In general, three interrelated themes affected implementation: a. Institutional and organizational factors: barriers included conflicting policies from other disciplines (n=6), limited time (n=5), cost constraints (n=4), and restrictive hospital rules (n=4); enablers included hospital-wide alignment (n=7), supportive leadership (n=6), and structural resources (n=4). b. Behavioral and cultural factors: barriers included staff resistance (n=7), lack of evidence (n=6), and low prioritization (n=5); enablers included active green teams (n=7), visualized before-and-after results (n=6), and protected time (n=5). c. System-level factors: barriers included limited influence on industry (n=3) and national and international regulations (n=2); enablers included collaboration across endoscopy departments regionally (n=6), across departments within the hospital (n=5), and the availability of empirical evidence (n=5).

**Conclusion:** Endoscopy departments in the south-west of the Netherlands have adopted a wide range of sustainability initiatives, primarily targeting reductions in single-use items, unnecessary procedures, and travel emissions. Despite this progress, substantial institutional, cultural, and system-level barriers persist. Advancing sustainable endoscopy will require coordinated organizational support, engaged leadership, robust evidence, and strong cross-departmental and inter-hospital collaboration.

## Psychosocial and Environmental Determinants of Nausea in Patients with Functional Dyspepsia: An Exploratory Experience Sampling Method (ESM) Study

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**Background:** Nausea is a frequently reported symptom in functional dyspepsia (FD). Its pathophysiology remains poorly understood, with daily life factors influencing its dynamic nature. This study aimed to identify psychosocial and environmental triggers of nausea in FD, utilizing the experienced sampling method (ESM).

**Methods:** Thirty-five Rome IV FD patients (71.4% female, mean age 44.7 years) and thirty-four healthy controls (HC) (70.6% female, mean age 44.1 years) completed ESM assessments, a tool capturing real-time data, over seven consecutive days (10 times daily). Scores were rated on an 11-point Numeric Rating Scale. Data were analyzed using linear mixed-effects models.

**Results:** Among ESM completers ( $\geq 24$  out of 70 questionnaires), completion rates were 62.2% in FD patients and 69.7% for HC. Mean seven-day nausea scores were 1.35 (SE 0.32) in FD and 0.10 (SE 0.06) in HC ( $P < 0.001$ ). In FD, a 1-point increase in positive affect was associated with a 0.29 decrease in nausea ( $P < 0.001$ ), while negative affect was associated with a 0.24 increase in nausea ( $P < 0.001$ ). Comfort in a situation ( $P < 0.001$ ) and pleasantness in company ( $P = 0.037$ ) were negatively associated with nausea. No association was found between food intake and nausea ( $P = 0.177$ ). Secondary analysis showed a positive association between concurrent abdominal pain and nausea ( $P < 0.001$ ).

**Conclusion:** Real-time affect, comfort, and pleasantness are significantly associated with concurrent nausea in FD, emphasizing a dynamic emotional-symptom interplay. ESM-based monitoring provides valuable insights into individual symptom variability and triggers, positioning it as a promising tool for personalized treatment strategies.

## High risk of avoidant/restrictive food intake disorder [arfid] in adults with eosinophilic esophagitis [eoe]

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**Background:** Patients with eosinophilic esophagitis [EoE] seem at higher risk for developing eating disorders with a restrictive and/or anxious component. We aim to explore the prevalence of and associated factors for a positive screening for Avoidant/Restrictive Food Intake Disorder [ARFID] in adults with EoE.

**Methods:** This cross-sectional study included adult patients diagnosed with EoE. Participants completed questionnaires concerning medical history, dysphagia symptoms (Straumann Dysphagia Index [SDI]), the ARFID presentations 'sensory sensitivity', 'lack of interest', and 'concern about aversive consequences of eating' (PARDI-AR-Q), quality of life (EoE–Quality of life–A-questionnaire) and the extent of trait anxiety sensitivity (Anxiety Sensitivity Index [ASI] and Hospital Anxiety and Depression Scale [HADS]). Primary analyses investigated the risk of ARFID, including the three presentations, in EoE patients. Secondary analyses explored the associations between ARFID symptoms and clinical characteristics.

**Results:** A total of 144 patients with EoE (67% males, mean age 42 [30-58] years) were included in the study, of which 21% had screened positive for ARFID based on the PARDI-AR-Q. Patients with a younger age ( $p=0.041$ ), single status ( $p=0.001$ ), higher education ( $p=0.047$ ) or patients who ever visited a psychologist ( $p=0.006$ ) were more likely to have a positive screening for ARFID. Increased anxiety sensitivity (ASI:  $p=0.004$ , HADS  $p\leq 0.001$ ) or depression scores ( $p\leq 0.001$ ) were also associated with a positive screen. Multivariable logistic regression identified history of psychological consultation in the past (odds ratio [OR] 2.92, 95% CI 1.15 - 7.44,  $p=0.025$ ) as an independent factor associated with a positive risk for ARFID. The presence of more severe or frequent dysphagia complaints (OR 1.19, 95% CI 0.99 – 1.44,  $p=0.063$ ) or a young age (OR 0.97, 95% CI 0.94 – 1.01,  $p=0.128$ ) were not independently associated. Patients who screened positive for risk of ARFID had a lower disease-related quality of life and this was in part determined by dysphagia score, increased anxiety and dietary modifications ( $p\leq 0.001$ ).

**Conclusion:** Patients with EoE have a high risk of ARFID, which is associated with a negative disease-related quality of life. Clinicians should pay more attention to ARFID signs, particularly in young, single and highly educated people, and if necessary they should refer them to a psychologist.

## The incidence and complication rate of pediatric battery ingestion in the Netherlands

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**Background:** Pediatric battery ingestion can result in serious complications and mortality. We aimed to determine the incidence and complication rate of pediatric battery ingestion in the Netherlands.

**Methods:** Cases of pediatric battery ingestion, including patient and battery characteristics, complications and interventions (2018-2021) were prospectively reported by pediatricians using the Dutch Pediatric Surveillance System and combined with population related data of Statistics Netherlands. Follow-up data after 3 (T3) and 12 (T12) months were assessed by standardized questionnaires.

**Results:** In total, 153 episodes of  $\geq 1$  battery ingestion were reported (49.7% female, median age 2.8 years). An average of 38 episodes per year, reflecting an incidence of 1.18 episodes per 100,000 children per year was found. Most ingested batteries (87.6%) were button batteries. In most cases, batteries were ingested as loose items (n=47; 30.7%) or as components of lights (n=25; 16.3%) and toys (n=22; 14.4%). Forty-eight (31.4%) children presented with symptoms. Feeding problems (n=16; 10.5%), vomiting (n=12; 7.8%) and abdominal pain (n=10; 6.5%) were most common. Mental health issues (n=7; 4.6%) and battery ingestion as suicide attempt (n=1; 0.7%) were reported. All patients with a battery impacted in the proximal, middle and distal esophagus and 3 (25%) symptomatic patients with the battery located in the stomach underwent a rigid or flexible upper endoscopy. Complications occurred in 26 (17.0%) of battery ingestions. Severe complications were mortality following esophageal-aortal fistula causing hemorrhagic shock (n=1; 0.7%), carotid artery bleeding (n=1; 0.7%), tracheal-esophageal fistula (n=1; 0.7%) and (pneumo)mediastinitis (n=2; 1.3%). Complications were significantly associated with younger age ( $p$  0.004), symptoms at first presentation ( $p$  <0.001), larger batteries ( $p$  0.021), and location in the proximal ( $p$  <0.001) and middle third part ( $p$  0.037) of the esophagus. Fourteen patients (14.9%) had complications at T3, with esophageal ulcerations (4.3%) and stenosis (4.3%) as the most common, and desaturations requiring cardiopulmonary resuscitation as the most severe (2.2%). One patient with esophageal stenosis and multiple esophageal dilatations at T3 still had esophageal stenosis and dysmotility requiring dilatations at T12.

**Conclusion:** Our study shows a population-related incidence of pediatric battery ingestion in the Netherlands of 1.18 episodes per 100,000 children per year with 17% complications. Battery swallowing in (young) children is a life-threatening emergency. Urgent action and increased awareness among politicians, industry and healthcare professionals is essential to prevent serious harm.

## Incidence and Management of Sigmoid Volvulus: a Dutch Single-Centre Retrospective Study- the Coffee Bean Study

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**Background:** A sigmoid volvulus is a rare, but potentially dangerous condition requiring urgent intervention to prevent complications. In patients without suspected perforation or ischemia, endoscopic decompression is preferred. Since recurrence rates are high, subsequent sigmoid resection is often considered to prevent recurrence. Guideline recommendations for the management of sigmoid volvulus are based on low grade levels of evidence. This study describes the incidence and management of sigmoid volvulus at a large teaching hospital in the Netherlands.

**Methods:** This retrospective single-centre cohort study included patients admitted with sigmoid volvulus between January 2014 and December 2024. Patients who experienced their first episode of sigmoid volvulus at another hospital or before January 2014 were excluded. Data on patient characteristics, diagnostics, treatment and outcomes were retrieved from the electronic health record.

**Results:** The study included 59 patients. During the initial episode, 81.4% of the patients underwent Computed Tomography (CT) imaging in order to establish the diagnosis, compared to only 7% during a recurrence episode. A plain abdominal radiograph was used as an alternative. Of all patients, 58 received endoscopic decompression during the initial episode, with a success rate of 94.8%. A decompression tube was placed in 50 patients (86.2%), in 8 patients it was restrained because of suspected ischemia. Among three patients with unsuccessful endoscopic decompression two (3.4%) required emergency sigmoid resection, and one underwent successful repeat endoscopic decompression within 24 hours. Of all patients who did not undergo emergency surgery during their first episode, 75.6% had at least one recurrence. The median time to first recurrence was 16 days (IQR = 6-230). The success rate of endoscopic decompression for recurrence was comparable to that of the initial episode. A total of 42 patients underwent a sigmoid resection: 5 as emergency surgery and 37 as elective procedures. The median waiting time for elective surgery was 21 days (IQR = 8-48), and more than half of these patients experienced at least one recurrence during the waiting period.

**Conclusion:** This study shows a 95% success rate for endoscopic decompression in sigmoid volvulus, but recurrence rates remain high. Elective sigmoid resection should be considered to prevent recurrence. Since over half of the patients experienced recurrence while awaiting surgery, efforts should be made to reduce the waiting period whenever possible.

## Remimazolam versus midazolam for sedation during diagnostic gastroscopy: a multicenter, double-blind, randomized controlled trial

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**Background:** Midazolam is widely used for procedural sedation during gastrointestinal (GI) endoscopy, but its limitations include prolonged recovery and impaired post-procedural memory. Remimazolam, a novel sedative, may enable faster recovery with improved preservation of cognition. Although both agents have been extensively studied, head-to-head comparisons in a Western population are limited. **Methods:** This trial is being performed in three Dutch community hospitals involving five experienced endoscopists. Adult patients scheduled for diagnostic upper GI endoscopy with procedural sedation were eligible; anticipated use of fentanyl was an exclusion criterium. Patients were randomized 1:1 for sedation with either remimazolam or midazolam, with both patients and observers blinded for allocation. The validated MOAA/S scores and the validated Aldrete recovery scores were monitored. In a follow-up phone call one day after the procedure, a memory test and patient questionnaire were completed. Primary endpoint was time to full alertness, defined as the interval between the latest sedative dose and the first of three consecutive MOAA/S scores  $\geq 5$ .

**Results:** In this interim analysis, 141/148 (95%) patients were enrolled, with 71 receiving remimazolam and 70 midazolam. Baseline characteristics were similar between groups (66% male; mean age  $68 \pm 11$  years). The most common indication for the endoscopy was Barrett surveillance (98/141 patients; 70%). Median total doses were 8mg (IQR 7-9) for remimazolam and 5mg (IQR 4-7) for midazolam. Median procedure times were similar: 6 minutes (IQR 4-8) in both groups. Sedation success rate was 96% (68/71, 95% CI 88-99) with remimazolam and 97% (68/70, 95% CI 90-99) with midazolam ( $p=0.718$ ). Time to full alertness was shorter with remimazolam: median 10 minutes (IQR 8-13) versus 22 minutes (IQR 13-33) with midazolam ( $p<0.005$ ). Setback in full alertness occurred in 1% (95% CI 0-8) after remimazolam versus 19% (95% CI 11-29) after midazolam ( $p<0.005$ ). At the time of leaving the endoscopy room, 93% (95%CI 85-97) of remimazolam patients were ready for discharge versus 30% (95%CI 21-42) of midazolam patients ( $p<0.005$ ). Successful memory testing was observed in 65% (95% CI 53-75) versus 17% (95% CI 10-28) for remimazolam and midazolam, respectively ( $p<0.005$ ). No serious adverse events occurred.

**Conclusion:** Remimazolam for diagnostic upper GI endoscopy, enables faster recovery than midazolam, allowing most patients to meet discharge criteria directly after leaving the endoscopy room. Together with superior post-procedural memory, and high satisfaction, this may support the potential for safe, recovery-room-free discharge following remimazolam monotherapy in routine clinical practice.

## Phenotyping increased urge to defecate in irritable bowel syndrome: analysis of symptom, sensory and psychological profiles

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**Background:** Visceral hypersensitivity (VH) is considered a hallmark of irritable bowel syndrome (IBS), characterized by thresholds for pain and discomfort during rectal distention. Rectal distention can also elicit urge to defecate, a normal physical sensation that is, reported more often in IBS and may involve mechanisms distinct from pain and discomfort. This study investigates clinical, psychological, and physiological correlates of increased urge to defecate in IBS compared with healthy controls (HC), including sex-based differences.

**Methods:** Patients with IBS (Rome III criteria) and HC underwent rectal balloon-distension and completed questionnaires on demographics, lifestyle, gastrointestinal and psychological symptoms, and health-related quality of life (HrQoL). Latent clusters were identified using finite-mixture modeling, and associated determinants were evaluated with multivariate regression analyses.

**Results:** Among 322 participants (220 IBS, 102 HC), urge to defecate was more frequent in IBS than in HC (80.9% versus 51.9%;  $p < 0.001$ ) and often co-occurred with pain and discomfort, particularly in patients with VH. Latent class analysis identified three clusters, primarily distinguished by symptom-distribution, with the most symptomatic cluster showing greater symptom severity, higher psychological burden, and lower HrQoL (all  $p < 0.001$ ). Multivariate regression confirmed associations of urge with symptom severity, depressive symptom scores, and co-occurrence of pain/discomfort, but no association were found based on IBS subtype or sex.

**Conclusion:** Increased urge to defecate is highly prevalent in IBS, strongly associated with pain, discomfort, psychological burden, and reduced HrQoL, but not IBS subtype, suggesting shared or overlapping mechanisms, particularly in context of VH. These findings underscore its clinical and pathophysiological relevance, supporting its value for patient-phenotyping and tailored management.

## Development and evaluation of automated CT-based models for quantifying abdominal gas, diaphragm position and abdominal distension in patients with abdominal bloating

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**Background:** Abdominal bloating and distension are common symptoms that can significantly impair quality of life in patients with functional gastrointestinal disorders. Objective imaging-based assessment supports differentiation of mechanisms such as gas accumulation and abdominophrenic dyssynergia (APD). Current clinical assessment relies on subjective interpretation and time-consuming manual measurements. This study aimed to develop and evaluate CT-based models for automated quantification of abdominal gas volume, diaphragm position and abdominal circumference to support standardized clinical evaluation.

**Methods:** Three automated models were developed using 29 CT scans from 28 patients. A gas volume model was created by optimizing intensity-based segmentation of abdominal gas. Diaphragm position was determined as the distance between the diaphragm and vertebra T12. An abdominal circumference model was designed to calculate mean and maximum perimeters on axial slices between vertebrae L1–L4. Model outputs were compared with manual measurements and evaluated for reliability and clinical applicability.

**Results:** The gas volume model demonstrated close agreement with manual measurements (mean deviation 6 mL). The diaphragm position model reduced measurement variability through improved anatomical localization, although reliance on single-slice estimates limited APD characterization. The abdominal circumference model consistently quantified abdominal distension and differentiated scans with low and high gas volume.

**Conclusion:** Three CT-based models were developed that enable automated, objective quantification of abdominal gas, diaphragm position and abdominal distension. These tools support standardized comparison between scans and can enhance the clinical assessment of bloating. Because diaphragm position was derived from a single axial slice, APD assessment remains limited. Further validation in larger and longitudinal datasets, including full diaphragm visualization, is recommended to strengthen the models.

## Characterizing the socioeconomic burden of functional dyspepsia: a cost-of-illness study of direct and indirect health care costs

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**Background:** Functional dyspepsia (FD) is a prevalent disorder of gut-brain interaction (DGBI) in both primary and secondary care and is associated with the highest health care burden among DGBIs. Earlier studies have shown that absenteeism and presenteeism are highly common. However, socioeconomic analyses examining patient-specific characteristics that contribute to this burden remain limited.

**Methods:** This cross-sectional cost-of-illness study assessed the socio-economic burden of patients with FD capturing direct and indirect costs. Patients who had been recruited from secondary and tertiary care in 11 Dutch hospitals as well as primary care for an RCT (n=76) comparing the efficacy of nortriptyline vs placebo were invited to fill in the following questionnaires. Health care utilization and productivity losses were measured at baseline using the iMTA Medical Consumption Questionnaire (iMCQ) and Productivity Cost Questionnaire (iPCQ). Participants also completed the EuroQol 5-Dimension 5-Level, Nepean Dyspepsia Index, Generalized Anxiety Disorder-7, and Patient Health Questionnaire-9 at baseline. Cost prices were adjusted to 2024. Total costs were extrapolated from four weeks (iPCQ) and three months (iMCQ) to one year. Non-parametric bootstrapping was applied to calculate mean annual costs per patient with corresponding 2.5<sup>th</sup> and 97.5<sup>th</sup> percentiles. Multivariable linear regression was used to identify specific patient characteristics associated with costs.

**Results:** Data were obtained from 73 patients (median age 39 years; 75% female). The mean annual total costs accounted for €12,165 (2.5<sup>th</sup> to 97.5<sup>th</sup> percentiles, €1,125-€36,369), of which €10,224 (2.5<sup>th</sup> to 97.5<sup>th</sup> percentiles, €0-€34,770) were indirect costs. Higher FD specific QoL was associated with lower annual total costs (B=-€4,726 per 0.1 point increase in QoL, p=0.002), while symptom severity or scores for anxiety or depression were not significantly associated. Notably, higher annual total costs were significantly associated with the subtypes epigastric pain syndrome (B=€21,922, p<0.001) and postprandial distress syndrome (B=€13,911, p=0.011), compared with overlap syndrome.

**Conclusion:** Patients with poorer FD specific QoL, but not necessarily those with more severe symptoms or higher anxiety and depression scores, are particularly likely to incur higher annual costs, possibly reflecting the complexity of factors determining QoL. This study was conducted within a single country, which may limit the generalizability of certain cost-related findings. Understanding the nature of costs and associated patient characteristics is essential for enabling more targeted strategies aimed at alleviating the socioeconomic burden related with FD.

## Wearable-Based Monitoring of Autonomic and Gastrointestinal Function in Disorders of Gut-Brain Interaction: A Systematic Review and Meta-Analyses

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**Background:** Autonomic nervous system (ANS) activity is implicated in the pathogenesis of disorders of gut-brain interaction (DGBI). Technological advances enable more accurate investigation of ANS function. This study aimed to evaluate the clinical utility of wearable devices in monitoring autonomic and gastrointestinal (GI) function in DGBI.

**Methods:** A systematic search identified studies in adults with DGBI using wearables to assess heart rate variability (HRV), sleep, skin conductance, or gastric myoelectric activity as clinical readouts for ANS and GI function. The review provides an overview of available devices, while the meta-analysis evaluates consistency in detecting differences between DGBI and healthy controls (HCs). Associations between autonomic function and GI symptom severity were explored. Methodological quality was assessed using the Cochrane risk of bias tool and ROBINS-I. Meta-analyses used random-effects models with standardized mean differences (SMDs).

**Results:** Thirty-six studies (3 RCTs, 33 observational) involving 3,986 DGBI patients were included (HRV: n=16, sleep: n=7, gastric myoelectric activity: n=14, skin conductance: n=0). Meta-analyses showed significantly lower Root Mean Square of Successive Differences (SMD=-0.503, SE 0.189, 95%CI[-0.873,-0.132], P=0.008) and percentage of successive RR intervals differing by >50 ms (SMD=-0.430, SE 0.176, 95%CI[-0.775,-0.085], P=0.015), reflecting HRV alterations in DGBI vs. HCs. No consistent differences were found for other metrics (P>0.05), except normal gastric slow waves (P=0.001). Heterogeneous ANS-symptom associations precluded definitive conclusions.

**Conclusion:** Wearables show potential for detecting altered ANS and GI function in DGBI, particularly via HRV. Result variability highlights need for further research to confirm accuracy and clinical utility.

## Increased ceftriaxone exposure in hospitalised patients with cirrhosis: external validation of a population pharmacokinetic model (TACTILE study)

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**Background:** Bacterial infections are a leading cause of acute decompensation, acute on chronic liver failure and mortality in patients with cirrhosis. International guidelines recommend early and adequate antibiotic treatment, but pathophysiological changes in decompensated cirrhosis alter drug pharmacokinetics (PK), potentially resulting in unpredictable and complex drug behaviour with either subtherapeutic concentrations or toxicity as a result. Ceftriaxone is one of the most commonly used antibiotics in patients admitted with decompensated cirrhosis. Despite predominant renal clearance of ceftriaxone, it might still be affected by liver disease-related pathophysiological changes. Only limited clinical PK data is available to guide dosing of ceftriaxone in cirrhosis patients. This study investigated whether ceftriaxone drug exposure was changed in patients with cirrhosis compared to hospitalised patients without cirrhosis. Funding: Gastrostart (24-2023).

**Methods:** The TACTILE study is a multicentre observational study in admitted patients with decompensated cirrhosis and ascites treated with intravenous ceftriaxone 2g/day. Waste material blood samples were collected to measure unbound (pharmacologically active) ceftriaxone concentrations. A previously published population PK (popPK) model developed in hospitalised patients without cirrhosis was used to predict unbound ceftriaxone exposure in our cirrhosis patients. Measured concentrations were compared with model-predicted concentrations, and bias (mean prediction error, MPE) and precision (normalised root mean squared error, NRMSE) were assessed as measures of agreement.

**Results:** The analysis included 75 ceftriaxone concentration measurements from 19 cirrhosis patients (age 62 years [IQR 50-71], weight 81 kg [IQR 55-104], eGFR 84 mL/min/1.73m<sup>2</sup> [IQR 51-106], refitted MELD-Na score 17 [IQR 15-20], n=7 with Child-Pugh B and n=12 with Child-Pugh C). Concentrations measured in patients with cirrhosis (ranging from 1-76 mg/L) were significantly underestimated by the previously published popPK model in patients without cirrhosis, with a MPE of -25% [95% CI -38 to -11]. NRMSE was 79% (95% CI 68-89), substantially exceeding the acceptable precision limit of 25%.

**Conclusion:** Ceftriaxone exposure is increased in hospitalised patients with decompensated cirrhosis when compared to patients without cirrhosis. This finding reveals that renally cleared drugs warrant cirrhosis-specific dosing recommendations and challenges the assumption that drugs independent of liver metabolism are unaffected by advanced liver disease.

## Ex vivo quantification and visualization of fluorescently labeled adalimumab in Inflammatory Bowel Disease (IBD) patients

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**Background:** IBD treatment with adalimumab, a TNF $\alpha$ -targeting biologic, faces significant challenges due to high non-response rates, exposing patients to ineffective therapy. The mucosal distribution of adalimumab and its cellular targets are unknown. Near infrared (NIR) fluorescence molecular imaging may enable visualization of drug localization and improve patient stratification. Therefore, we labeled adalimumab with IRDye 680LT, administered it intravenously to IBD patients, and performed quantified fluorescence molecular endoscopy to visualize adalimumab *in vivo* and assess *ex vivo* mucosal distribution.

**Methods:** For *in vitro* binding and staining pattern assessment of adalimumab-680LT, TOV-21G and RKO cells were incubated with adalimumab-680LT, fixed, and stained with DAPI. Fourteen IBD patients were enrolled in the clinical study. Eleven patients received adalimumab-680LT (4.5 mg: n=3; 15 mg: n=4; 25 mg: n=4) and three served as controls. FFPE mucosal sections from tracer patients (15 and 25 mg) and controls were DAPI-stained, and NIR signal intensities were quantified in ImageJ as raw integrated density normalized to tissue area. To improve adalimumab-680LT visualization autofluorescence was reduced using an AI pipeline with an autoencoder to reconstruct autofluorescence patterns and a U-Net to segment tracer signal. Multiplex fluorescence staining was used to identify target cells.

**Results:** TNF $\alpha$ -expressing TOV-21G cells showed cytosolic adalimumab-680LT fluorescence, whereas RKO showed no binding. Signal quantification on FFPE biopsy sections indicated similar median adalimumab-680LT signal for the 15 mg (131 [74.4-162.4]) and 25 mg group (128 [86.3-187.1]), both exceeding controls (100 [75.4-114.3]). Two patients per dose group had higher NIR signals than controls, while others showed comparable or lower signals, suggesting variable TNF $\alpha$  levels and varying therapy suitability. NIR signal was detected in control biopsies due to autofluorescence, which obscured adalimumab-680LT visualization in tracer patients. The applied AI pipeline enabled accurate prediction and subtraction of autofluorescence for cleaner tracer visualization, revealing cytoplasmic adalimumab-680LT, as seen *in vitro*. Multiplex fluorescence staining indicated adalimumab-680LT binding to CD68+ macrophages.

**Conclusion:** A dose of 15 or 25 mg adalimumab-680LT enabled visualization and quantification of drug distribution in mucosal biopsies of IBD patients. Uptake varied between patients, suggesting the potential for therapy stratification. AI-based autofluorescence correction improved signal clarity, and multiplex staining confirmed macrophages as an adalimumab target.

## The immunosuppressive effect of Cancer-Associated Fibroblasts on CD8+ T Cell Effector Function in Pancreatic Ductal Adenocarcinoma

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**Background:** Pancreatic ductal adenocarcinoma (PDAC) is a highly lethal malignancy characterized by an immunosuppressive and desmoplastic tumor microenvironment (TME), which contributes significantly to therapy resistance, including failures in immunotherapy. Cancer-associated fibroblasts (CAFs), the most abundant stromal cell type, play a key role in mediating therapy resistance, but the molecular mechanisms remain unclear. Especially, the distinct role of CAF subsets on immune cell function has not yet been elucidated. This study aims to address the impact of CAF subsets on CD8+ T cell effector function.

**Methods:** To map spatial T cell-CAF subset interactions in human PDAC resection specimens an image mass cytometry (IMC) panel was developed. In parallel, a co-culture model with human pancreatic cancer cells, primary patient-derived CAFs (n=3 individual patients) and human T cells was employed to functionally study CAF-T-cell interactions. CAFs were pre-incubated with cytokines IL-1 $\beta$ , TGF- $\beta$  or TNF $\alpha$  + IL17a to obtain different subsets. Antigen-specific T-cell activation was assessed by using peptide-loaded cancer cells and peptide-specific TCR-transduced CD8+ T cells. IFN- $\gamma$  release measured by ELISA was used to assess T-cell effector function. To explore these interactions in a more physiologically relevant context, a 3D co-culture model incorporating PDAC organoids, CAFs, and T cells was developed. Ongoing work explores T-cell phenotype, activation, inhibition, and metabolism using flow cytometry to deepen our mechanistic understanding of the interaction between CAFs and T cells.

**Results:** The IMC panel has been validated and analysis of a patient cohort is ongoing. The co-culture experiments demonstrated that IFN- $\gamma$  release by T cells was 50% lower in the presence of CAFs, suggesting that CAFs inhibit T-cell effector function. Furthermore, incubation with CAF subsets differentiated by cytokines IL-1 $\beta$ , TGF- $\beta$  or by TNF $\alpha$  + IL17a resulted in a decreased IFN- $\gamma$  release by T cells of 72%, 45% or 68%, respectively. A decrease in mitochondrial fitness was observed in T-cells after co-culture with CAFs.

**Conclusion:** In conclusion, our work demonstrates that CAFs can inhibit T-cell effector function and the impact is dependent on the CAF subset. By further elucidating the CAF-T-cell interplay, our research aims to enhance understanding of CAF-mediated immunosuppression and its implications for PDAC treatment.



