DIGESTIVE DISEASE DAYS

2022

PROGRAMMA

14 en 15 september

Congrescentrum NH Koningshof
Veldhoven

NVGE
NEDERLANDSE VERENIGING
VOOR GASTRO-ENTEROLOGIE

DIGESTIVE DISEASE DAYS - DDD

Het programma van de DDD werd samengesteld met inbreng van de volgende verenigingen en secties:

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

INHOUDSOPGAVE **pag.**

Woensdag 14 september 2022

Tijdstippen diverse ledenvergaderingen woensdag:

Nederlandse Vereniging voor Gastroenterologie 14 september, 12.30 uur Brabantzaal

INHOUDSOPGAVE **pag.**

Donderdag 15 september 2022

Tijdstippen diverse ledenvergaderingen donderdag

Nederlandse Vereniging van Maag-Darm-Leverartsen	15 september, 08.00 uur Zaal 80
Nederlandse Vereniging voor Hepatologie	15 september, 13.15 uur Baroniezaal

Belangrijke mededeling
over de aanwezigheid van farmaceutische industrieën

Aan alle deelnemers tijdens de Digestive Disease Days op 14 en 15 september 2022

De Nederlandse Vereniging voor Gastroenterologie kent een jarenlange samenwerking met de farmaceutische industrie. De vereniging stelt de farmaceutische industrie in de gelegenheid aanwezig te zijn bij de wetenschappelijke vergaderingen met een stand. Mede hierdoor kan de vereniging haar wetenschappelijke bijeenkomsten organiseren.

De Geneesmiddelenwet zegt dat - onder strikte voorwaarden - de farmaceutische industrie alleen reclame mag maken voor receptgeneesmiddelen voor personen die bevoegd zijn om dergelijke geneesmiddelen voor te schrijven. Alle andere personen (inclusief bijvoorbeeld verpleegkundigen, endoscopie-assistenten en biochemici) worden beschouwd als "publiek". De farmaceutische industrie mag geen reclame maken voor receptgeneesmiddelen voor publiek.

De Nederlandse Vereniging voor Gastroenterologie is een wetenschappelijke vereniging voor personen die beroepsmatig betrokken zijn bij zorg, onderwijs en onderzoek ten behoeve van patiënten met maag-darm- en leveraandoeningen. Dat betekent dat ook personen die geen arts zijn, lid van de NVGE zijn.
De aanwezigheid van artsen, niet-artsen en farmaceutische industrieën tijdens het congres kan de NVGE ongewild in aanraking brengen met de inspectie voor de gezondheidszorg, sectie reclametoezicht, en daarmee in diskrediet worden gebracht. Dat willen wij uiteraard voorkomen.

In verband met de Gedragscode Geneesmiddelenreclame van de CGR en de aan het NVGE-congres verbonden expositie van farmaceutische producten, medische instrumenten en voedingsmiddelen, zal bij uw congresregistratie via de NVGE-website worden gevraagd naar uw bevoegdheid om medicijnen voor te schrijven.

Alle congresdeelnemers dragen verplicht een congresbadge waarop behalve de naam ook beroep/ functie staat aangegeven. Farmaceutische standhouders benaderen uitsluitend congresdeelnemers die de bevoegdheid hebben om receptgeneesmiddelen voor te schrijven of ter hand te stellen. Om dit extra te verduidelijken zal wederom worden gekozen voor verschillende kleuren congresbadges.

Uit het bovenstaande volgt dat aanwezige reclame-uitingen en merkproductinformatie van farmaceutische industrieën alleen gericht zijn op personen die bevoegd zijn om de betreffende geneesmiddelen voor te schrijven. Wij maken u erop attent dat het voor niet-artsen dan ook niet is toegestaan de stands van de aanwezige farmaceutische industrieën te bezoeken.

De NVGE en farmaceutische industrie (sponsoren) vertrouwen erop u met bovenstaande voldoende te hebben geïnformeerd.

Bestuur van de NVGE

Symposium NVGIC / NVCO I **Brabantzaal**

Thema: Veranderende paradigma's bij de behandeling van GI tumoren

Voorzitters: A. van der Bilt en C. Hoff

09.30 HIPEC bij maagcarcinoom
Dr. J.W. van Sandick, chirurg, Antonie van Leeuwenhoek, Amsterdam

Neoadjuvante therapie bij locally advanced rectumcarcinoom
Dr. B. van Etten, chirurg, UMC Groningen

Neoadjuvante therapie bij het vroeg stadium rectumcarcinoom
Prof. dr. H. de Wilt, chirurg, Radboudumc, Nijmegen

10.45 Koffie-/theepauze in de expositiehal

Opening en President Select **Brabantzaal**

Voorzitters: C.J. van der Woude en A.E. van der Meulen

11.15 A randomized non-inferiority trial comparing two versus five days of intravenous antibiotics after appendectomy for complex appendicitis (p. 35)
E.M.L. de Wijkerslooth[1], E.G. Boerm[2], C.C. van Rossem[3], J. van Rosmalen[4], C.I.M. Baeten[5], F.H. Beverdam[6], J.W.A.M. Bosmans[2], E.C.J. Consten[7], J.W.T. Dekker[8], M. Emous[9], A.A.W. van Geloven[10], A.F. Gijsen[11], L.A. Heijnen[12], A.P. Jairam[13], D.C. Melles[14], A.P.T. van der Ploeg[3], P. Steenvoorde[11], B.R. Toorenvliet[15], M. Vermaas[16], B. Wiering[17], B.P.L. Wijnhoven[1], A.L. van den Boom[1], [1]Dept. of Surgery, Erasmus MC - University Medical Center, Rotterdam, [2]Dept. of Surgery, Zuyderland MC, Heerlen, [3]Dept. of Surgery, Maasstad Ziekenhuis, Rotterdam, [4]Dept. of Biostatistics, Erasmus MC - University Medical Center, Rotterdam, [5]Dept. of Surgery, Groene Hart Ziekenhuis, Gouda, [6]Dept. of Surgery, Franciscus Gasthuis & Vlietland, Rotterdam, [7]Dept. of Surgery, Meander MC, Amersfoort, [8]Dept. of Surgery, Reinier de Graaf Gasthuis, Delft, [9]Dept. of Surgery, MC Leeuwarden, Leeuwarden, [10]Dept. of Surgery, Tergooi MC, Hilversum, [11]Dept. of Surgery, Medisch Spectrum Twente, Enschede, [12]Dept. of Surgery, Noordwest Ziekenhuisgroep, Alkmaar, [13]Dept. of Surgery, Catharina Ziekenhuis, Eindhoven, [14]Dept. of Medical Microbiology, Meander MC, Amersfoort, [15]Dept. of Surgery, Ikazia Ziekenhuis, Rotterdam, [16]Dept. of Surgery, IJsselland Ziekenhuis, Capelle a/d IJssel, [17]Dept. of Surgery, Slingeland Ziekenhuis, Deventer, The Netherlands.

11.24 Octreotide significantly reduces transfusion requirements compared to standard care in patients with angiodysplasia-related anaemia: a multicentre randomised controlled trial (p. 36)

L.C.M.J. Goltstein[1], L.H.P. Bernts[1], K.V. Grooteman[1], R.C.H. Scheffer[2], R.J.F. Laheij[3], L.P.L. Gilissen[4], R.W.M. Schrauwen[5], N.C. Talstra[5], A.T. Zuur[6], H. Braat[7], M. Hadithi[8], J.T. Brouwer[9], W.B. Nagengast[10], F.A. Oort[11], J. Tenthof van Noorden[12], W. Kievit[13], E.J.M. van Geenen[1], J.P.H. Drenth[1], [1]Dept. of Gastroenterology and Hepatology, Radboud University Medical Center, Nijmegen, [2]Dept. of Gastroenterology and Hepatology, Jeroen Bosch Hospital, 's-Hertogenbosch, [3]Dept. of Gastroenterology and Hepatology, Elisabeth-TweeSteden Hospital, Tilburg, [4]Dept. of Gastroenterology and Hepatology, Catharina Hospital, Eindhoven, [5]Dept. of Gastroenterology and Hepatology, Bernhoven Hospital, Uden, [6]Dept. of Gastroenterology and Hepatology, Tjongerschans Hospital, Heerenveen, [7]Dept. of Gastroenterology and Hepatology, Gelre Hospital, Apeldoorn, [8]Dept. of Gastroenterology and Hepatology, Maasstad Hospital, Rotterdam, [9]Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, [10]Dept. of Gastroenterology and Hepatology, University Medical Center Groningen, Groningen, [11]Dept. of Gastroenterology and Hepatology, Rijnstate Hospital, Arnhem, [12]Dept. of Gastroenterology and Hepatology, St. Antonius Hospital, Nieuwegein, [13]Dept. of Health Evidence, Radboud University Medical Center, Nijmegen, The Netherlands.

11.33 Rifaximin stimulates nitrogen detoxification in a PXR-independent manner in human small intestinal organoids (p. 37)

K. de Wit[1], U. Beuers[1], R.B. Takkenberg[1], S.W.C. van Mil[2], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [2]Center for Molecular Medicine, UMC Utrecht, The Netherlands.

11.42 Uitreiking Gastrostart subsidies
Uitreiking Gastrostart vervolgsubsidie

NVGE - Invited speakers **Brabantzaal**

11.50 Early rectal cancer: diagnostics and treatment
Dr. A. Haji, Clinical Director for Surgery, King's College Hospital, London, UK
Dr. J.J Boonstra, MDL-arts, Leids Universitair Medisch Centrum, The Netherlands

12.30 Algemene ledenvergadering NVGE

12.45 Lunch in de expositiehal en gemodereerde postersessies

Abstractsessie Nederlandse Vereniging voor Gastrointestinale Chirurgie — Brabantzaal

Voorzitters: *P. van Duijvendijk en J.J. Atema*

Voordrachten in het Nederlands, 6 minuten presentatie en 3 minuten discussie.

13.45 External validation of a nomogram predicting conditional survival after curative treatment of esophageal cancer (p. 38)
N. Schuring[1], N.E. Donlon[2], E.R.C. Hagens[1], C. Donohoe[2], M.I. van Berge Henegouwen[3], J.V. Reynolds[2], S.S. Gisbertz[1], [1]Dept. of Surgery, Amsterdam UMC, Amsterdam, [2]Dept. of Surgery, St James's Hospital, Dublin, Ierland. [3]Dept. of Gastrointestinal Surgery, Amsterdam UMC, Amsterdam, The Netherlands.

13.54 Hospital variation in feeding jejunostomy policy for minimally invasive esophagectomy; population-based results from the Dutch Upper gastrointestinal Cancer Audit (DUCA) (p. 39)
M.R. Visser[1], D.M. Voeten[2], J. Straatman[2], S.S. Gisbertz[2], J.P. Ruurda[1], D.L. van der Peet[2], M.I. van Berge Henegouwen[2], R. van Hillegersberg[1], [1]Dept. of Surgery, UMC Utrecht, [2]Dept. of Surgery, Amsterdam UMC, Amsterdam, The Netherlands.

14.03 Gecombineerde Vena Porta en Vena Hepatica Embolizatie (PVE/HVE) voor versnelde hypertrofie van de toekomstige restlever – Interim analyse van de DRAGON 1 (p. 40)
R. Korenblik[2], J. Smits[1], [1]Dept. of Surgery, MUMC+, Maastricht, [2]Dept. of Surgery, MUMC, Maastricht, The Netherlands.

14.12 Management of anastomotic leakage after robot-assisted minimally invasive esophagectomy with intrathoracic anastomosis (p. 41)
E.M. de Groot, L. Goense, S.F.C. Bronzwaer, B.F. Kingma, S. van der Horst, J.W. van den Berg, J.P. Ruurda, R. van Hillegersberg, Dept. of Gastrointestinal Surgery, UMC Utrecht, Utrecht, The Netherlands.

14.21 Metastasectomy or stereotactic radiotherapy for oligometastatic esophagogastric cancer: a nationwide population-based cohort study (p. 42)
T.E. Kroese[1], N. Jorritsma[1], H.W.M. van Laarhoven[2], R. Verhoeven[2], S. Mook[3], J.P. Ruurda[1], P.S.N. van Rossum[3], R. van Hillegersberg[1], [1]Dept. of Surgery, UMC Utrecht, Utrecht, [2]Dept. of Medical Oncology, Amsterdam UMC, Amsterdam, [3]Dept. of Radiotherapy, UMC Utrecht The Netherlands.

14.30 Long-term complications after distal pancreatectomy: a nationwide analysis (p. 43)
E.A. van Bodegraven, Dept. of Surgery, Amsterdam UMC, Amsterdam, The Netherlands.

14.39 Samenvatting programma

14.45 Einde van deze sessie

Symposium NVGIC / NVCO II — Brabantzaal

Voorzitters: *O.W. Bastian en A.K. Talsma*

Thema: **"Non"-adenocarcinoom in het gastro-intestinale stelsel**

14.45 Neuro-endocriene pancreas tumoren
Dr. D.J. van Beek, arts-onderzoeker, UMC Utrecht

15.05 HCC
Dr. M.J. Coenraad, MDL-arts, Leids Universitair Medisch Centrum

15.25 Sarcomen
Dr. W. van Houdt, chirurg-oncoloog, Antoni van Leeuwenhoek, Amsterdam

15.45 Koffie-/theepauze in de expositiehal

Symposium NVGIC / NVCO III — Brabantzaal

Voorzitters: *T. van Loon en M. Westerterp*

Thema: **IBD ICC-Symposium 'De patiënt centraal'**

16.15 Sexualiteit en IBD
Dr. C. Reisman, uroloog / seksuoloog, Flare-Health, Amsterdam

16.40 Maakt de Kono-S zijn beloftes waar? Ervaring met de Kono-S anastomose
Dr. M. Richir, oncologisch chirurg, UMC Utrecht

17.05 Casuïstiek
A. van der Bilt, fellow gastro-intestinal surgery and surgical oncology, UMCG

17.30 Einde programma, aansluitend Best Abstract sessie

Best abstracts NVGE 2022 — Brabantzaal

Voorzitters: *L.P.S. Stassen en P.P.J. van der Veek*

Voordrachten in het Nederlands, 6 minuten presentatie en 3 minuten discussie.

17.30 Outcomes of percutaneous cholecystostomy in high-risk patients with acute cholecystitis (p. 44)
A.G. Overdevest[1], B.M. Zonderhuis[2], J.J.J. de Vries[3], O.M. van Delden[3], M.G. Besselink[2], P. Fockens[1], R.P. Voermans[1], R.L.J. van Wanrooij[1], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [2]Dept. of Surgery, Amsterdam UMC, Amsterdam, [3]Dept. of Radiology, Amsterdam UMC, Amsterdam, The Netherlands.

17.39 Pancreatoscopy-guided electrohydraulic lithotripsy for the treatment of obstructive distal main pancreatic duct stones; long-term outcomes (p. 45)

F.E.M. de Rijk[1], P.M.C. Stassen[1], M.A. Boermeester[2], Y. Issa[2], M.A. Kempeneers[2], R.C. Verdonk[3], M.J. Bruno[1], P.J.F. de Jonge[1], [1]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, [2]Dept. of Surgery, Amsterdam UMC, location University of Amsterdam, Amsterdam, [3]Dept. of Gastroenterology and Hepatology, St. Antonius Hospital, Nieuwegein, The Netherlands.

17.48 Dietary patterns are reflected in the plasma inflammatory proteome of patients with inflammatory bowel disease (p. 46)

A.R. Bourgonje[1], L.A. Bolte[1], L.L.C. Vranckx[1], L.M. Spekhorst[1], R. Gacesa[1], S. Hu[1], H.M. van Dullemen[1], M.C. Visschedijk[1], E.A.M. Festen[1], J.N. Samsom[2], G. Dijkstra[1], R.K. Weersma[1], M.J.E. Campmans-Kuijpers[1], [1]Dept. of Gastroenterology and Hepatology, University Medical Center Groningen, Groningen, [2]Dept. of Pediatrics, Erasmus University Medical Center, Rotterdam, The Netherlands.

17.57 The socioeconomic impact of irritable bowel syndrome: an analysis of direct and indirect healthcare costs in the Netherlands (p. 47)

M.H.M.A. Bosman[1], Z.Z.R.M. Weerts[1], J.T.W. Snijkers[1], L. Vork[1], Z. Mujagic[1], M.A.M. Hesselink[1], C. Leue[2], J.W. Kruimel[1], J.W.M. Muris[3], A.A.M. Masclee[1], D.M.A.E. Jonkers[1], D. Keszthelyi[1], [1]Dept. of Gastroenterology and Hepatology, Maastricht University Medical Center+, Maastricht, [2]Dept. of Psychiatry, Maastricht University Medical Center+, Maastricht, [3]Dept. of General practice and elderly care medicine, Maastricht University, Maastricht, The Netherlands.

18.06 Short and long-term oncological outcomes in screen-detected T1 colorectal cancer: a multicentre cohort study (p. 48)

L. van der Schee[1], K.J.C. Haasnoot[1], K.M. Gijsbers[1], S. Elias[2], F. ter Borg[3], R.W.M. Schrauwen[4], A. van Berkel[5], W.H. de Vos tot Nederveen Cappel[6], K. Kessels[7], J.S. Terhaar sive Droste[8], M.B.W.M. Spanier[9], F. Boersma[10], Y.A. Alderlieste[11], R.M. Schreuder[12], T.C.J. Seerden[13], G. Rasschaert[13], F.P. Vleggaar[1], M.M. Laclé[14], L.M.G. Moons[1], [1]Dept. of Gastroenterology and Hepatology, University Medical Centre Utrecht, Utrecht, [2]Dept. Julius Center for Health Sciences and Primary Care, University Medical Centre Utrecht, Utrecht, [3]Dept. of Gastroenterology and Hepatology, Deventer Hospital, Deventer, [4]Dept. of Gastroenterology and Hepatology, Bernhoven Hospital, Uden, [5]Dept. of Gastroenterology and Hepatology, Noordwest Hospital, Alkmaar, [6]Dept. of Gastroenterology and Hepatology, Isala Clinics, Zwolle, [7]Dept. of Gastroenterology and Hepatology, Antonius Hospital, Nieuwegein, [8]Dept. of Gastroenterology and Hepatology, Jeroen Bosch Hospital, Den Bosch, [9]Dept. of Gastroenterology and Hepatology, Rijnstate Hospital, Arnhem, [10]Dept. of Gastroenterology and Hepatology, Gelre Hospital, Apeldoorn, [11]Dept. of Gastroenterology and Hepatology, Beatrix Hospital, Gorinchem, [12]Dept. of Gastroenterology and Hepatology, Catharina Hospital, Eindhoven, [13]Dept. of Gastroenterology and Hepatology, Amphia Hospital, Breda, [14]Dept. of Pathology, University Medical Centre Utrecht, Utrecht, The Netherlands.

18.15 Informele afsluiting in de expositiehal

19.30 Diner in de Beneluxhal

22.00 Koffie/thee in Meierij foyer, informeel netwerken

WOENSDAG 14 SEPTEMBER 2022

Symposium **Precision medicine in IBD** **Auditorium**

Voorzitters: *M. Duijvestein en D. van Asseldonk*

09.30 TDM of biological therapies
Dr. K.B. Gecse, MDL-arts, Amsterdam UMC

09.55 Omics in IBD care
Prof. dr. R.K. Weersma, MDL-arts, UMC Groningen

10.20 Drug positioning in IBD: clues in special patient populations
Dr. A.C. de Vries, MDL-arts, Erasmus MC, Rotterdam

10.45 Koffie-/theepauze in de expositiehal

Abstractsessie Sectie Gastrointestinale Oncologie **Auditorium**

Voorzitters: *J. Westerhof en K.V. Grooteman*

Voordrachten in het Nederlands, 6 minuten presentatie en 3 minuten discussie.

13.45 Development and validation of a remote monitoring tool for real-world assessment of mild, moderate, and severe infections in Inflammatory Bowel Disease patients (p. 49)
A. Rezazadeh Ardabili[1], D.E.J.M. van Esser[1], D.S.J. Wintjens[1], M. Cilissen[1], D.S. Deben[2], Z. Mujagic[3], F. Russ[4], L.P.S. Stassen[5], A.A. van Bodegraven[4], D.R. Wong[2], B. Winkens[6], D.M.A.E. Jonkers[1], M.J.L. Romberg-Camps[7], M.J. Pierik[8], [1]Dept. of Gastroenterology and Hepatology, Maastricht University Medical Center+, Maastricht, [2]Dept. of Clinical Pharmacy and Toxicology, Zuyderland Medical Centre, Sittard-Geleen, [3]Dept. Of Gastrointestinal Surgery, Maastricht University Medical Center+, Maastricht, [4]Dept. of Gastroenterology and Hepatology, Zuyderland Medical Centre, Sittard-Geleen, [5]Dept. of Surgery, Maastricht University Medical Center+, Maastricht, [6]Dept. of Epidemiology, Maastricht University, Maastricht, [7]Dept. of Gastroenterology, Hepatology and Endocrinoligy, Zuyderland Medical Centre, Sittard-Geleen, [8]Dept. of Gastroenterology, Hepatology and Endocrinoligy, Maastricht University Medical Center+, Maastricht, The Netherlands.

13.54 Transition readiness in adolescents with IBD; Translation and Validation of the Transition Readiness Assessment Questionnaire (TRAQ-NL) (p. 50)
M.A.C. van Gaalen[1], E. van Gijn[1], M. van Pieterson[1], L. de Ridder[1], D. Rizopoulos[2], J.C. Escher[1], [1]Dept. of Pediatric Gastroenterology Hepatology and Nutrition, Erasmus MC Sophia's Children hospital, Rotterdam, [2]Dept. of Epidemiology and Biostatistics, Erasmus MC, Rotterdam, The Netherlands.

14.03 Impact of fecal immunochemical test screening on colorectal cancer incidence and mortality (p. 51)
F.E.R. Vuik[1], P. Wisse [1], W. de Klaver[2], S.A.V. Nieuwenburg[1], N.S. Erler[3], I. Lansdorp-Vogelaar[4], E.J. Kuipers[1], E. Dekker[2], M.C.W. Spaander[1], [1]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, [2]Dept. of Gastroenterology and Hepatology, Amsterdam University Medical Centers, Amsterdam, [3]Dept. of Biostatistics, Erasmus MC, Rotterdam, [4]Dept. of Public Health, Erasmus MC, Rotterdam, The Netherlands.

14.12 Screening for metachronous esophageal second primary tumors in patients with head and neck cancer (p. 52)
L. van Tilburg[1], S.E.M. van de Ven[1], P.J.F. de Jonge[1], W. de Graaf[1], M.C.W. Spaander[1], S. Nikkessen[1], J.A. Hardillo[2], A. Sewnaik[2], D.A. Monserez[2], H. Mast[2], S. Keereweer[2], M.J. Bruno[1], R.J. Baatenburg de Jong[2], A.D. Koch[1], [1]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, [2]Dept. of Otorhinolaryngology and Head and Neck Surgery, Erasmus MC, Rotterdam, The Netherlands.

14.21 Rectal preservation and short-term follow-up after endoscopic intermuscular dissection (EID) for deep submucosal invasive rectal cancer (p. 53)
L. van der Schee[1], S.C. Albers[2], M.C. Richir[3], R. Hompes[3], E. Dekker[2], J.B. Tuynman[4], P. Didden[1], M.M. Laclé[5], A. Farina Sarasqueta[6], B.A.J. Bastiaansen[2], L.M.G. Moons[1], [1]Dept. of Gastroenterology and Hepatology, University Medical Centre Utrecht, Utrecht, [2]Dept. of Gastroenterology and Hepatology, Amsterdam University Medical Centres, Amsterdam, [3]Dept. of Surgery, University Medical Centre Utrecht, Utrecht, [4]Dept. of Surgery, Amsterdam University Medical Centres, Amsterdam, [5]Dept. of Pathology, University Medical Centre Utrecht, Utrecht, [6]Dept. of Pathology, Amsterdam University Medical Centres, Amsterdam, The Netherlands.

14.30 An Objective, Fully Automated Barrett's Risk Prediction Assay Outperforms Pathology in Risk Stratifying Barrett's Esophagus with Low-Grade Dysplasia (p. 54)
A.M. Khoshiwal[1], N.F. Frei[1], L.C. Duits[1], R.E. Pouw[1], E.A. Bossart[2], R. Critchley-Thorne[2], J.J.G.H.M. Bergman[1], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, The Netherlands. [2]Dept. of Gastroenterology and Hepatology, Castle Biosciences, Pittsburgh, The United States.

14.39 Samenvatting programma

14.45 Einde van deze sessie

Symposium **Secties Gastrointestinale Oncologie en Sectie IBD** **Auditorium**

Voorzitters: *J. Westerhof, M.C. Visschedijk en F.D.M. van Schaik*

Thema: **Checkpoint-inhibitor gerelateerde aandoeningen**

14.45 Checkpoint inhibitors: werking, indicatiegebied, wat te verwachten voor de nabije toekomst?
Dr. J. de Haan, internist-oncoloog, UMC Groningen

15.05 Checkpoint-inhibitor-geïnduceerde colitis
Dr. F.D.M. van Schaik, MDL-arts, UMC Utrecht

15.25 Checkpoint-inhibitor-geïnduceerde hepatitis/pancreatitis
Dr. M. Visschedijk, MDL-arts, UMC Groningen
Dr. H. Blokzijl, MDL-arts, UMC Groningen

15.45 Koffie-/theepauze in de expositiehal

Symposium NVH / NVGE **Auditorium**

Voorzitter: *C. Buis*

Thema: **Nieuwe en aangepaste indicaties voor levertransplantatie in Nederland**

16.15 HCC richtsnoer
Dr. M.J. Coenraad, MDL-arts, Leids Universitair Medisch Centrum

Neuroendocriene tumoren
Dr. C.M. den Hoed, MDL-arts, Erasmus MC, Rotterdam

Colorectaal carcinoom metastasen
Dr. M.E. Tushuizen, MDL-arts, Leids Universitair Medisch Centrum

17.30 Einde programma in deze zaal. Plenaire sessie in de Brabantzaal

Abstractsessie Sectie Inflammatoire Darmziekten **Baroniezaal**

Voorzitters: *A.G.L. Bodelier en A.C. de Vries*

Voordrachten in het Nederlands, 6 minuten presentatie en 3 minuten discussie.

13.45 Real-World Effectiveness and Safety of Tofacitinib for Ulcerative Colitis: Two-Year results of the ICC Registry (p. 55)
T.S. Straatmijer[1], V.B.C. Biemans[2], F. van Schaik[2], M. Visschedijk[3], A.C. de Vries[4], C.Y. Ponsioen[5], M. Pierik[6], A.A. van Bodegraven[7], R. West[8], K.H.N. de Boer[5], N. Srivastava[9], T. Romkens[10], J. Hoekstra[11], B. Oldenburg[2], G. Dijkstra[3], C.J. van der Woude[4], M. Lowenberg[5], Z. Mujagic[6], A. Bodelier[11], A.E. van der Meulen[12], M. Duijvestein[13], [1]Dept. of Gastroenterology, Amsterdam UMC, Amsterdam, [2]Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, [3]Dept. of Gastroenterology and Hepatology, UMCG, Groningen, [4]Dept. of Gastroenterology and Hepatology, Erasmus mc, Rotterdam, [5]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [6]Dept. of Gastroenterology and Hepatology, MUMC, Maastricht, [7]Dept. of Gastroenterology and Hepatology, Zuyderland, Sittard, [8]Dept. of Gastroenterology and Hepatology, Franciscus Gasthuis & Vlietland, Rotterdam, [9]Dept. Of Gastroenterology and Hepatology, Haaglanden mc, Den Haag, [10]Dept. of Gastroenterology and Hepatology, Jeroen Bosch Ziekenhuis, 's-Hertogenbosch, [11]Dept. of Gastroenterology and Hepatology, Amphia ziekenhuis, Breda, [12]Dept. of Gastroenterology and Hepatology, LUMC, Leiden, [13]Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, The Netherlands.

13.54 Thioguanine as maintenance therapy for inflammatory bowel disease: A prospective multicenter study (p. 56)

M. Simsek[1], A.A. van Bodegraven[2], D. van Asseldonk[3], P. van Boeckel[4], P. Boekema[5], G. Dijkstra[6], H. Fidder[7], I. Gisbertz[8], F. Hoentjen[9], B. Jharap[10], F. Kubben[11], H. de Leest[12], M. Russel[13], M. Meijssen[14], S. Kaplan[15], A. Petrak[16], E. van de Poel[17], F. Schepers[17], C. Mulder[1], K. de Boer[1], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [2]Dept. of Gastroenterology and Hepatology, Zuyderland MC, Heerlen, [3]Dept. of Gastroenterology and Hepatology, NWZ, Alkmaar, [4]Dept. of Gastroenterology and Hepatology, St Antonius ziekenhuis, Nieuwegein, [5]Dept. of Gastroenterology and Hepatology, Maxima MC, Eindhoven, [6]Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, [7]Dept. of Gastroenterology and Hepatology, UMCU, Utrecht, [8]Dept. of Gastroenterology and Hepatology, Bernhoven, Bernhoven, [9]Dept. of Gastroenterology and Hepatology, Radboudumc, Nijmegen, [10]Dept. of Gastroenterology and Hepatology, Meander MC, Amersfoort, [11]Dept. of Gastroenterology and Hepatology, Maasstad, Rotterdam, [12]Dept. of Gastroenterology and Hepatology, Rijnstate ziekenhuis, Arnhem, [13]Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, Namibië. [14]Dept. of Gastroenterology and Hepatology, Isala Zwolle, [15]Dept. of Pharmacovigilancy, TEVA, Israël. [16]Dept. of Pharmacovigilancy, TEVA, [17]Dept. of Pharmacovigilancy, TEVA, Haarlem.

14.03 Mercaptopurine treatment using therapeutic drug monitoring is effective in Ulcerative Colitis: a placebo-controlled randomized trial (p. 57)

A. Volkers[1], S. van Gennep[1], A. Mookhoek[2], K. de Boer[1], N. Montazeri[3], E. Clasquin[1], M. Duijvestein[4], A.A. van Bodegraven[5], M. Dijkgraaf[6], S. Rietdijk[7], J. Jansen[7], D. van Asseldonk[8], E. van der Zanden[9], R. West[10], G. D'Haens[1], M. Löwenberg[1], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [2]Dept. of Pathology, University of Bern, Zwitserland. [3]Dept. of Biostatistics, Amsterdam UMC, Amsterdam, [4]Dept. of Gastroenterology and Hepatology, RadboudUMC, Nijmegen, [5]Dept. Gastroenterology- Geriatrics- Internal and Intensive Care Medicine Co-MIK, Zuyderland Medical Centre, Sittard-Geleen/Heerlen, [6]Dept. of Epidemiology and Biostatistics, Amsterdam UMC, Amsterdam, [7]Dept. of Gastroenterology and Hepatology, OLVG, Amsterdam, [8]Dept. of Gastroenterology and Hepatology, Noordwest ziekenhuisgroep, Alkmaar, [9]Dept. of Gastroenterology and Hepatology, Ziekenhuis Amstelland, Amstelveen, [10]Dept. of Gastroenterology and Hepatology, Franciscus Gasthuis, Rotterdam, The Netherlands.

14.12 Clinical outcomes of increased versus conventional adalimumab dose intervals in patients with Crohn's disease in stable remission: the randomised controlled LADI trial (p. 58)

R.C.A. van Linschoten[1], F.M. Jansen[2], R.W.M. Pauwels[1], L.J.T. Smits[2], F. Atsma[3], W. Kievit[4], P.J. Boekema[5], R.L. West[6], A.G.L. Bodelier[7], I.A.M. Gisbertz[8], F.H.J. Wolfhagen[9], T.E.H. Römkens[10], M.W.M.D. Lutgens[11], A.A. van Bodegraven[12], B. Oldenburg[13], M. Pierik[14], M.G.V.M. Russel[15], N.K. de Boer[16], R.C. Mallant-Hent[17], P.C.J. ter Borg[18], A.E. van der Meulen[19], J.M. Jansen[20], S.V. Jansen[21], A.C.I.T.L. Tan[22], C.J. van der Woude[1], F. Hoentjen[2], [1]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, [2]Dept. of Gastroenterology and Hepatology, Radboud UMC, Nijmegen, [3]IQ Healthcare, Radboud UMC, Nijmegen, [4]Dept. of Health Evidence, Radboud UMC, Nijmegen, [5]Dept. of Gastroenterology and Hepatology, Maxima MC, Eindhoven, [6]Dept. of Gastroenterology and Hepatology, Franciscus Gasthuis & Vlietland, Rotterdam, [7]Dept. of Gastroenterology and Hepatology, Amphia Hospital, Breda, [8]Dept. of Gastroenterology and Hepatology, Bernhoven Hospital, Uden, [9]Dept. of Gastroenterology and Hepatology, Albert Schweitzer Hospital, Dordrecht, [10]Dept. of Gastroenterology and Hepatology, Jeroen Bosch Hospital, 's-Hertogenbosch, [11]Dept. of Gastroenterology and Hepatology, Elisabeth Tweesteden Hospital, Tilburg,

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14.21 Early anti-TNF results in higher sustained steroid free remission rates without treatment escalation in newly diagnosed paediatric Crohn's disease patients (p. 59)

R.C.W. Klomberg[1], H.C. van der Wal[2], M. Charrout[3], P. Kemos[4], F. Ruemmele[5], N.M. Croft[4], A. Levine[6], J.C. Escher[2], L. de Ridder[2], [1]Dept. of Pediatrics, Sophia Children's Hospital, Erasmus Medical Center, Rotterdam, [2]Dept. of Pediatrics, Sophia Children's Hospital, Erasmus Medical Center, Rotterdam. [3]Delft Bioinformatics Lab, Delft University of Technology, Delft, The Netherlands. [4]Dept. of Pediatrics, Queen Mary University of London, London, UK. [5]Dept. of Pediatric Gastroenterology Hepatology and Nutrition, Sorbonne Paris Cité, APHP, Hôpital Necker Enfants Malades, Paris, Frankrijk. [6]Dept. of Pediatric Gastroenterology Hepatology and Nutrition, PIBD research center, Wolfson Medical Center, Holon, Israël.

14.30 Fecal Microbiota Transplantation with pre-selected donors after budesonide or placebo in patients with active ulcerative colitis: a randomized study (p. 60)

E. van Lingen[1], S. Nooij[2], E.M. Terveer[2], S. van der Marel[3], N. Srivastava[3], C.J. van der Woude[4], H.W. Verspaget[1], A.E. van der Meulen-de Jong[5], J.J. Keller[3], [1]Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, [2]Dept. of Microbiology and Immunology, Leiden University Medical Center, Leiden, [3]Dept. of Gastroenterology and Hepatology, Haaglanden Medisch Centrum, Den Haag, [4]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, [5]Dept. of Gastroenterology, Leiden University Medical Center, Leiden, The Netherlands.

14.39 HLA-DR+CD38+ effector T helper cells distinguish Crohn's disease-associated perianal fistulas from cryptoglandular fistulas (p. 61)

L.F. Ouboter[1], M. Schreurs [1], T. Abdelaal[2], S.J. Luk[3], M.C. Barnhoorn[4], W.E. Hueting[5], I.J.M. Han-Geurts[6], K.C.M.J. Peeters[7], F. Holman[7], F. Koning[1], A.E. Van der Meulen-de Jong[4], M.F. Pascutti[1], [1]Dept. of Immunology, Leiden University Medical Center, Leiden, [2]Dept. of Radiology, Leiden University Medical Center, Leiden, [3]Dept. of Hematology, Leiden University Medical Center, Leiden, [4]Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, [5]Dept. of Surgery, Alrijne ziekenhuis, Leiderdorp, [6]Dept. of Surgery, Proctos Clinic, Bilthoven, [7]Dept. of Surgery, Leiden University Medical Center, Leiden, The Netherlands.

14.48 Einde van deze sessie

Abstractsessie Sectie Gastrointestinale Chirurgie — Parkzaal

Voorzitters: *K.M. Govaert en C.M. Marres*

Voordrachten in het Nederlands, 6 minuten presentatie en 3 minuten discussie.

13.45 CD44v6, EpCam, cMet, Rock2 and DUOX2 as targeted biomarkers for the identification of micrometasasis in colon carcinoma (p. 62)
A.J. Sterkenburg[1], A.M. van der Waaij[1], D.J. Sikkenk[2], A. Karrenbeld[3], M. Perla[1], V. Kyriskozoglou[1], E.C.J. Consten[4], W.B. Nagengast[1], [1]Dept. of Gastroenterology and Hepatology, UMCG, Groningen, [2]Dept. of Surgery, Meander Medical Center, Amersfoort, [3]Dept. of Pathology, UMCG, Groningen, [4]Dept. of Surgery, Meander Medical Center, Groningen, The Netherlands.

13.54 Endoscopic submucosal dissection does not affect outcome of completion surgery in early colorectal cancer patients (p. 63)
N. Dekkers[1], H. Dang[1], K. Vork[1], A.M.J. Langers[1], J. van der Kraan[1], M. Westerterp[2], K.C.M.J. Peeters[3], F.A. Holman[3], A.D. Koch[4], W. de Graaf[4], P. Didden[5], L.M.G. Moons[5], P.G. Doornebosch[6], J.C.H. Hardwick[1], J.J. Boonstra[1], [1]Dept. of Gastroenterology and Hepatology, LUMC, Leiden, [2]Dept. of Gastrointestinal Surgery, Haaglanden Medisch Centrum, Den Haag, [3]Dept. of Gastrointestinal Surgery, LUMC, Leiden, The Netherlands. [4]Dept. of Gastroenterology and Hepatology, Erasmus MC Cancer Institute, Rotterdam, [5]Dept. of Gastroenterology and Hepatlogy, UMCU, Utrecht, [6]Dept. of Gastrointestinal Surgery, IJsselland ziekenhuis, Capelle aan den IJssel, The Netherlands.

14.03 Gluteal Fasciocutaneous Flap Reconstruction after Salvage Surgery for Pelvic Sepsis (p. 64)
S.I. Kreisel[1], S. Sparenberg[2], S. Sharabiany[2], R. Hompes[2], O. Lapid[2], C.M.A.M. van der Horst[2], G.D. Musters[2], P.J. Tanis[2], [1]Dept. of Gastrointestinal Surgery, Amsterdam University Medical Centre, Amsterdam, [2]Dept. of Surgery, Amsterdam University Medical Centre, Amsterdam, The Netherlands.

14.12 Required Distal Mesorectal Resection Margin in Partial Mesorectal Excision: a Systematic Review on Distal Mesorectal Spread (p. 65)
A.A.J. Grüter[1], A.S. van Lieshout[1], S.E. van Oostendorp[1], J.C.F. Ket[2], M. Tenhagen[1], F.C. den Boer[3], R. Hompes[1], P.J. Tanis[4], J.B. Tuynman[1], [1]Dept. of Surgery, Amsterdam UMC, Amsterdam, [2]Medical Library, Vrije Universiteit, Amsterdam, [3]Dept. of Surgery, Zaans Medical Centre, Zaandam, [4]Dept. of Surgery, Erasmus MC, Rotterdam, The Netherlands.

14.21 Risk factors for a permanent stoma after resection of left-sided obstructive colon cancer – A prediction model (p. 66)
B. Zamaray, Dept. of Gastrointestinal Surgery, Isala ziekenhuis, Zwolle, The Netherlands.

14.30 Colorectal Cancer in Patients with Ulcerative Colitis: A National Cohort Study between 1991-2020 (p. 67)
L. Heuthorst, Dept. of Surgery, Amsterdam UMC, Amsterdam, The Netherlands.

14.39 Samenvatting programma

14.45 Einde van deze sessie

Meet the expert sessie — Zaal 80

Thema: **Belang van voeding: wat kan een tarwekorrel uitrichten met onze darmen?***

13.45 *Deze sessie - waarvoor tevoren moet worden ingeschreven - wordt verzorgd door: Dr. J.W. Kruimel, MDL-arts, en Prof. dr. D.M.A.E. Jonkers, onderzoeker, MUMC+, Maastricht*

14.45 Einde van deze sessie

* De tweede sessie vangt aan om 16:15

15.45 Koffie-/theepauze in de expositiehal

Postersessie 1 — Expositiehal

1 Laparoscopic ischemic conditioning prior to esophagectomy in high-risk esophageal cancer patients – a multicenter feasibility trial (p. 68)
E.M. de Groot[1], L. Schiffmann[2], A. van der Veen[1], D. Pintos dos Santos[3], P.A. de jong[4], B. Babic[5], C. Bruns[5], J.P. Ruurda[1], H. Fuchs[5], R. van Hillegersberg[1], W. Schröder[5], [1]Dept. of Gastrointestinal Surgery, UMC Utrecht, Utrecht, [2]Dept. of Surgery, University of Cologne, Cologne, Duitsland. [3]Dept. of Radiology, University of Cologne, Cologne, Germany. [4]Dept. of Radiology, UMC Utrecht, Utrecht, The Netherlands, [5]Dept. of Gastrointestinal Surgery, University of Cologne, Cologne, Germany.

2 Surgical treatment of esophago-tracheobronchial fistulas after esophagectomy with gastric conduit reconstruction (p. 69)
E.M. de Groot[1], B.F. Kingma[1], L. Goense[1], N.P. van der Kaaij[2], R.C.A. Meijer[2], F.Z. Ram-Jankhan[2], P.A.A. Schellekens[2], S.A. Braithwaite[3], M. Marsman[3], J.P. Ruurda[1], R. Van Hillegersberg[1], [1]Dept. of Gastrointestinal Surgery, UMC Utrecht, Utrecht, [2]Dept. of Surgery, UMC Utrecht, Utrecht, [3]Dept. of Anesthesiology, UMC Utrecht, Utrecht, The Netherlands.

3 Endoscopic suturing as salvage therapy for anastomosis leakage after colorectal surgery (p. 70)
J.W.A. Straathof[1], G.D. Slooter[2], M.J. ter Borg[1], C. van den Broek[1], [1]Dept. of Gastroenterology and Hepatology, Maxima MC, Veldhoven, [2]Dept. of Surgery, Maxima MC, Veldhoven, The Netherlands.

4 Metachronous peritoneal metastases in patients with pT4b colon cancer: an international multicenter analysis of intraperitoneal versus retroperitoneal tumor invasion (p. 71)
E.S. Zwanenburg[1], A.M. Gehrels[1], V.P. Bastiaenen[1], A.G.J. Aalbers[2], A. Arjona-Sanchez[3], V. Bellato[4], J.D.W. van der Bilt[5], A.D. D'Hoore[6], E. Espinosa-Redondo[3], C.E.L. Klaver[7], M. Kusters[1], I.D. Nagtegaal[8], B. van Ramshorst[9], H.C. van Santvoort[9], G.S. Sica[4], P. Snaebjornsson[10], K.A.T.G.M. Wasmann[1], J.H.W. de Wilt[11], A.M. Wolthuis[6], P.J. Tanis[12],

[1]Dept. of Gastrointestinal Surgery, Amsterdam UMC, Amsterdam, [2]Dept. of Gastrointestinal Surgery, Netherlands Cancer Institute, Amsterdam, [3]Dept. of Gastrointestinal Surgery, Reina Sofia University Hospital, Cordoba, Spanje. [4]Dept. of Gastrointestinal Surgery, University Hospital Tor Vergata, Rome, Italië. [5]Dept. of Gastrointestinal Surgery, Flevoziekenhuis, Almere, [6]Dept. of Gastrointestinal Surgery, University Hospital Leuven, Leuven, België. [7]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [8]Dept. of Pathology, Radboud University
Medical Center, Nijmegen, [9]Dept. of Gastrointestinal Surgery, Sint Antonius Hospital, Nieuwegein, [10]Dept. of Pathology, Netherlands Cancer Institute, Amsterdam, [11]Dept. of Gastrointestinal Surgery, Radboud University Medical Center, Nijmegen, [12]Dept. of Gastrointestinal Surgery, Erasmus Medical Center, Rotterdam, The Netherlands.

5 Identification of a distinct microbiota signature in Crohn's disease-associated and cryptoglandular perianal fistulas (p. 72)

M.C. Barnhoorn[1], L.F. Ouboter[1], Q.R. Ducarmon[2], E. van Lingen[1], R.D. Zwittink[2], L.J.A.C. Hawinkels[1], M.F. Pascutti[3], A.E. van der Meulen-de Jong[1], [1]Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, [2]Dept. of Medical Microbiology, Leiden University Medical Center, Leiden, [3]Dept. of Immunology, Leiden University Medical Center, Leiden, The Netherlands.

Postersessie II **Expositiehal**

6 Contrast-enhanced radiologic evaluation of gastric conduit emptying after esophagectomy (p. 73)

M.L. Feenstra[1], L. Alkemade[1], J.E. van den Bergh[2], S.S. Gisbertz[1], F. Daams[1], M.I. van Berge Henegouwen[1], W.J. Eshuis[1], [1]Dept. of Surgery, Amsterdam UMC, Amsterdam, [2]Dept. of Radiology and Nuclear Medicine, Amsterdam UMC, Amsterdam, The Netherlands.

7 Exploring the impact of urogenital organ displacement after abdominoperineal resection on urinary and sexual function (p. 74)

S.I. Kreisel[1], S. Sharabiany[2], G.J. Strijk[2], R.D. Blok[2], J. Bosschieter[2], E.T.M. Laan[2], C. Cunningham[3], R. Hompes[2], G.D. Musters[2], P.J. Tanis[2], [1]Dept. of Gastrointestinal Surgery, Amsterdam University Medical Centre, Amsterdam, [2]Dept. of Surgery, Amsterdam University Medical Centre, Amsterdam, The Netherlands, [3]Dept. of Surgery, Oxford University Hospitals NHS Foundation Trust, Oxford, UK.

8 Development and validation of a condition-specific quality of life instrument for adults with esophageal atresia (p. 75)

C.A. ten Kate[1], N.M. Teunissen[1], J. van Rosmalen[2], L.S. Kamphuis[3], M.P. van Wijk[4], M. Joosten[5], E.S. van Tuyll van Serooskerken[6], R. Wijnen[1], H. IJsselstijn[1], A.B. Rietman[1], M.C.W. Spaander[7], [1]Dept. of Pediatric Surgery, Erasmus University Medical Centre – Sophia Children's Hospital, Rotterdam, [2]Dept. of Biostatistics, Erasmus University Medical Centre, Rotterdam, [3]Dept. of Gastroenterology, Erasmus University Medical Centre, Rotterdam, [4]Dept. of Pediatric Gastroenterology Hepatology and Nutrition, Amsterdam UMC – Emma Children's Hospital, University of Amsterdam, Amsterdam, [5]Dept. of Pediatric Surgery, Radboud University Medical Center, Amalia Children's Hospital, Nijmegen, [6]Dept. of Pediatric Surgery, Wilhelmina Chil dren's Hospital, University Medical Center Utrecht, Utrecht, [7]Dept. of Gastroenterology and Hepatology, Erasmus University Medical Centre, Rotterdam, The Netherlands.

9 A Computer-Aided Diagnosis (CADx) system for characterization of Barrett's neoplasia (p. 76)

J.B. Jukema[1], C.H.J. Kusters[2], M.R. Jong[1], K.N. Fockens[1], T. Boers[2], J.A. van der Putten[2], F. van der Sommen[2], P.H. de With[2], A.J. de Groof[1], J.J.G.H.M. Bergman[1], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [2]Video Coding and Architectures group, Eindhoven University of Technology, Eindhoven, The Netherlands.

10 Incidence of recurrent cholangitis in patients with a non-stenotic hepaticojejunostomy (p. 77)

B.M. van der Lecq[1], J.A. Fritzsche[1], M.A.D. Smit[1], M.G. Besselink[2], O.R. Busch[3], F. Daams[4], G. Kazemier[4], J. Langver[1], C.Y. Ponsioen[5], R.J. Swijnenburg[2], B.M. Zonderhuis[4], R.L.J. van Wanrooij[6], J.I. Erdmann[2], R.P. Voermans[1], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC location University of Amsterdam, Amsterdam, [2]Dept. of Surgery, Amsterdam UMC location University of Amsterdam, Amsterdam, [3]Dept. of Surgery, Amsterdam UMC location University of Amsterdam, Amsterdam, [4]Dept. of Surgery, Amsterdam UMC location Vrije Universiteit Amsterdam, Amsterdam, [5]Dept. of Gastroenterology and Hepatology, Amsterdam UMC lcoation University of Amsterdam, Amsterdam, [6]Dept. of Gastroenterology and Hepatology, Amsterdam UMC location Vrije Universiteit Amsterdam, Amsterdam, The Netherlands.

11 Random biopsies from the gastro-esophageal junction after complete eradication of Barrett's esophagus: utile or futile? (p. 78)

C.N. Frederiks[1], S.N. van Munster[2], E.A. Nieuwenhuis[3], L. Alvarez Herrero[2], A. Alkahalaf[4], B.E. Schenk[4], E.J. Schoon[5], W.L. Curvers[5], A.D. Koch[6], P.J.F. de Jonge[6], T.J. Tang[7], W.B. Nagengast[8], J. Westerhof[8], M.H.M.G. Houben[9], J.J.G.H.M. Bergman[3], R.E. Pouw[3], B.L.A.M. Weusten[2], [1]Dept. of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, The Netherlands. [2]Dept. of Gastroenterology and Hepatology, St. Antonius Hospital, Nieuwegein, The Netherlands. [3]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, The Netherlands. [4]Dept. of Gastroenterology and Hepatology, Isala Clinics, Zwolle, The Netherlands. [5]Dept. of Gastroenterology and Hepatology, Catharina Hospital, Eindhoven, The Netherlands. [6]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, The Netherlands. [7]Dept. of Gastroenterology and Hepatology, IJsselland Hospital, Cappelle aan den IJssel, The Netherlands. [8]Dept. of Gastroenterology and Hepatology, UMC Groningen, Groningen, The Netherlands. [9]Dept. of Gastroenterology and Hepatology, Haga Hospital, Den Haag, The Netherlands.

Postersessie III **Expositiehal**

12 Improving patient-centred cancer care with the Assessment of Burden of ColoRectal Cancer (ABCRC)-tool (p. 79)

B.J.M. Thomassen[1], I. te Boome[2], A.M.J. Somers[2], C. Graupner[2], M.L. Kimman[3], A.H.M. Gidding-Slok[4], S.O. Breukink[2], [1]Dept. of Surgery, Maastricht University, Maastricht, [2]Dept. of Surgery, Maastricht University Medical Center, Maastricht. [3]Dept. of Clinical Epidemiology and Medical Technology Assessment (KEMTA), Maastricht University Medical Center, Maastricht, [4]Dept. of General practice and elderly care medicine, Maastricht University, Maastricht, The Netherlands.

13 Impact of the COVID-19 pandemic on procedure volumes in gastroenterology: a nationwide study (p. 80)

M.J. Sonneveld[1], S. Hardeman[2], E.J. Kuipers[3], W. De Graaf[1], M.C.W. Spaander[3], A.J.P. Van der Meer[3], [1]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, [2]Dutch Healthcare Authority, Newtonlaan 1, [3]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, The Netherlands.

14 Benefit of risk-stratified prophylactic treatment on clinical outcome in post-operative Crohn's disease (p. 81)

V.W. Joustra[1], J. van Sabben[1], E. van der Does de Willebois[2], M. Duijvestein[3], N. de Boer[1], J. Jansen[4], J. van der Bilt[2], W. Lameris[2], W. Bemelman[2], C. Buskens[2], G.R.A.M. D'Haens[1], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC locatie AMC, Amsterdam, [2]Dept. of Surgery, Amsterdam UMC locatie AMC, Amsterdam, [3]Dept. of Gastroenterology and Hepatology, Radboud University Medical Centre, Nijmegen, [4]Dept. of Gastroenterology and Hepatology, Onze Lieve Vrouwe Gasthuis, Amsterdam, The Netherlands.

15 Fatigue associates with frailty in older patients with Inflammatory Bowel Disease (p. 82)

A.B. Fons[1], V.E.R. Asscher[1], S.N. Waars[1], R.J.L. Stuyt[2], A.M.C. Baven-Pronk[3], S. van der Marel[4], R.J. Jacobs[5], J.J.L. Haans[6], F.J. van Deudekom[7], S.P. Mooijaart[7], A.E. van der Meulen-de Jong[1], K.J. Kalisvaart[8], P.W.J. Maljaars[1], [1]Dept. of Gastroenterology and Hepatology, Leiden University Medical Centre, Leiden, [2]Dept. of Gastroenterology and Hepatology, HagaZiekenhuis, The Hague, [3]Dept. of Gastroenterology and Hepatology, Groene Hart Ziekenhuis, Gouda, [4]Dept. of Gastroenterology and Hepatology, Haaglanden Medical Centre, The Hague, [5]Dept. of Gastroenterology and Hepatology, Alrijne Hospital, Leiden and Leiderdorp, [6]Dept. of Gastroenterology and Hepatology, Maastricht University Medical Centre, Maastricht, [7]Dept. of Gerontology and Geriatrics, Leiden University Medical Centre, Leiden, [8]Dept. of Gerontology and Geriatrics, Spaarne Gasthuis, Haarlem, The Netherlands.

16 The impact of sex on treatment and outcome in relation to histologic subtype in patients with resectable gastric cancer (p. 83)

I.A. Caspers[1], A.E. Slagter[2], P. Lind[3], K. Sikorska[4], K. Wiklund[3], F. Pontén[5], M. Nordsmark[6], C.J.H. Van de Velde[7], E. Meershoek - Klein Kranenbarg[7], J.W. Van Sandick[8], E.P.M. Jansen[2], H.W.M. Van Laarhoven[9], M. Verheij[10], N.C.T. Van Grieken[11], A. Cats[12], [1]Dept. of Gastroenterology, NKI Antoni van Leeuwenhoek, Amsterdam, [2]Dept. of Radiation Oncology, NKI Antoni van Leeuwenhoek, Amsterdam, [3]Dept. of Medical Oncology, Karolinska institute, Stockholm, Zweden. [4]Dept. of Biometrics, NKI Antoni van Leeuwenhoek, Amsterdam, [5]Dept. of Pathology, Rudbeck Laboratory, Uppsala, Zweden. [6]Dept. of Medical Oncology, Aarhus University Hospital, Aarhus, Denemarken. [7]Dept. of Surgery, Leids Universitair Medisch Centrum, Leiden, [8]Dept. of Surgery, NKI Antoni van Leeuwenhoek, Amsterdam, [9]Dept. of Medical Oncology, Amsterdam UMC, Amsterdam, [10]Dept. of Radiation Oncology, Radboud UMC, Nijmegen, [11]Dept. of Pathology, Amsterdam UMC, Amsterdam, [12]Dept. of Gastrointestinal Oncology, NKI Antoni van Leeuwenhoek, Amsterdam, The Netherlands.

NVMDL	**Algemene Ledenvergadering**	**Zaal 80**
08.00	Algemene ledenvergadering NVMDL met ontbijtbuffet	
09.30	Einde vergadering	

DONDERDAG 15 SEPTEMBER 2022

PhD-netwerk — Auditorium

Voorzitter: *C.N. Frederiks*

Thema: **Tips & tricks 'Van onderzoeksidee naar uitvoering'**

08.30 *Dr. Robert Verdonk (MDL-arts in het St. Antonius ziekenhuis) en bestuurslid van de Pancreatitis werkgroep*

Dr. Stella Nieuwenburg (aios MDL in het Erasmus MC) en recent gepromoveerd op het thema "screening and surveillance of the gastrointestinal tract"

09.30 Einde van deze sessie

Videosymposium Sectie Gastrointestinale Endocopie — Auditorium

Voorzitter: *L.M.G. Moons en M.J.M. Groenen*

09.30 Een beetje groen hier, brengt je zo het lek in het vizier
S.P.G. Henckens, co-assistent, Amsterdam UMC

Geel sputum
Dr. P. Didden, MDL-arts, UMC Utrecht

Ablatie als enucleatie
Dr. R.P. Voermans, MDL-arts, Amsterdam UMC

A positive outcome after lots of negative pressure
L.M.D. Pattynama, MDL-arts, Amsterdam UMC

Artificial intelligence met een andere bril op
M.H.J. Maas, MDL-arts, RadboudMC, Nijmegen

Een nieuw huwelijk tussen Crohn en chirurgie?
B. Smalbroek, arts-onderzoeker Heelkunde, St. Antonius Ziekenhuis, Nieuwegein

Magnetic attraction to continue the action
R.E. Pouw, MDL-arts, Amsterdam UMC

Biliary obstruction: not the usual suspects
Dr. R. Zoutendijk, MDL-arts, St. Antonius Ziekenhuis, Nieuwegein

Zelfde probleem, ander orgaan
Dr. R.L.J. van Wanrooij, MDL-arts, Amsterdam UMC

Een mes in de rug: blind erin of 'chirurgische' dissectie
Dr. L.A. van der Waaij, MDL-arts, Martini Ziekenhuis, Groningen

10.45 Koffie-/theepauze in de expositiehal

Symposium Neurogastroenterologie en Motiliteit — Auditorium

Voorzitters: *F.B. van Hoeij en Z.Z.R.M. Weerts*

Thema: **Invasieve ingrepen voor functionele aandoeningen: indicatie, techniek en uitkomst**

11.15 POEM voor achalasie
Prof. dr. A.J. Bredenoord, MDL-arts, Amsterdam UMC

11.35 G-POEM voor gastroparese
Dr. J.M. Conchillo, MDL-arts, Maastricht UMC

11.55 Coeliacus release bij MALS (CARoSO studie)
F. Metz, arts-assistent chirurgie en promovenda, Expertcentrum Maag-Darm Ischemie, Medisch Spectrum Twente

12.15 Einde van deze sessie, lunchpauze in de expositiehal

Abstractsessie Sectie Gastrointestinale Endoscopie — Auditorium

Voorzitters: *A.M. van Berkel en H.T. Künzli*

Voordrachten in het Nederlands, 6 minuten presentatie en 3 minuten discussie

12.15 A computer aided detection system for Barret's neoplasia improves neoplasia detection (p. 84)
K.N. Fockens[1], M.R. Jong[1], J.B. Jukema[1], T. Boers[2], K. Kusters[2], J.A. van der Putten[2], F. van der Sommen[2], P.H. de With[2], A.J. de Groof[1], J.J.G.H.M. Bergman[1], [1]Dept. Of Gastroenterology and Hepatology, Amsterdam UMC, loc. VUmc, Amsterdam, [2]Dept. of Electrical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands.

12.24 Early detection of Barrett's esophagus and esophageal cancer in primary care using transnasal endoscopy: a prospective cohort study (p. 85)
L.J. Huibertse, Y. Peters, P.D. Siersema, Dept. of Gastroenterology and Hepatology, Radboud University Medical Center, Nijmegen, The Netherlands.

12.33 Long-term efficacy of plastic versus metal stents in inoperable perihilar cholangiocarcinoma; a retrospective cohort study (p. 86)
J.A. Fritzsche[1], D.M. de Jong[2], J.J.M.M. Borremans[1], M.J. Bruno[2], O.M. Van Delden[3], J.I. Erdmann[4], P. Fockens[1], P. De Gooyer[1], B. Groot Koerkamp[5], H.J. Klümpen[6], A. Moelker[7], L.E. Nooijen[8], C.Y. Ponsioen[1], R.L.J. Van Wanrooij[9], L.M.J.W. Van Driel[2], R.P. Voermans[1], [1]Dept. of Gastroenterology and Hepatology, Amsterdam UMC loc University of Amsterdam, Amsterdam, [2]Dept. of Gastroenterology and Hepatology, Erasmus University Medical Center, Rotterdam, [3]Dept. of Radiology, Amsterdam UMC loc University of Amsterdam [4]Dept. of Surgery, Amsterdam UMC loc University of Amsterdam, Amsterdam, [5]Dept. of Gastroenterology and Hepatology, Erasmus MC Cancer Center, Rotterdam, [6]Dept. of Medical Oncology, Amsterdam UMC loc University of Amsterdam, [7]Dept. of Radiology, Erasmus University Medical Center, Rotterdam, [8]Dept. of Surgery, Amsterdam UMC loc Vrije Universiteit, [9]Dept. of Gastroenterology and Hepatology, Amsterdam UMC location Vrije Universiteit The Netherlands.

12.42 Endoscopy training in the Netherlands: a national survey among gastroenterologists (p. 87)
R.A. Mousset[1], W.H. de Vos tot Nederveen Cappel[1], J.P.E.N. Pierie[2], P.L.P. Brand[3], A.M.J. Langers[4], [1]Dept. of Gastroenterology and Hepatology, Isala Zwolle, Zwolle, [2]Dept. of Gastrointestinal Surgery, Medisch Centrum Leeuwarden, Leeuwarden, [3]Dept. of Pediatrics, Isala Zwolle, Zwolle, [4]Dept. of Gastroenterology and Hepatology, LUMC, Leiden, The Netherlands.

12.51 Intraductal fully covered self-expanding metal stent versus multiple plastic stents for treating biliary anastomotic strictures after liver transplantation (p. 88)
N.J. Sissingh[1], A. Inderson[1], A.B. De Vries[2], B. Van Hoek[1], F. Van der Heide[2], J.E. Van Hooft[1], [1]Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, [2]Dept. of Gastroenterology and Hepatology, University of Groningen and University Medical Center Groningen, Groningen, The Netherlands.

13.00 Motorized spiral enteroscopy-assisted ERCP in surgically altered upper gastrointestinal anatomy: preliminary experience (p. 89)
A. Al-Toma[1], R. Zoutendijk[2], P. van der Schaar[1], P. Stadhouders[1], W.W. te Riele[3], W.J.M. Derksen[3], R.C. Verdonk[1], [1]Dept. of Gastroenterology and Hepatology, St Antonius Hospital, Nieuwegein, [2]Dept. of Gastroenterology and Hepatology, St Antonius Hospital, Nieuwegein, [3]Dept. of Gastrointestinal Surgery, St Antonius Hospital, Nieuwegein, The Netherlands.

13.09 Samenvatting programma

13.15 Lunch in de expositiehal en gemodereerde postersessies

Best of DDD 'Wrap up' — Auditorium

Voorzitter: *C.J. van der Woude en A.E. van der Meulen*

14.00 Tijdens deze sessie zal door de volgende sprekers een wrap up gegeven worden van de sessies in de afgelopen twee dagen:

Best of Oncology – Dr. K. Grooteman, Amsterdam UMC
Best of Surgery – Prof. dr. L.P.S. Stassen, MUMC+ Maastricht
Best of Neurogastroenterolgy and Motility – Dr. D. Keszthelyi, MUMC+ Maastricht
Best of IBD – Dr. F.M. van Schaik, UMC Utrecht

Symposium Groene MDL: wat kan JIJ doen? — Auditorium

Voorzitters: *E.P.M. van der Zanden, M. Duijvestein en B. Krijnen*

15.00 Groene MDL: Waar staan we nu?
M. te Groen, arts-onderzoeker, Radboudumc, Nijmegen

15.10 Groene MDL: single use duodenoscopopen: niche of noodzaak
Dr. P.J.F. de Jonge, MDL-arts, Erasmus MC, Rotterdam

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15.40	Pitches voorbeelden uit de dagelijkse praktijk, o.a. :	
	Vervoer van patiënten	*Drs. D.C. de Jong, arts-onderzoeker, Amsterdam UMC*
		Drs. E. Hendrix, arts-onderzoeker, MUMC+
	Minder papier	*Drs. J. van der Kraan, MDL-arts, LUMC*
	Water en groene matjes	*Drs. S.K. van der Wiel, MDL-arts. Reinier de Graaf Gasthuis*
	Verzekeringskwesties	*Dr. ir. A.T. Zuur, MDL-arts, Zks De Tjongerschans*
	De groene opleiding	*E. van Bree, expert-groepslid GREENER*
16.00	In kleine werkgroepjes aan de slag: wat kunnen we komend jaar oppakken?	
16.20	Samenvatting symposium Groene MDL: wat kan JIJ doen?	
16.30	Afsluiting	

NVMDL i.o. — Baroniezaal

Voorzitters: *D.S.J. Wintjens en C.M. de Klerk*

08.30 **MDL Collegetour: extracurriculair verdiepen**

Laat je tijdens deze eerste MDL collegetour inspireren door MDL-artsen prof. dr. Daniel Keszthelyi, Dr. Hanneke van Soest en Dr. Bart Takkenberg over hun inzet voor het vak naast hun dagelijkse werk. Samen met de aanwezigen gaan we in gesprek over wat hen drijft en waarom zij het belangrijk vinden zich bestuurlijk in te zetten.
Collegetour-stijl: dus alle input en vragen van het publiek zijn welkom!

09.30 Einde van deze sessie

Voortgangstoets en NOVUM — Baroniezaal

Voorzitters: *E.H. Wouters-van den Berg*

09.30 NOVUM 1.1 en 2.0
Prof. dr. B. Oldenburg, MDL-arts, UMC Utrecht

10.00 MDL voortgangstoets: do's and don'ts
Dr. A.M.J. Langers, MDL-arts, LUMC

10.30 Prijsuitreiking kennisspel
Dr. F.B. van Hoeij, aios MDL, Meander MC

10.45 Koffie-/theepauze in de expositiehal

Abstractsessie Nederlandse Vereniging voor Hepatologie — Baroniezaal

Voorzitters: *E.M.M. Kuiper en R.B. Takkenberg*

Voordrachten in het Nederlands, 6 minuten presentatie en 3 minuten discussie

12.15 Comorbidities, information needs and lifestyle changes in patients with NAFLD (p. 90)
L.S. Oude Veldhuis[1], C.H.C. Drossaert[2], H. ten Berge[2], M.E.M. den Ouden[1], J.E.W.C. van Gemert-Pijnen[2], M.M.J. Guichelaar[3], [1]Dept. of Health Services Research, Saxion University of Applied Sciences, Enschede, [2]Dept. of Health Psychology, University of Twente, Enschede, [3]Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Enschede, The Netherlands.

12.24 Evaluation of medication-related problems in liver transplant recipients with and without an outpatient medication consultation by a clinical pharmacist: a cohort study (p. 91)
M.B. Mulder[1], B. Doga[1], S.D. Borgsteede[2], A.M. van den Burg[3], H.J. Metselaar[3], C.M. den Hoed[3], N.G.M. Hunfeld[1], [1]Dept. of Hospital Pharmacy, Erasmus MC, Rotterdam, [2]Dept. of Clinical Pharmacy, Stichting HealthBase, Houten, [3]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, The Netherlands.

12.33 Ductular bilirubinostasis is a diagnostic biomarker for acute-on-chronic liver failure: results from a well-defined cohort of patients with alcoholic steatohepatitis (p. 92)
A.G.C. Broekhoven[1], T. Ostyn[2], L. Van Melkebeke[3], H.W. Verspaget[1], S. Van der Merwe[3], J. Verbeek[3], M.J. Coenraad[1], T.A. Roskams[2], F. Nevens[3], [1]Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, The Netherlands, [2]Dept. of Pathology, Translational Cell and Tissue Research, KU Leuven, Leuven, Belgium, [3]Dept. of Gastroenterology and Hepatology, University Hospitals, KU Leuven, Leuven, Belgium.

12.42 The effect of consecutive fecal microbiome transplantation (FMT) on hepatic steatosis in patients with non-alcoholic fatty liver disease (NAFLD) (p. 93)
K.C. van Son[1], M.M. Ruissen[2], J.K. Sont[3], E.J. Kuijper[3], E.M. Terveer[3], J.J. Keller[1], M.E. Tushuizen[1], [1]Dept. of Gastroenterology and Hepatology, Leiden University Medical Center, Leiden, [2]Dept. of Internal Medicine, Leiden University Medical Center, Leiden, [3]Dept. of Infectious Diseases, Leiden University Medical Center, Leiden, The Netherlands.

12.51 Three-year results of renal function in De Novo liver transplant recipients with low-dose sirolimus and tacrolimus versus normal-dose tacrolimus: multicenter randomized, controlled trial (p. 94)
M. B. Mulder[1], B. van Hoek[2], A.P. van den Berg[3], W.G. Polak[4], I.P.J. Alwayn[5], K.P. de Jong[6], B.C.M. de Winter[1], E. Verhey-Hart[7], N.S. Erler[8], C.M. den Hoed[7], H. .J. Metselaar[7], [1]Dept. of Hospital Pharmacy, Erasmus MC, Rotterdam, [2]Dept. of Gastroenterology and Hepatology, LUMC, Leiden, [3]Dept. of Gastroenterology and Hepatology, UMCG, Groningen, [4]Dept. of Surgery, Erasmus MC, Rotterdam, [5]Dept. of Surgery, LUMC, Leiden, [6]Dept. of Surgery, UMCG, Groningen, [7]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, [8]Dept. of Biostatistics, Erasmus MC, Rotterdam, The Netherlands.

13.00 Dietary Dicarbonyls and Intestinal Inflammation in Inflammatory Bowel Disease and Irritable Bowel Syndrome Patients (p. 95)
M.C.G. de Graaf[1], J.L.J.M. Scheijen[2], C.E.G.M. Spooren[1], Z. Mujagic[1], M.J. Pierik[1], D. Keszthelyi[1], C.G. Schalkwijk[2], D.M.A.E. Jonkers[1], [1]Dept. of Gastroenterology and Hepato-

logy, Maastricht University Medical Center+, Maastricht, [2]Dept. of Internal Medicine, Maastricht University Medical Center+, Maastricht, The Netherlands.

13.09 General life satisfaction in IBS patients is associated with psychological symptom burden and quality of life, rather than gastrointestinal symptom severity (p. 96)
J.T.W. Snijkers[1], B. Winkens[2], Z.Z.R.M. Weerts[1], L. Vork[1], Z. Mujagic[1], M.A.M. Hesselink[1], C. Leue[3], J.W. Kruimel[1], J.W.M. Muris[4], D.M.A.E. Jonkers[1], A.A.M. Masclee[1], D. Keszthelyi[1], [1]Dept. of Gastroenterology and Hepatology, Maastricht University Medical Center+, Maastricht, [2]Dept. of Mathematics and Statistics, Maastricht University, Maastricht, [3]Dept. of Psychiatry, Maastricht University Medical Center+, Maastricht, [4]Dept. of General practice and elderly care medicine, Maastricht University, Maastricht, the Netherlands.

13.18 Ledenvergadering van de NVH
Aansluitend lunch in de expositiehal en gemodereerde postersessies

DONDERDAG 15 SEPTEMBER 2022

E-learning en richtlijn PEG Voeding **Baroniezaal**

14.00 E-learning Voeding: Meer kennis over voeding bij gezondheid en ziekte!
Dr. G.J.A. Wanten, MDL-arts, Radboudumc, Nijmegen
Dr. J.W. Kruimel, MDL-arts, MUMC+, Maastricht
Dr. A.A. van Bodegraven, MDL-arts, Zuyderland, Heerlen
Dr. R.G.P.J. de Jong, aios MDL, Zuyderland, Heerlen
F.M. Jansen, arts-onderzoeker, Radboudumc, Nijmegen
M. Brands, aios MDL, Amsterdam UMC, Amsterdam

14.20 Richtlijn PEG
Dr. I.A.M. Gisbertz, MDL-arts, Ziekenhuis Bernhoven, Uden
Dr. L.P.L. Gilissen, MDL-arts, Catharina Ziekenhuis, Eindhoven

15.00 Einde van deze sessie

Symposium Bariatrie: wat moet de MDL-arts weten **Baroniezaal**

Voorzitters: *P. Koehestanie en S.D. Kuiken*

15.00 Introductie
Dr. P. Koehestanie, MDL-arts, Bravis Ziekenhuis, Roosendaal
Dr. S.D. Kuiken, MDL-arts, OLVG, Amsterdam

15.05 Overzicht bariatrische ingrepen
Dr. S.M.M. de Castro, chirurg OLVG, Amsterdam

15.20 Endoscopie bij bariatrie voor dummies
Dr. D.P. Hirsch, MDL-arts, Rijnstate Ziekenhuis, Arnhem

15.35 Pancreato-biliaire complicaties
Dr. R.P. Voermans, MDL-arts, Amsterdam UMC

15.50 Voeding en deficiënties bij bariatrie
S. Oost, Internist-vasculair geneeskundige, ZGT Almelo

16.05 Buikpijn na bariatrie

K.A. Berghuis, PA obesitascentrum
Dr. L.P.L. Gilissen, MDL-arts, Catharina Ziekenhuis, Eindhoven

16.20 Panel discussie
Dr. P. Koehestanie, MDL-arts Bravis Ziekenhuis, Roosendaal
Dr. S.D. Kuiken, MDL-arts, OLVG, Amsterdam

16.30 Afsluiting

DONDERDAG 15 SEPTEMBER 2022

Niet-alcoholische leververvetting (NAFLD) — Parkzaal

Voorzitters: *M.M.J. Guichelaar en M.E. Tushuizen*

11.15 Is NAFLD wel N-AFLD?
S. Meijnikman, PhD student Amsterdam UMC
thans aios MDL, Leids Universitair Medisch Centrum

The clock ticks: morning or evening traning for NAFLD?
M. Schönke, postdoctoral fellow, Leids Universitair Medisch Centrum

Fibrose voorspeller in NAFLD/NASH
L. Verschuren, Sr. Scientist Applied Systems Biology, TNO

12.15 Einde van deze sessie

Sectie Gastrointestinale Endoscopie — Parkzaal

Voorzitter: *L.M.G. Moons en W.B. Nagengast*

12.15 How to do it - Instructievideo's

13.15 Einde van deze sessie

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V&VN MDL Plenair programma — Brabantzaal

Beroepsvereniging van zorgprofessionals
Maag Darm Lever

Voorzitter: *M. van der Ende-van Loon*

09.30 Opening

09.35 Digitaal fit: letterlijk en figuurlijk
J. Arends, internist infectioloog, directeur Happiapp

10.05 (Acute) pancreatitis, behandeling en onderzoeksresultaten
Dr. R.C. Verdonk, MDL-arts, St. Antonius Ziekenhuis, Nieuwegein

10.20 Eosinofiele oesofagitis
Dr. M.J. Warners, aios MDL, St. Antonius Ziekenhuis, Nieuwegein

10.45 Koffie-/theepauze in de expositiehal

V&VN MDL Endoscopie — Brabantzaal

Beroepsvereniging van zorgprofessionals
Maag Darm Lever

Voorzitter: *P.C.A. Terpstra*

11.15 Nieuwe PEG-richtlijn
Dr. L.P.L. Gilissen, MDL-arts, Catharina Ziekenhuis, Eindhoven

11.45 De complexe ERCP
Dr. R. Zoutendijk, MDL-arts, St. Antonius Ziekenhuis, Nieuwegein

12.15 Einde van deze sessie, lunchpauze in de expositiehal

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V&VN MDL Abstracts — Brabantzaal

Beroepsvereniging van zorgprofessionals
Maag Darm Lever

Voorzitter: *T. Korpershoek*

12.15 The European Society of Gastroenterology and Endoscopy Nurses and Associates
M. Poot, voorzitter ESGENA

12.20 Ondersteunt de Charlson Comorbiditeits Index zorgverleners bij de besluitvorming rondom de screeningscolonoscopie?
S. van Baalen, verpleegkundige in opleiding tot specialist, Erasmus MC, Rotterdam

12.30 Kwaliteitsverbeterplan dieet na ERCP
S. Naberhuis, MDL verpleegkundige, ZGT Almelo

12.40 The Dutch Inflammatory Bowel- Disease Fatigue patient self- assessment scale: a comprehensible tool with adequate psychometric properties
A.M.H. Stoker, verpleegkundig specialist, Catharina Ziekenhuis, Eindhoven

12.50 Verpleegkundige interventies bij hepatische encefalopathie
E. Smits, verpleegkundige, Albert Schweitzer Ziekenhuis, Dordrecht

13.00 Uitreiking abstractprijs

13.15 Lunch in de expositiehal en gemodereerde postersessies

V&VN MDL Endoscopie — Brabantzaal

Beroepsvereniging van zorgprofessionals
Maag Darm Lever

Voorzitter: *P.C.A. Terpstra*

14.00 Stentplaatsing
A.N. Reijm, verpleegkundig specialist, Erasmus MC, Rotterdam

14.30 Endoscopische echogeleide gastro-enterostomie
Prof. dr. F.P. Vleggaar, MDL arts UMC Utrecht

15.00 POEM
Prof. dr. A.J. Bredenoord, MDL-arts, Amsterdam UMC

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15.30 Upper GI bloedingen
Dr. N.L. de Groot, MDL-arts, Rode Kruis Ziekenhuis, Beverwijk

16.00 Einde van deze sessie

V&VN MDL Chirurgie/ oncologie — Baroniezaal

Beroepsvereniging van zorgprofessionals
Maag Darm Lever

Voorzitter: *A.N. Reijm*

11.15 T1 carcinoom
L. van der Schee, PhD kandidaat, UMC Utrecht

11.45 Functionele klachten na buismaag chirurgie
K.A. Berghuis, PA bariatrische chirurgie, Catharina Ziekenhuis, Eindhoven

12.15 Einde van deze sessie

V&VN MDL Inflammatoire darmziekten — Parkzaal

Beroepsvereniging van zorgprofessionals
Maag Darm Lever

Voorzitter: *R. Theeuwen*

14.00 Chronische diarree
Dr. P.F. Vollebregt, MDL-arts, Noordwest Ziekenhuisgroep, Alkmaar

14.30 IBD en vermoeidheid
R. Lovelkyte, arts-onderzoeker, LUMC

15.00 IBD en arbeid
Dr. M.H.M. Derikx, klinisch arbeidsgeneeskundige IBD, Radboudumc

15.30 IBD en seksualiteit
S. van der Zwet, verpleegkundig specialist, MC Leeuwarden

16.00 Einde van deze sessie

V&VN MDL Lever & Kinder — Zaal 80

Beroepsvereniging van zorgprofessionals
Maag Darm Lever

Voorzitter: *J. Helder*

11.15	Van aanmelding tot chirurgie: leverdonatie bij leven *A. Chorley, coördinator levende donor levertransplantatieprogramma, Erasmus MC, Rotterdam*
11.45	Chirurgische aspecten van leverdonaties bij leven *Dr. R. Minnee, transplantatiechirurg, Erasmus MC, Rotterdam*
12.15	Einde van deze sessie

V&VN MDL Verpleegkundig endoscopisten — Zaal 80

Beroepsvereniging van zorgprofessionals
Maag Darm Lever

Voorzitter: *A.P.M. Boersen*

14.00	AI op de endoscopie *Q.E.W. van der Zander, arts-onderzoeker, Maastricht UMC*
14.30	Resect en discard strategie bij kleine poliepen *V.R.H. van der Voort, aios MDL, UMC Utrecht*
15.00	Endoscopische resectie technieken *L.W. Zwager, anios MDL, Noordwest Ziekenhuisgroep, Alkmaar*
15.30	Koud lissen bij anticoagulantia *J.R. ten Hove, aios MDL, UMC Utrecht*
16.00	Einde van deze sessie

17 Cost-effectiveness analysis of increased adalimumab dose intervals in patients with Crohn's disease in stable remission: the randomised controlled LADI trial (p. 97)

F.M. Jansen[1], R.C.A. van Linschoten[2], R.W.M. Pauwels[2], L.J.T. Smits[1], W. Kievit[3], P.J. Boekema[4], R.L. West[5], A.G.L. Bodelier[6], I.A.M. Gisbertz[7], F.H.J. Wolfhagen[8], T.E.H. Römkens[9], M.W.M.D. Lutgens[10], A.A. van Bodegraven[11], B. Oldenburg[12], M. Pierik[13], M.G.V.M. Russel[14], N.K. de Boer[15], R.C. Mallant-Hent[16], P.C.J. ter Borg[17], A.E. van der Meulen[18], J.M. Jansen[19], S.V. Jansen[20], A.C.I.T.L. Tan[21], F. Hoentjen[1], C.J. van der Woude[2], [1]Dept. of Gastroenterology and Hepatology, Radboud UMC, Nijmegen, [2]Dept. of Gastroenterology and Hepatology, Erasmus MC, Rotterdam, [3]Dept. of Health Evidence, Radboud UMC, Nijmegen, [4]Dept. of Gastroenterology and Hepatology, Maxima MC, Eindhoven, [5]Dept. of Gastroenterology and Hepatology, Franciscus Gasthuis & Vlietland, Rotterdam, [6]Dept. of Gastroenterology and Hepatology, Amphia Hospital, Breda, [7]Dept. of Gastroenterology and Hepatology, Bernhoven Hospital, Uden, [8]Dept. of Gastroenterology and Hepatology, Albert Schweitzer Hospital, Dordrecht, [9]Dept. of Gastroenterology and Hepatology, Jeroen Bosch Hospital, 's-Hertogenbosch, [10]Dept. of Gastroenterology and Hepatology, Elisabeth Tweesteden Hospital, Tilburg, [11]Dept. Gastroenterology- Geriatrics- Internal and Intensive Care Medicine Co-MIK, Zuyderland Medical Centre, Sittard-Geleen/Heerlen, [12]Dept. of Gastroenterology and Hepatology, UMC Utrecht, [13]Dept. of Gastroenterology and Hepatology, Maastricht UMC+, Maastricht, [14]Dept. of Gastroenterology and Hepatology, Medisch Spectrum Twente, Twente, [15]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Vrije Universiteit Amsterdam, Amsterdam, [16]Dept. of Gastroenterology and Hepatology, Flevo Hospital, Almere, [17]Dept. of Gastroenterology and Hepatology, Ikazia Hospital, Rotterdam, [18]Dept. of Gastroenterology and Hepatology, Leiden UMC, Leiden, [19]Dept. of Gastroenterology and Hepatology, OLVG Hospital, Amsterdam, [20]Dept. of Gastroenterology and Hepatology, Reinier de Graaf Gasthuis, Delft, [21]Dept. of Gastroenterology and Hepatology, CW Hospital, Nijmegen, The Netherlands.

18 Implications of tioguanine dosing in IBD patients with a homozygous TPMT deficiency (p. 98)

D.S. Deben[1], R.H. Creemers[2], K.N. Shudofsky[3], B.J.C. van den Bosch[4], P.J. Bus[5], A. van Nunen[2], L.J.J. Derijks[6], A.A. van Bodegraven[2], D.R. Wong[1], [1]Dept. of Clinical Pharmacy and Tox cology, Zuyderland Medical Center, Sittard-Geleen, [2]Dept. of Gastroenterology and Hepatology, Zuyderland Medical Center, Sittard-Geleen, [3]Dept. of Clinical Pharmacy and Toxicology, VieCuri Medical Center, Venlo, [4]Dept. of Clinical Genetics, Maastricht University Medical Center , Maastricht,. [5]Dept. of Gastroenterology and Hepatology, Laurentius Hospital Roermond, [6]Dept. of Clinical Pharmacy and Toxicology, Maxima Medical Center, Veldhoven, The Netherlands.

19 Smoking and colitis-associated colorectal neoplasia: exploring the relationship (p. 99)

A.M. Wijnands[1], S.G. Elias[2], E. Dekker[3], H.H. Fidder[1], F. Hoentjen[4], J.R. Ten Hove[1], P.W.J. Maljaars[5], A.E. Van der Meulen-de Jong[5], E. Mooiweer[6], R.J. Ouwehand[1], C.Y. Ponsioen[3], F.D.M. van Schaik[1], J.P.D. Schultheiss[1], M. Severs[1], B. Oldenburg[1], [1]Dept. Of Gastroenterology and Hepatology, UMC Utrecht, Utrecht, [2]Dept. Julius Center for Health Sciences and Primary Care, UMC Utrecht, Utrecht, [3]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [4]Dept. of Medicine, University of Alberta and Radboud university medical centre, Edmonton, Canada.

[5]Dept. of Gastroenterology and Hepatology, Leiden University Medical Centre, Leiden, [6]Dept. of Gastroenterology and Hepatology, Hospital St Jansdal, Harderwijk, The Netherlands.

20 Hyperferritinemia and liver iron content determined with MRI: a new role for the liver iron index (p. 100)

W. Moris[1], J. Verbeek[2], F.C. Bakers[3], E. Rombout-Sestrienkova[1], A.A.M. Masclee[1], G.H. Koek[1], C.T.B.M. van Deursen[1], [1]Dept. of Gastroenterology and Hepatlogy, MUMC+, Maastricht, [2]Dept. of Hepatology, University Hospitals KU Leuven, Leuven, België. [3]Dept. of Radiology, MUMC+, Maastricht, The Netherlands.

21 Time-trends in disease characteristics and comorbidities in patients with chronic hepatitis B (p. 101)

D.P.C. van der Spek, W.K. Katwaroe, L. van Kleef, S. Brakenhoff, R.A. de Man, R.J. de Knegt, A.J. van der Meer, M.J. Sonneveld, Dept. of Gastroenterology and Hepatology, Eramus Medical Centre, Rotterdam, The Netherlands.

Postersessie V **Expositiehal**

22 The measured distance between tumor cells and the peritoneal surface predicts the risk of peritoneal metastases and offers an objective means to differentiate between pT3 and pT4a colon cancer (p. 102)

D.D. Wisselink[1], C.E.L. Klaver[2], J.D.W. van der Bilt[3], P.J. Tanis[4], P. Snaebjornsson[5], [1]Dept. of Gastrointestinal Surgery, Amsterdam UMC, Amsterdam, [2]Dept. of Gastroenterology and Hepatology, Amsterdam UMC, Amsterdam, [3]Dept. of Gastrointestinal Surgery Flevoziekenhuis, Almere, [4]Dept. of Gastrointestinal Surgery, Erasmus Medical Center, Rotterdam, [5]Dept. of Pathology, Netherlands Cancer Institute, Amsterdam, The Netherlands.

23 Incidence and survival of patients with oligometastatic esophagogastric cancer: a multicenter cohort study (p. 103)

M. Guckenberger[3], P.S.N. van Rossum[2], J.P. Ruurda[1], R. van Hillegersberg[1], [1]Dept. of Surgery, UMC Utrecht, Utrecht, [2]Dept. of Radiotherapy, UMC Utrecht, Utrecht, The Netherlands. [3]Dept. of Radiation Oncology, University Hospital Zurich, Zurich, Switzerland.

24 Oligometastatic liver disease in synchronous metastatic gastric cancer: a nationwide population-based cohort study (p. 104)

T.E. Kroese[1], R. van Hillegersberg[1], P.S.N. van Rossum[2], J.P. Ruurda[1], R. Verhoeven[3], H.W.M. van Laarhoven[3], [1]Dept. of Surgery, UMC Utrecht, Utrecht, [2]Dept. of Radiotherapy, UMC Utrecht, Utrecht, [3]Dept. of Medical Oncology, Amsterdam UMC, Amsterdam, The Netherlands.

25 Fluorescence molecular endoscopy using cetuximab-800CW to evaluate the response to neoadjuvant chemoradiotherapy in locally advanced rectal cancer (p. 105)

A.M. van der Waaij[1], W.T.R. Hooghiemstra[1], R.Y. Gabriëls[1], G. Kats-Ugurlu[2], B. van Etten[3], W.B. Nagengast[1], [1]Dept. of Gastroenterology and Hepatology, UMCG, Groningen, [2]Dept. of Pathology, UMCG, Groningen, [3]Dept. of Surgery, UMCG, Groningen, The Netherlands.

26 Presence of metabolic comorbidities is associated with reduced HCC-free survival in patients with chronic hepatitis B (p. 106)

L.A. Patmore, W.K. Katwaroe, D. van der Spek, S. Brakenhoff, A.J. van der Meer, H.L.A. Janssen, L.A. van Kleef, R.J. de Knegt, B.E. Hansen, R.A. de Man, M.J. Sonneveld, Dept. of Gastroenterology and Hepatology, Erasmus MC, University Medical Center, Rotterdam, The Netherlands.

A randomized non-inferiority trial comparing two versus five days of intravenous antibiotics after appendectomy for complex appendicitis

E.M.L. de Wijkerslooth[1], E.G. Boerm[2], C.C. van Rossem[3], J. van Rosmalen[4], C.I.M. Baeten[5], F.H. Beverdam[6], J.W.A.M. Bosmans[2], E.C.J. Consten[7], J.W.T. Dekker[8], M. Emous[9], A.A.W. van Geloven[10], A.F. Gijsen[11], L.A. Heijnen[12], A.P. Jairam[13], D.C. Melles[14], A.P.T. van der Ploeg[3], P. Steenvoorde[11], B.R. Toorenvliet[15], M. Vermaas[16], B. Wiering[17], B.P.L. Wijnhoven[1], A.L. van den Boom[1], [1]Dept. of Surgery, Erasmus MC - University Medical Center, Rotterdam, [2]Dept. of Surgery, Zuyderland MC, Heerlen, [3]Dept. of Surgery, Maasstad Ziekenhuis, Rotterdam, [4]Dept. of Biostatistics, Erasmus MC - University Medical Center, Rotterdam, [5]Dept. of Surgery, Groene Hart Ziekenhuis, Gouda, [6]Dept. of Surgery, Franciscus Gasthuis & Vlietland, Rotterdam, [7]Dept. of Surgery, Meander MC, Amersfoort, [8]Dept. of Surgery, Reinier de Graaf Gasthuis, Delft, [9]Dept. of Surgery, MC Leeuwarden, Leeuwarden, [10]Dept. of Surgery, Tergooi MC, Hilversum, [11]Dept. of Surgery, Medisch Spectrum Twente, Enschede, [12]Dept. of Surgery, Noordwest Ziekenhuisgroep, Alkmaar, [13]Dept. of Surgery, Catharina Ziekenhuis, Eindhoven, [14]Dept. of Medical Microbiology, Meander MC, Amersfoort, [15]Dept. of Surgery, Ikazia Ziekenhuis, Rotterdam, [16]Dept. of Surgery, IJsselland Ziekenhuis, Capelle a/d IJssel, [17]Dept. of Surgery, Slingeland Ziekenhuis, Deventer, The Netherlands.

Methods: In this pragmatic non-inferiority trial in 15 Dutch hospitals, patients with complex appendicitis (age ≥ 8) were randomized to two or five days of intravenous antibiotics after appendectomy. The primary endpoint was a composite endpoint of infectious complications and mortality within 90 days. The main outcome was the absolute risk difference in primary endpoint, adjusted for age and severity of appendicitis. Secondary endpoints included postoperative complications, reinterventions, readmission, hospital stay and adverse effects to antibiotics.
Results: The primary endpoint was observed in 51/502 patients in the two-day group (10.2%) and 41/503 patients in the five-day group (8.2%). The median duration of postoperative antibiotics was 2.0 days (IQR 2.0 to 2.3) versus 5.0 (IQR 4.7 to 5.0) in the five-day arm, P < 0.001. The adjusted absolute risk difference in primary endpoint was 1.8% in favour of the five-day arm (95% confidence interval -1.8 to 5.4%), demonstrating non-inferiority. Rates of complications and reinterventions were similar between trial arms. In the two-day arm, fewer patients experienced adverse effects to antibiotics (45 (9%) vs. 112 (22%), P < 0.001). Readmission was more frequent in the two-day arm (58 (11.6%) vs. 29 (5.8%), P = 0.001).
Conclusion: Two days of intravenous antibiotics after appendectomy for complex appendicitis is non-inferior to five days in terms of infectious complications and mortality within 90 days.

Octreotide significantly reduces transfusion requirements compared to standard care in patients with angiodysplasia-related anaemia: a multicentre randomised controlled trial

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Background: Gastrointestinal angiodysplasias (GIADs) are vascular anomalies that can result in transfusion-dependent anaemia despite endoscopic intervention. A recent individual patient data meta-analysis suggests that octreotide decreases rebleeding rates, but robust evidence is absent. We aimed to investigate the efficacy of octreotide compared to standard care in reducing the transfusion requirements of patients with GIAD-related anaemia.

Methods: The study was designed as a nationwide multicentre randomised controlled trial. Patients with GIADs who required at least four red blood cell (RBC) and/or parental iron (500 mg) transfusions in the preceding year were eligible. Patients were randomly allocated (1:1) to 40 mg octreotide long-acting release intramuscular every 28 days or standard care. The treatment duration was one year. The primary endpoint was the mean difference in the number of transfusion units (RBC + parental iron) between groups, comparing the year before and after randomisation. Endoscopic interventions were allowed as rescue therapy, and the mean difference between groups was included as a secondary endpoint. Patients who received at least one octreotide injection or only standard care for at least one month were included in our intention-to-treat analyses. Analyses of covariance were used to adjust for baseline transfusion requirements and follow-up time (12 months). This study was registered in ClinicalTrials.gov, NCT02384122.

Results: Between September 2015 and April 2021, we enrolled 62 patients (32 men, 72 years) from 17 Dutch hospitals in the octreotide (n=31) and standard care (n=31) groups. Patients required a mean number of 20.3 (SD: 15.6) transfusion units in the year prior to enrolment and a mean number of 2.4 (SD: 2.0) endoscopic interventions. The total number of transfusions was lower with octreotide (11.0; 95% CI, 5.5-16.5) compared to standard care (21.2; 95% CI, 15.7-26.7). Octreotide reduced the number of transfusions with 10.2 (95% CI, 2.4-18.1; P=0.012). The total number of endoscopic interventions was lower with octreotide (0.3; 95% CI, -0.1-0.7) compared to standard care (1.2; 95% CI, 0.8-1.6). Octreotide reduced the number of endoscopic interventions with 0.9 (95% CI, 0.3-1.5; P=0.005). Mortality rates did not differ.

Conclusion: Octreotide treatment effectively reduces the transfusion requirements and endoscopic interventions of patients with GIAD-related anaemia.

Rifaximin stimulates nitrogen detoxification in a PXR-independent manner in human small intestinal organoids

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Background: The poorly absorbed antibiotic rifaximin - a Pregnane X Receptor (PXR) agonist - prevents recurrent hepatic encephalopathy (HE). Although the pathophysiology of HE is only partly unravelled, ammonia accumulation, systemic inflammation and oxidative stress appear to play a central role. Ammonia is detoxified by formation of glutamine and urea. Due to its poor absorption, rifaximin is considered to exert beneficial effect on HE by acting on the gut microbiome, thereby decreasing bacterial ammonia production. Direct effects of rifaximin on intestinal epithelium have barely been studied. We tested our hypothesis that rifaximin is effective in HE by strengthening the human intestinal mucosal detoxification capacity.
Methods: Using lentiviral delivery of short hairpins, we generated a PXR knockdown human small intestinal organoid line and a control line in which a non-target shRNA was introduced. Organoids were cultured for 24 hours with either rifaximin, rifampicin (100 uM each), or DMSO. RNA-sequencing and AccQ-Tag mass spectrometry were performed to investigate effects on gene expression and glutamine metabolism. Rifaximin uptake and secretion were studied by bright field microscopy.
Results: Uptake and apical secretion of rifaximin in human small intestinal organoids was documented using microscopy. In total, 31% of the differentially expressed genes upregulated by rifaximin were overlapping in the PXR knockdown and control organoids. Gene ontology (GO) analysis revealed that rifaximin treatment in WT organoids showed upregulation of several pathways related to amino acid and nitrogen processes: cellular amino acid metabolic processes ($p<0.01$, *Kolmogorov-Smirnov*); organonitrogen compound metabolic processes ($p=0.03$); organonitrogen compound biosynthetic processes ($p=0.03$); and cellular nitrogen compound biosynthesis processes ($p < 0.01$). Notably, PXR-independent upregulation of Asparagine Synthetase (Log2FC 2.3, p<0.001) and downregulation of Glutaminase 2 (Log2FC -0.8, p<0.001) are suggestive of decreased ammonia levels. Indeed, preliminary data show that intracellular concentrations of asparagine and glutamine were increased by rifaximin while no such effects were seen by rifampicin.
Conclusion: Our findings suggest that rifaximin – after uptake into human small intestinal cells – stimulates nitrogen detoxification and decreases ammonia production in a PXR-independent manner. Active luminal intestinal rifaximin excretion may explain the lack of systemic effects of rifaximin.

External validation of a nomogram predicting conditional survival after curative treatment of esophageal cancer

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Background: Recently, a conditional survival nomogram was developed to predict 5-year overall survival for esophageal cancer patients after neoadjuvant treatment followed by esophagectomy. This nomogram includes cardiac comorbidity, cN-stage, ypT-stage, ypN-stage, chyle leakage and pulmonary complications as independent predictors of survival. The aim of this study was to externally validate the conditional survival nomogram in a cohort of patients from another European high volume esophageal cancer center.
Methods: We included consecutive patients with a resectable esophageal carcinoma who received neoadjuvant treatment followed by an esophagectomy in a tertiary referral center for esophageal cancer between 01-01-2004 and 01-01-2016. The discriminative ability for the prediction of 5-year overall survival was quantified by Harrell's C-statistics. Calibration of the conditional survival nomogram was visualized by plotting actual 5-year survival against predicted probabilities.
Results: In total 296 patients were included. Median overall survival was 48.1 months (95%CI: 37.5-58.7). The probability to achieve 5-year overall survival directly after surgery was 45%, and increased to 57%, 68%, 78% an 89% for each additional year survived. Prediction of 5-year overall survival differed from the observed survival with a calibration slope of 0.54, 0.55, 0.59, 0.73 and 1.09, directly after surgery and given 1, 2, 3, and 4 years already survived, respectively. The discriminative ability of the nomogram for 5-year survival was moderate with a C-statistics of 0.65 compared to a value of 0.70 in the original study.
Conclusion: This study externally validated a model for conditional survival after neoadjuvant chemoradiotherapy and surgery for esophageal cancer. The proposed nomogram had a moderate predictive discrimination and accuracy for the derivation cohort. This is the first step towards a clinically applicable conditional survival nomogram predicting the 5-year overall survival in esophageal cancer patients treated with multimodal therapy.

Hospital variation in feeding jejunostomy policy for minimally invasive esophagectomy; population-based results from the Dutch Upper gastrointestinal Cancer Audit (DUCA)

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Background: No consensus exists on feeding jejunostomy (FJ) policy for minimally invasive esophagectomy (MIE). This study aims to investigate hospital variation in placement, surgical techniques and safety of FJ during MIE in the Netherlands.
Methods: This nationwide cohort study analysed patients registered in the Dutch Upper Gastrointestinal Cancer Audit that underwent minimally invasive esophagectomy for cancer. Hospital variation in FJ placement techniques and usage was investigated using a survey questionnaire among all Dutch esophagectomy centers. Hospital variation in FJ placement rates was investigated using case-mix corrected funnel plots. Incidence of intra- and postoperative complications, prolonged hospital stay and reinterventions was compared between patients with and without FJ using multilevel multivariable logistic regression. Additionally, the incidence, Clavien-Dindo score and reintervention rates of FJ-related complications were described and compared between hospitals performing jejunostomies routinely (≥90% of patients) and not routinely (<90%).
Results: Between 2018-2020, a FJ was placed in 1481/1811 (81.8%) of included patients, with rates ranging from 11-100% among hospitals. More patients were discharged within 10 days (median hospital stay in the Netherlands = 10 days) without FJ compared to patients with feeding jejunostomy placement (64.5% vs. 50.4%, respectively; OR:0.62, 95%CI:0.42-0.90). In total, 45/1481 (3%) patients had FJ-related complications, of whom 23 (1.6%) experienced severe complications (≥Clavien-Dindo IIIa). The complication rate following jejunostomy was 13.7% in hospitals not routinely placing an FJ, versus 1.7% following FJ in hospitals that perform routine placement ($p<0.01$).
Conclusion: Hospital variation in placement of FJ exists in the Netherlands. Patients with FJ were less likely to have a length of hospital stay shorter than the Dutch median of 10 days. Centers routinely performing jejunostomy have a lower jejunostomy complication rate than centers performing it selectively. In the Netherlands, the use of FJs is shown to be relatively safe, although the hospital variation might show room for nationwide improvement.

Gecombineerde Vena Porta en Vena Hepatica Embolizatie (PVE/HVE) voor versnelde hypertrofie van de toekomstige restlever – Interim analyse van de DRAGON 1

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Background: Inductie van hypertrofie van de toekomstige restlever (FLR) is vaak nodig om het risico op Post Hepatectomy Liver Failure (PHLF) te verkleinen bij patiënten met Colorectale levermetastasen (CRLM) in combinatie met een te kleine restlever. Vena Porta Embolizatie (PVE) is op dit moment de gouden standaard, echter zou de nieuwe techniek " gecombineerde Vena Portal en Vena Hepatica Embolizatie (PVE/HVE) superieur over PVE kunnen zijn in het induceren van FLR hypertrofie.
Methods: Het primaire eindpunt van de DRAGON 1 trial is het vermogen van ieder deelnemend centrum om drie patiënten binnen een jaar te includeren zonder 90-dagen mortaliteit gerelateerd aan de interventie. Het primaire eindpunt is dus een combinatie van veiligheid van de procedure en de accrual van elk deelnemend centrum. Indien een centrum het primaire eindpunt heeft gehaald mag het patiënten gaan includeren in de DRAGON 2 trial. Secundaire eindpunten van de DRAGON 1 trial zijn: het percentage van de patiënten die uiteindelijk een resectie ondergaan, volumeveranderingen van de FLR, complicaties, recidief percentage en de eenjaars overleving.
Results: Momenteel zijn 34 centra wereldwijd actief patiënten aan het includeren in de DRAGON 1 trial. Ca 15 andere centra zitten nog in het initiatie proces. Ca 60 patiënten zijn reeds geïncludeerd maar volledige data tot en met de resectie is momenteel van 34 patienten beschikbaar.
Conclusion: De DRAGON trial studiegroep hoopt een interim analyse van de DRAGON 1 trial te mogen presenteren op het NVGE congres.

Management of anastomotic leakage after robot-assisted minimally invasive esophagectomy with intrathoracic anastomosis

E.M. de Groot, L. Goense, S.F.C. Bronzwaer, B.F. Kingma, S. van der Horst, J.W. van den Berg, J.P. Ruurda, R. van Hillegersberg, Dept. of Gastrointestinal Surgery, UMC Utrecht, Utrecht, The Netherlands.

Background: Anastomotic leakage is an impactful complication after esophagectomy. Treatment of anastomotic leakage is challenging and standardized treatment protocols are lacking. The aim of this study was to evaluate the management of leakage after robot-assisted minimally invasive esophagectomy (RAMIE) with intrathoracic anastomosis.
Methods: From a single center prospectively maintained database all patients with anastomotic leakages defined by the Esophageal Complications Consensus Group between 2016 and 2021 were included. Contained leakage was defined as air or fluid locally at level of the anastomosis without involvement of the mediastinum or thorax. Non-contained leakage was defined as mediastinitis and/or mediastinal/pleural fluid collections. The primary outcome was 90-day mortality rate and the secondary outcome was successful recovery.
Results: Between 2016-2021, 149 patients underwent RAMIE of which 40 patients developed anastomotic leakage and were included. The 90-day mortality in case of leakage was 5% (n=2). Leakage was contained in 29 patients (73%) and non-contained in 11 patients (27%). In the contained group, the majority of the patients were treated non-surgically (n=27, 93%) and management was successful in 22 patients (76%). In the non-contained group, all patients required a reoperation with thoracic drainage and management was successful in 7 patients (64%). Management failed in 11 patients (28%) of whom 7 developed an esophagobronchial fistula, 3 had a disconnection of the anastomosis and 1 died of a septic bleeding.
Conclusion: This study demonstrated that the management anastomotic leakage in patients who underwent RAMIE with intrathoracic anastomosis was successful in 73% with a 90-day mortality rate of 5%. Treatment failures were mainly due to inadequately drained leaks resulting in an esophagobronchial fistula in 7 patients. Based on this experience, we developed a differentiated approach for the management of intrathoracic anastomotic leakage based on the manifestation of the leakage.

Metastasectomy or stereotactic radiotherapy for oligometastatic esophagogastric cancer: a nationwide population-based cohort study

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Background: This nationwide population-based study analyzed the outcomes of local treatment (i.e. metastasectomy or stereotactic body radiotherapy [SBRT]) for oligometastatic disease (OMD) in patients with esophagogastric cancer in The Netherlands.
Methods: Between 2015 and 2016, all patients in The Netherlands with esophagogastric cancer and synchronous or metachronous OMD were eligible for inclusion. Patients who underwent local treatment of OMD (metastasectomy or SBRT) with or without systemic therapy were included. OMD was defined as distant metastases in 1 organ or 1 extra-regional lymph node region. The primary outcomes were overall survival (OS) and independent prognostic factors for OS. OS was defined since diagnosis of OMD. Prognostic factors for OS were analyzed using a multivariable Cox proportional hazard model.
Results: In total, 105 patients were included. Patients were predominantly diagnosed with esophageal cancer (85%), adenocarcinomas (80%), and metachronous OMD (59%). The primary tumor was controlled in 83% (surgery or definitive chemoradiotherapy). Treatment of OMD was local treatment (79%) or combined treatment (local plus systemic, 21%). Median OS was 18.1 months (95% confidence interval [CI]: 13.9-22.7). Improved OS was independently associated with combined treatment compared with local treatment (hazard ratio [HR] 0.47, 95% CI: 0.23-0.96) and improved performance status (HR 0.55, 95% CI: 0.29-0.92). Median OS after combined treatment was 22.7 months (95% CI: 14.7-42.6) compared with 16.0 months (95% CI: 12.7-21.8) after local treatment ($p<0.001$).
Conclusion: Local treatment of OMD plus systemic therapy was independently associated with improved OS as compared with local treatment of OMD alone in this population-based cohort study in The Netherlands. Randomized controlled trials are warranted to confirm these results.

Long-term complications after distal pancreatectomy: a nationwide analysis

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Background: Distal pancreatectomy (DP) is the surgical treatment of choice for (pre)malignant lesions found in the pancreatic neck or body. Long-term complications as exocrine and endocrine pancreatic insufficiency, remain a topic where data is lacking in patients receiving DP. Current study aims to provide an overview of complications after DP, and emphasize the need for intensive postoperative monitoring in patients with an increased risk of developing long-term complications after DP.
Methods: Current study is a nationwide observational cohort study, using available data from the Dutch Pancreatic Cancer Audit (DPCA) in the period of 2013 until 2019. Outcomes of interest of this study was the presence of endocrine and exocrine pancreatic insufficiency and, subsequently, disease management. Endocrine pancreatic insufficiency was defined as new onset diabetes mellitus (NODM), occurring postoperatively or worsening of pre-existent diabetes mellitus. Exocrine pancreatic insufficiency was defined as having exocrine pancreatic insufficiency-related complaints (steatorrhea, weight loss, malabsorption and flatulence) or the need for enzyme supplements. Baseline characteristics, operative data and postoperative variables were retrieved as variables to predict long-term complications.
Results: 1330 patients were included for analyses of which. Severe complications occurred in 31%, POPF in 24% and postoperative interventions in 17%. Patients required pancreatic supplements for exocrine pancreatic insufficiency in 36.6%. New onset diabetes occurred in 20.2% and worsening of pre-existing diabetes mellitus in 11.2%.
Conclusion: Pancreatic insufficiency is a prevalent problem because of almost half of the patients experience exocrine or endocrine insufficiency after DP. Currentstudy provided an extensive overview of the current management of long-term complications after DP and, subsequently, confirmed the need for extensive postoperative monitoring and management after DP.

Outcomes of percutaneous cholecystostomy in high-risk patients with acute cholecystitis

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Background: Over the last decades, percutaneous cholecystostomy (PC) has been the mainstay of treatment in patients with acute cholecystitis who are not eligible for (emergency) surgery. Endosonography-guided gallbladder drainage (EUS-GBD) has recently been recommended by the European Society of Gastrointestinal Endoscopy (ESGE) as alternative treatment for these patients. We aimed to analyze indications and outcome of PC in daily clinical practice to provide further insight of the potential benefit of EUS-GBD.
Methods: A retrospective, single-center, observational study of all patients who underwent PC for acute cholecystitis between 2016 and 2021 was carried out at the Amsterdam UMC. A search was conducted using codes for PC in the hospital electronic patient system (EPIC). Patients were included when acute cholecystitis was caused by gallstone disease or obstruction due to hepatopancreatobiliary (HPB) malignancy. Primary endpoint was need for re-intervention. Secondary endpoints were clinical success, adverse events, drain dysfunction, and recurrence of cholecystitis. Follow-up was until cholecystectomy or death.
Results: We identified a total of 110 patients who underwent percutaneous cholecystostomy, excluding ten patients that were primarily treated with EUS-GB in this time period. Gallstone disease and HPB malignancy were observed in 84 (76.4%) and 26 (23.6%) of patients respectively. Six of the latter 26 patients had undergone endoscopic biliary metal stent placement within the last 7 days (23.1%). Nine patients were lost to follow-up. Clinical success of PC was 100%. Procedure-related adverse events occurred in 14/110 (12.7%) of patients. A total of 56 (51%) patients underwent cholecystectomy after a median of 77 days (IQR: 73). Drain dysfunction was defined as drain luxation, dislodgement or obstruction. Drain dysfunction requiring re-intervention (i.e. non-elective procedures) occurred in 15 out of 56 (26.8%) patients when PC was utilized as a bridge to surgery. In the 45 patients in whom PC was considered definitive treatment, drain dysfunction occurred in 33.3% and required re-intervention in 20.0%. In 6 out of 45 patients the drain was removed or left out after drain dysfunction. In patients without cholecystectomy, the recurrence rate of cholecystitis was 11.1%.
Conclusion: PC was utilized as definitive therapy in 41% of high-risk patients with acute cholecystitis and resulted in high technical and clinical success. However, re-interventions due to drain dysfunctions and recurrence of cholecystitis were common, which underlines the need for alternative techniques such as EUS-GBD, especially in inoperable patients where definitive therapy is required.

Pancreatoscopy-guided electrohydraulic lithotripsy for the treatment of obstructive distal main pancreatic duct stones; long-term outcomes

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Background: Pancreatoscopy-guided electrohydraulic lithotripsy (EHL) seems to be a safe and effective first-line therapy in symptomatic chronic pancreatitis (CP) patients with obstructing pancreatic duct (PD) stones located in the head or neck of the pancreas.(1) However, long-term outcomes of endoscopic EHL as primary treatment are unknown. The aim of the present study is to evaluate the long-term effects of EHL as first-line therapy and to compare outcomes to those obtained in a historical cohort of patients who underwent extracorporeal shockwave lithotripsy (ESWL).
Methods: An observational prospective single-center long-term follow-up (FU) study was performed including 19 patients who underwent pancreatoscopy-guided EHL as first-line therapy and 18 patients who underwent ESWL followed by endoscopic retrograde pancreatography (ERP) as primary treatment. The primary endpoint was long-term technical success after EHL or ESWL, defined as no recurrence of symptomatic intraductal stones confirmed on imaging, and no need for a re-intervention for the preservation of ductal clearance. Secondary endpoints for the EHL population included long-term clinical success (i.e. same or a lower Izbicki pain score or reduced opiate usage as compared to 6-months FU) and quality of life (QoL) based on the 12-Item Short Form Health Survey (SF-12). For both study groups, hospital re-admission rates due to acute-on-CP or inadequate pain control, and pancreatic function at long-term FU were evaluated.
Results: In the EHL-group, 8/19 patients (42%) developed recurrent obstructive PD-stones versus 11/18 patients (61%) in the ESWL-group (P = 0.248) after a medium FU of 1085 and 2349 days. Of the recurrent patients, 5/8 EHL-patients (63%) versus 11/11 ESWL-patients (100%) were in need of a re-intervention (P = 0.058). Median time to recurrence was 424 versus 352 days (P = 0.364). Long-term clinical success after EHL was achieved in 11/19 patients (58%). QoL was not significantly different compared with 6-months FU and baseline. No differences were observed in re-admission rate and pancreatic function between the two treatment groups.
Conclusion: At long-term FU, endoscopic EHL as first-line treatment seems to be a promising and effective treatment for symptomatic CP patients, with a lower recurrence rate and subsequent lower need for re-intervention as compared to ESWL, although not significant in this small series. Long-term clinical success is remained in more than half of the patients. Future studies are needed to directly compare both treatment techniques as first-line treatment in patients with symptomatic CP.

Dietary patterns are reflected in the plasma inflammatory proteome of patients with inflammatory bowel disease

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Background: Diet plays an important role in the development and progression of inflammatory bowel diseases (IBD). However, little is known about the extent to which different diets reflect specific inflammatory activity in IBD, beyond general measures such as fecal calprotectin or C-reactive protein. In this study, we aimed to unravel associations between long-term dietary patterns and specific plasma inflammatory proteins in patients with IBD by leveraging high-throughput proteomics technology.
Methods: Plasma concentrations of 92 different inflammation-related proteins were measured by proximity extension assay (PEA) technology in 454 patients with IBD, comprising Crohn's disease (CD, n=264) and ulcerative colitis (UC, n=190). Dietary intake was assessed through food frequency questionnaires and Principal component analysis (PCA) was performed to extract data-driven dietary patterns. To identify associations between dietary patterns and plasma inflammatory proteins, we used general linear models, correcting for age, sex, BMI, plasma storage time, smoking, surgical history and medication use. Stratified analyses were performed for IBD type, disease activity and sufficiency of protein intake.
Results: PCA revealed five dietary patterns cumulatively explaining 40% of the total dietary variation. A pattern enriched in high-sugar foods and refined carbohydrates such as pastry, sweets, savoury snacks and juice, showed a significant negative association with fibroblast growth factor-19 (FGF-19), a gut-derived hormone reflecting intestinal health. Conversely, FGF-19 was positively associated with a healthy, Mediterranean-style pattern high in fruit, fish, nuts, eggs, tea and cereals and low in meat. The associations were robust throughout all stratified analyses and after adjusting for aforementioned covariates (FDR < 0.05). A pattern characterized by high intake of alcoholic drinks and coffee was associated with decreased plasma levels of IL-12B and with increased levels of eotaxin-1 (CCL11), that are implicated in the pathogenesis of IBD. All associations remained significant when analysing patients with CD separately, while only the association between the high-sugar pattern and FGF-19 remained in UC.
Conclusion: We show distinct plasma inflammatory proteins that may be amenable to dietary modulation in the treatment and prevention of IBD. Our study suggests that dietary habits influence distinct circulating inflammatory proteins implicated in intestinal inflammation, independent of other clinical factors, and underlines the importance of dietary assessment and advise in the management of IBD

The socioeconomic impact of irritable bowel syndrome: an analysis of direct and indirect healthcare costs in the Netherlands

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Background: Irritable bowel syndrome (IBS), a highly prevalent disorder of the gut-brain interaction, is associated with substantial costs to society. Extensive data on direct costs (healthcare consumption) and indirect costs (health-related productivity loss at work, *i.e.* absenteeism and presenteeism, and health related productivity loss related to unpaid labour, *e.g.* voluntary, and domestic work) are still lacking. Hence, we examined the socioeconomic cost of IBS in the Netherlands and assessed which sociodemographic and clinical patient characteristics are associated with higher costs.
Methods: We collected cross-sectional data from three well-characterized Dutch IBS patient cohorts, *i.e.* two multicentre Rome IV patient cohorts as part of interventional trials, and a Rome III longitudinal patient cohort as part of a follow-up measurement. Direct and indirect costs were evaluated using validated comprehensive questionnaires, *i.e.* medical cost questionnaire (MCQ) and productivity cost questionnaire (PCQ), respectively. Bootstrapped mean quarterly costs per IBS patient were calculated using healthcare costs prices and average wages as determined by the Dutch National Healthcare Institute. Multivariate regression analyses were performed to characteristics associated with higher costs.
Results: A total of 419 IBS patients (mean age 39.3 (16.0 SD) years, 74.5% female, 90.2% Rome IV patients) were included. Quarterly mean total costs per patient were €2.156 (95% CI 1793-2541), consisting of €802 (625-1010) direct costs and €1.354 (1072-1670) indirect costs. Direct costs consisted primarily of consultations with healthcare professionals, with costs related to gastrointestinal (GI) clinic visits accounting for 6% and costs related to mental healthcare visits accounting for 20%. Older patients (p=0.007), patients not working (p=0.001), patients with IBS subtypes other than constipation (p=0.033), lower disease-specific quality of life (p=0.027), and more severe depressive symptoms (p=0.001) had significantly higher direct costs. Indirect costs consisted of absenteeism (45%), presenteeism (42%), and productivity loss related to unpaid labour (13%). Male patients (p=0.014) and patients with more severe depressive symptoms (p=0.047) had significantly higher indirect costs.
Conclusion: Productivity loss is the main contributor to the socioeconomic burden of IBS. Direct costs did not appear to be predominantly related to GI care, but rather to mental healthcare. Awareness of the nature of the costs and contributing patient factors should lead to optimalisation of IBS management (*e.g.* integration of somatic and mental healthcare) and a significant socioeconomic benefit for society.

Short and long-term oncological outcomes in screen-detected T1 colorectal cancer: a multicentre cohort study

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Background: The detection and local excision of T1 colorectal cancers (T1CRC) have increased with the implementation of CRC screening programs. It is however unknown whether screen-detected (sd) and non-screen-detected (non-sd) T1CRCs have similar risk profiles, or if they should be considered as two distinct entities.

Methods: We analysed data from consecutive patients diagnosed with T1CRC between 2014-2017 in 12 participating hospitals. Sd and non-sd patients were compared on the presence of lymph node metastasis (LNM) at baseline and recurrence during follow-up (FU), with recurrence being a composite endpoint of local recurrence and distant metastasis. The association between method of detection (sd vs. non-sd) and LNM was analysed in all surgically treated patients using multivariable logistic regression. We adjusted for clinical and histological confounding factors (i.e., age, gender, tumour location, size, morphology, lymphovascular invasion, and grade of differentiation). We used Cox proportional hazard regression to study the association between the method of detection and recurrence.
Results: 1805 patients were included (median age 69 years, 62% male, 14% ASAIII/IV, 34% pedunculated T1CRCs), of which 1114 (62%) were detected by screening. Sd patients were younger (67 vs 71 years, *P*<0.001), more frequently male (65% vs 58%, *P*<0.05), had fewer comorbidities (ASA III/IV 9% vs 21%, *P*<0.001), and had more left-sided tumours (63% vs 52%, *P*<0.001) than non-sd patients. The proportions of pedunculated T1CRCs (34% vs 34%), frequency of the histological risk factors for LNM, and proportion of surgery (primary and completion) (53% vs 54%) were comparable. LNM was more often observed in sd patients (12.8%; 95%CI 10.1-16.1%) than in non-sd patients (8.8%, 95%CI 6.1-12.4%). However, when adjusted for potential confounders, the risk was not significantly different (OR 1.45; 95%CI 0.92-2.29; *P*=0.11). In 59 patients (3.3%) recurrences were observed (median FU 45 months [IQR 36 months]), with similar recurrence rates in the sd and non-sd population (3.2% vs 3.3%; HR 1.02; 95%CI 0.60-1.73; *P*=0.95). Curative salvage treatment of recurrences was possible in 16/36 (44%) and 12/23 (52%) of sd and non-sd patients, respectively.
Conclusion: Our data show similar short- and long-term oncological outcomes for sd patients and non-sd patients with T1CRC. This supports that risk stratification, primarily based on non-sdT1CRCs, can be safely applied to sdT1CRCs as well.

Development and validation of a remote monitoring tool for real-world assessment of mild, moderate, and severe infections in Inflammatory Bowel Disease patients

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Background: Immunomodulators and biologicals are cornerstones in the current management of Inflammatory Bowel Disease (IBD), although associated with increased risk of infections. Post-marketing surveillance registries are important to assess this risk, but mainly focus on severe infections. Data on mild and moderate infections are scarce, yet these take longer to clear in immunosuppressed patients, and can substantially impact quality of life. We aimed to develop and validate a remote monitoring tool for assessment of all infections in IBD patients in every day care.
Methods: Through a structured iterative process with input from IBD specialists and literature review, a 7-item Patient-Reported Infections Questionnaire (PRIQ) comprising 15 different types of infections was developed to measure infections with a recall period of 3 months. Infection severity was defined as mild (self-limiting or topical treatment), moderate (oral antibiotics/antivirals/antifungals) or severe (hospitalization, and/or IV treatment). Comprehensiveness and comprehensibility were ascertained through cognitive interviewing of 36 IBD outpatients. After implementation in myIBDcoach, a prospective, multi-centre, observational cohort study was performed between June 2020 and June 2021 in 584 IBD patients to assess diagnostic accuracy of the PRIQ. Patients filled out the PRIQ every 3 months. Infectious events were manually cross-checked with GP and pharmacy data (Gold Standard). Agreement was evaluated using linearly weighted kappa and sensitivity and specificity (outcome: infection present/absent) were calculated. Cluster-bootstrapping was performed to adjust for in-patient level correlation.
Results: During development, patient understanding of the PRIQ was good and cognitive interviews did not result in reduction of items. Analysis of feedback from interviews resulted in addition of definitions to certain response options (*e.g.* definition for antivirals) and minor linguistic adjustments. During validation, 584 IBD patients (57.8% female, mean age 48.6 years [SD: 14.8], mean disease duration 12.6 years [SD: 10.9], n=323 Crohn's disease, n=261 ulcerative colitis) completed 1386 periodic assessments resulting in 1626 recorded events. Linearly weighted kappa for agreement between the PRIQ and Gold Standard was 0.92 (bootstrap-adjusted 95%CI 0.89-0.94). As for diagnostic accuracy, sensitivity and specificity were 93.9% (bootstrap-adjusted 95%CI 91.8-96.0) and 98.5% (bootstrap-adjusted 95%CI 97.5-99.4), respectively.
Conclusion: The PRIQ is a valid and accurate remote monitoring tool to assess patient-reported infections in IBD patients. The PRIQ can be used for post marketing surveillance and in healthcare pathways of IBD.

Transition readiness in adolescents with IBD; Translation and Validation of the Transition Readiness Assessment Questionnaire (TRAQ-NL)

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Background: Transition in care can be challenging for adolescents and young adults (AYA) with Inflammatory Bowel Disease (IBD). This study aimed to develop a Dutch version of the Transition Readiness Assessment Questionnaire (TRAQ), a generic tool to measure transition readiness, and verify its validity and reliability.
Methods: Following COSMIN methodology, we performed translation, pretesting and validation of TRAQ-NL questionnaire. TRAQ consists of 20 items divided into 5 subscales (Managing Medication, Appointment Keeping, Tracking Health Issues, Talking with Providers, Managing Daily Activities), and is self-administered. The minimum score on every item is 1 and maximum score of 5 with a sumscore of 100. For the translation the back to back methodology was used. RASCH analysis was used for structural validation, and hypothesis testing for construct validity. Overall internal consistency of TRAQ-NL was assessed using Cronbach's alpha coefficient. Reference scores were calculated using percentiles.
Results: A total of 250 TRAQ questionnaires were evaluated in 136 AYA's with IBD (56% Crohn's disease, 58% male, median age 17.5 years (range 15.67-20.38)). Total mean score was 3.87 (range 1.45-5). Data of one outlier (AYA scoring very low, total mean score 1.45) was not used in order to have evenly distributed data (mean score range 2.25-5). We defined transition readiness as moderate in patients with score between 25th-50th percentile (total mean score 3.375 - 3.9), adequate when scores in 50th -90th percentile (total mean score 3.91- 4.7) and excellent when score was above 90th percentile (sum score >4.7). Transition readiness was low when score was below 25th percentile (<3.375). Reliability with Cronbach's alpha was good (0.87). TRAQ-NL discriminated well between different levels of knowledge, especially in de lower levels. TRAQ scores increased in patients who repeatedly completed TRAQ-NL during their transition period, in the ages 16-20 years. Younger patients, concomitant illness, less visits to transition outpatient clinic and dependence on parents associated with significantly lower scores. Boys (versus girls) and AYA's with disease acceptance issues had nearly significant lower scores. AYA's with a higher VAS of independency and transfer readiness, as well as TRAQs done after transfer to adult care scored significantly higher.
Conclusion: The Dutch version of Transition Readiness Assessment Questionnaire (TRAQ-NL) is a reliable and valid tool. TRAQ-NL can be used to detect gaps in transition readiness skills in AYA's with IBD transitioning to adult healthcare. TRAQ is a generic questionnaire and can thus be used to evaluate transition readiness in patients with other chronic diseases.

Impact of fecal immunochemical test screening on colorectal cancer incidence and mortality

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Background: Many countries have implemented fecal immunochemical test (FIT) -based colorectal cancer (CRC) screening programs. However, little is known about the effectiveness of FIT-based screening on CRC incidence and mortality.
Methods: Before implementing a national screening program, a population-based cohort study was performed in The Netherlands. The screened individuals, aged 50-75 years, participated in a biennial FIT screening program between 2006-2014, with a follow-up until 31-12-2018. All Dutch inhabitants aged 50-75 years on 01-01-2006 -same time period as the screening cohort started - were used as reference cohort. Since an organized nationwide CRC screening program was gradually implemented from 2014 onwards, persons in the reference cohort needed to be censored when they were eligible to participate in the national CRC screening program, resulting in a shorter follow-up time. To enable analyses with a longer time horizon, we additionally included all Dutch inhabitants aged 50-75 years at 01-012001. They were eligible to participate in the nationwide CRC screening after at least 13-years and could therefore be followed until 31-12-2013.The Kaplan Meier method and Cox regression analysis were performed to evaluate the association between FIT screening and CRC incidence or mortality.
Results: In total, 15.397 individuals (mean age:59,0 years;52,6% female) participated at least once in the screening program ("screenees") and were compared to the cohort of non-screened individuals starting in 2001 (n=4.292.731) and the cohort starting in 2006 (n=4.682.982). The proportional hazards assumption of the Cox regression models was violated for age and year. Therefore, analyses were performed by stratifying the follow-up time. Over 13-years of follow-up, screenees had a significantly lower CRC incidence (hazard ratio (HR) 0,78;95%CI0,68-0,90;p=0.001) compared to the non-screened individuals. In the first five years of screening an initial increase in cumulative CRC risk was found, followed by a subsequently decrease after seven years. Screenees had a significantly lower CRC-related mortality (HR 0,39; 95%CI0,29-0,53;p<0.001) compared to the non-screened individuals. Female gender was associated with a lower CRC-related mortality (HR 0,65; 95%CI:0,64-0,66,p<0.001). Age was associated with an increased CRC-related mortality (HR 1,11 per year increase in the first two years of follow-up, which slightly decreased over time (HR 1,07 after 6 years).
Conclusion: Biennial FIT-based CRC screening is associated with lower CRC incidence and CRC-related mortality. However, healthy screenee bias cannot be ruled out. These results further encourage the implementation of FIT-based CRC screening programs.

Screening for metachronous esophageal second primary tumors in patients with head and neck cancer

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Background: Patients with head and neck squamous cell carcinoma (HNSCC) frequently develop second primary tumors (SPTs) in the esophagus or stomach. Metachronous screening could lead to timely detection of SPTs in early stages and therefore improves the survival in these patients.
Methods: We conducted a metachronous screening study in patients with HNSCC in a Western country. Patients with HNSCC in the oropharynx, hypopharynx or other sub-locations with alcohol abuses diagnosed between January 2017 and September 2020 were included. Included patients received curative treatment and routine follow-up for HNSCC. A metachronous screening esophagogastroduodenoscopy (EGD) with white light imaging, optical chromoendoscopy and lugol's staining was performed more than 6 months after HNSCC diagnosis. Primary outcome was the incidence of SPTs, defined as presence of high grade dysplasia (HGD), esophageal squamous cell carcinoma (ESCC) or any other cancer in the upper gastrointestinal tract.
Results: 126 patients (78% male, median age at HNSCC diagnosis 65 years) were included. HNSCC was located in the oropharynx (33%), larynx (25%), hypopharynx (25%), or oral cavity (17%). In total, 9 SPTs were detected in 7 patients (6%). 52 (41%) of the included patients had undergone previous synchronous screening, leading to the detection of 3 early stage SPTs (3 HGD). Metachronous screening was performed within 2 years (56%), 2 to 3 years (14%), or 3 to 5 years (30%) after HNCC diagnosis. Lesions suspicious for SPTs were detected in 15 (12%) patients, and SPTs were confirmed in 6 patients (5%) patients (2 HGD, 3 ESCC and 1 esophageal adenocarcinoma). Most metachronous SPTs (5/6) were detected in early stages and could be curatively treated with endoscopic resection. No SPTs were detected with routine follow-up imaging for HNSCC prior to metachronous screening.
Conclusion: Metachronous SPTs in the esophagus or stomach were detected in 5% of patients with HNSCC. Metachronous screening for SPTs should be considered in a selection of HNSCC patients.

Rectal preservation and short-term follow-up after endoscopic intermuscular dissection (EID) for deep submucosal invasive rectal cancer

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Background: Endoscopic intermuscular dissection (EID) has recently been shown to be an effective new technique to resect suspected deep submucosal invasive cancer (D-SMIC) of the rectum with high R0 rates. This study aims to evaluate the impact of EID on rectal preservation and to assess short-term oncological follow-up.
Methods: We analyzed prospectively collected data from consecutive patients treated with EID for suspected rectal D-SMIC between 2018-2022 in two academic hospitals. Superficial submucosal invasive cancer (S-SMIC) represents T1Sm1, whereas D-SMIC represents Sm2-3 invasion. D-SMIC patients undergo intensive surveillance, consisting of biannual MRI and scar inspection for 2 years, followed by annual examinations for 3 years. CEA is measured biannually for 5 years. Outcomes are the proportion of patients with rectal preservation, cancer recurrence rate and metastasis free survival (MFS).
Results: EID was performed in 140 patients (median age 65.6 years, 70% male, 79% ASA I-II, median size 29mm). Histology showed high grade dysplasia in 18 (13%), S-SMIC in 7 (5%), D-SMIC in 74 (53%), and ≥pT2 in 41 (29%) cases. For D-SMIC technical success, R0 resection and complication rates were 97% (95%CI 93-100%), 93% (95%CI 87-99%) and 8% (95%CI 3-15%) respectively. For ≥T2 rectal cancers this was 90% (95%CI 80-98), 53% (95%CI 38-68%) and 20% (95%CI 8-32%). All complications after EID were classified as minor. Rectal preservation was chosen in 98 (70%) patients (100% for S-SMIC, 76% for D-SMIC, 36% for pT2 cancers). In the 74 D-SMIC cases, 49 (66%) followed an intensive surveillance strategy (20/49 cases with ≥1 histological risk factor), 7 (10%) received adjuvant chemoradiotherapy, and 18 (24%) underwent completion surgery. Median follow-up was 17 months (IQR 23 months). Cancer recurrence was detected in 4/122 patients (3%), of which 3 occurred in the intensive surveillance group after previous R0 resection: 2 involved local intramural recurrences detected with endoscopy and MRI (12 and 24 months), and 1 involved a pathological lymph node detected at MRI (24 months). 2/3 patients had 1 histological risk factor in addition to deep submucosal invasion. All patients were treated with curative salvage therapy. In the completion surgery group, a solitary liver metastasis was detected (3 months) and treated by wedge resection. MFS was 100% for the intensive surveillance strategy versus 97% for completion surgery.
Conclusion: High R0 resection rates following EID resulted in rectal preserving management in the vast majority of patients with rectal D-SMIC, with low risk of cancer recurrence during short-term follow-up. All recurrences were successfully treated with curative salvage therapy.

An Objective, Fully Automated Barrett's Risk Prediction Assay Outperforms Pathology in Risk Stratifying Barrett's Esophagus with Low-Grade Dysplasia

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Background: Low-grade dysplasia (LGD) is the best predictor of malignant progression in Barrett's Esophagus (BE). LGD is over-diagnosed in up to 75% of community-based cases. Guidelines therefore recommend expert histological revision of LGD. However, it is unclear what defines an expert pathologist and such review is not widely available. TissueCypher is an objective, fully automated BE risk prediction assay which has been previously validated. It analyzes 15 features of 9 biomarkers associated with malignant progression, using multiplexed fluorescence.
Aim: To evaluate the predictive value of TissueCypher in BE patients with a community-based diagnosis of LGD and to benchmark its performance against an international panel of expert and non-expert pathologists.
Methods: A cohort of BE patients with community-based LGD was derived from the screening cohort of the randomized SURF trial comparing Surveillance vs. RFA for confirmed LGD. Ten 5-micron slides from all biopsies of the baseline LGD-endoscopy were assessed by TissueCypher, which classifies patients as low-, intermediate- or high-risk for progression to high-grade dysplasia (HGD) or esophageal adenocarcinoma (EAC). Two H&E and 1 p53 immunohistochemistry slides were digitized for histology revision. All digital slides were independently reviewed by 29 pathologists from the USA, UK, Germany, Netherlands and Belgium, including 13 BE experts.
Results: 155 patients (79% male), with a median age of 62±10 years, median BE length of C3M4, median follow-up of 7 years (IQR 4.4-9.7), and a mean number of 3±2 endoscopies, were studied. 25 patients developed HGD/EAC within 5 years (progressors) and 130 did not (non-progressors). Sensitivity for the experts ranged from 32-72% with a mean of 55%, specificity ranged from 57-95% with a mean of 81%. Community-based pathologists showed a mean sensitivity of 64% (range 32-84%) and a mean specificity of 70% (range 12-92%). TissueCypher sensitivity and specificity were respectively 68% and 79%. Pathologists showed significant variability in sensitivity (range 32-84%) and specificity (12-95%). TissueCypher had a sensitivity for identifying progressors that outperformed 79% of pathologists (85% of experts and 75% of non-experts) , while having a specificity in line with most pathologists. The 6 pathologists with a higher sensitivity than TissueCypher had unacceptable low specificity rates (range 12-62%).
Conclusion: Histological review of community-based LGD showed a high inter-observer variability. TissueCypher provides an objective reassessment of LGD, outperforming the vast majority of pathologists.

Real-World Effectiveness and Safety of Tofacitinib for Ulcerative Colitis: Two-Year results of the ICC Registry

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Background: Tofacitinib is an oral Janus Kinase (JAK) inhibitor and is registered for the treatment of ulcerative colitis (UC). The effectiveness of tofacitinib has been evaluated up to one year of treatment. We assessed the real-world effectiveness and safety of two years tofacitinib use in the Netherlands.
Methods: Patients initiating tofacitinib were included in the ICC Registry, a nationwide, observational registry. Patients were prospectively evaluated with scheduled outpatient clinic visits at week 12, 24, 52 and 104 in 12 participating centers. Patients initiating tofacitinib received an induction regimen of 10 mg BID for the first eight weeks, followed by a maintenance treatment of 5 mg BID. Optional dose optimization in case of insufficient response was at discretion of the treating physician. Patients with both clinical and objective (either biochemical or endoscopic) disease activity at baseline were used in the primary analysis. The primary outcome was corticosteroid-free clinical remission at week 104 (SCCAI ≤2). Secondary outcomes included biochemical remission (C-reactive protein CRP ≤ 5 mg/L and fecal calprotectin ≤250 µg/g), combined clinical and biochemical remission, safety and discontinuation rate.
Results: In total, 110 patients were included. After 104 weeks of treatment with tofacitinib, 31.8% (34/107) patients were in corticosteroid-free clinical remission, 23.4% (25/107) patients in biochemical remission and 18.7% (20/107) in combined clinical and biochemical remission. Of the patients in corticosteroid-free clinical remission at week 52, 76.5% (26/34) was still in corticosteroid-free clinical remission after 104 weeks of treatment. Of the patients in biochemical remission at week 24, 89.5% (17/35) was still in biochemical remission after 104 weeks of treatment. Sixty-one patients (55.5%) discontinued tofacitinib therapy after a median duration of 13 weeks (IQR 7-34). Main reasons for discontinuation were primary non response (59%), adverse events (18%) and secondary loss of response (14.8%). During follow-up, 16 moderate and two severe infections were noted. Most common infections were urinary tract infections and herpes zoster infections. Most probably related adverse events were skin reactions and headache.
Conclusion: Tofacitinib was effective in approximately one third of patients after two years of treatment. Also, tofacitinib was a relative safe therapy with no observed cardiovascular or thromboembolic events and no new safety signals were observed.

Thioguanine as maintenance therapy for inflammatory bowel disease: A prospective multicenter study

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Background: In several retrospective studies, thioguanine (TG) has been a well-tolerated and effective therapy for inflammatory bowel diseases (IBD) patients. Data on the safety and effectiveness of TG in larger, prospective studies are crucial for evaluating the role of TG as a maintenance regimen for IBD.
Methods: In this real-world evidence study, adult IBD patients that failed prior therapy with azathioprine (AZA) and/or mercaptopurine (MP), and initiated TG (including patients who received < 6 months steroids for induction), were enrolled prospectively. The primary endpoint started at moment of reaching steroid-free clinical remission and was defined as the rate of patients that maintained steroid-free clinical remission throughout 12 months of TG therapy. Loss of clinical remission was defined as SSCAI score > 3 or HBI score > 4, need of surgery, escalation of therapy and initiation of a long-term course of steroids. Additional endpoints were adverse events, drug survival, physician global assessment (PGA) scores and patient reported outcomes (PRO) on quality of life (IBDQ).
Results: Out of 176 enrolled patients that initiated TG (median dosage of TG 20mg per day), 108 (61%) reached steroid-free clinical remission within 6 months. These 108 patients were followed and 49 (45%) of them maintained steroid-free clinical remission throughout 12 months. Loss of response was reported in 59 (55%) patients including 16 (15%) that needed escalation to biologicals, 11 (10%) a long-term course of steroids and three (3%) patients with Crohn's disease who needed surgery. TG was well tolerated and continued in 86 (80%) patients for at least 12 months. PGA scores indicated that 82% of patients were still in remission after 12 months and the quality of life increased slightly over time. Adverse events (AE), that were possibly TG related, were reported in 55%, serious AE in 13% and severe AE in 5%. Myelotoxicity was reported in 7%, hepatotoxicity in 6%, infections in 8%, skin cancer in 1% and discontinuation of TG due to intolerance in 11% of patients.
Conclusion: Sustained steroid-free clinical remission throughout at least 12 months was achieved in 45% of TG treated IBD patients. A drug continuation rate of 80%, together with favorable GPA and IBDQ scores at 12 months, underlines the tolerability and effectiveness of TG.

Mercaptopurine treatment using therapeutic drug monitoring is effective in Ulcerative Colitis: a placebo-controlled randomized trial

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Background: We did a prospective placebo (PLC)-controlled clinical trial of mercaptopurine (MP) including therapeutic drug monitoring (TDM) in patients with active UC.
Methods: UC patients with endoscopic disease activity failing ≥ 2 g/d 5-aminosalicylate (5ASA) were randomized to 6MP or PLC. All pts received prednisone or budesonide, 5ASA was continued. TDM based dose adjustments were communicated from week 6 onwards by two unblinded independent clinicians, aiming for a 6TGN red blood cell concentration 600-1200 pmol/8×10^8 (Dervieux method). Random PLC dose adaptations were also instructed. 5ASA doses could be adjusted during the trial if required. Patients who discontinued study treatment were considered non-responders (non-responder imputation). Endoscopic videos were blindly assessed. The primary endpoint was corticosteroid-free, combined clinical and endoscopic improvement at week 52 (12-point Mayo score ≤2, no item >1). Secondary endpoints were endoscopic improvement (eMayo ≤1) and clinical remission (6-point Mayo score rectal bleeding =0, stool frequency =1 or 0) at week 52. We also described combined clinical and endoscopic response (3-point and 30% reduction, rectal bleeding drop of 1 point or rectal bleeding ≤1), endoscopic remission (eMayo =0) and clinical response (6-point Mayo score ≥2 point drop) at week 52.
Results: Fifty-nine patients were randomized; groups were comparable for sex, age, UC extent, endoscopic Mayo (eMayo) score and proportion with need for 5ASA dose escalation. Combined corticosteroid-free clinical and endoscopic improvement at week 52 was observed in 14/29 (48.3%) on MP TDM and in 4/30 (13.3%, Δ=35%) on PLC (p=0.005). Endoscopic improvement and clinical remission occurred more in the MP group compared to the PLC group (15/29 (51.7%) vs. 4/30 (13.3%) p=0.002, and 15/29 (51.7%) vs. 7/30 (23.3%) p=0.033, respectively). Combined clinical and endoscopic response occurred in 15/29 (51.7%) patients with MP vs. 7/30 (23.3%) with PLC. Endoscopic remission was seen in 13/29 (44.8%) patients with MP vs. 4/30 (13.3%) with PLC. 12/29 (41.4%) and 5/30 (16.7%) participants showed a clinical response in the MP and PLC group, respectively. Thirteen pts (45%) discontinued MP, 7 due to adverse events (3 nausea, 1 hepatotoxicity, 1 myelotoxicity, 1 allergy and 1 myopathy), 5 due to inefficacy and 1 patient withdrew at own request. 17 (53%) patients discontinued PLC: 14 (47%) due to inefficacy, 2 due to adverse events (palpitations, rash) and 1 was loss to follow-up.
Conclusion: TDM-based MP with 5ASA treatment was superior to PLC and 5ASA to induce (combined) clinical and endoscopic remission in UC patients. MP failure was mainly due to adverse events, PLC failure due to inefficacy.

Clinical outcomes of increased versus conventional adalimumab dose intervals in patients with Crohn's disease in stable remission: the randomised controlled LADI trial

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Background: Withdrawing adalimumab (ADA) in Crohn's disease (CD) patients reduces adverse events (AEs) but results in high recurrences rates. We assessed clinical outcomes of an increased ADA dose interval compared to conventional dosing in CD patients in stable remission.
Methods: In this pragmatic open label multicentre randomised controlled non-inferiority trial, adult CD patients in clinical remission on ADA maintenance therapy were randomized (2:1), stratified for concomitant immunosuppressive use, to increase ADA intervals from 2 to 3 and subsequently 4 weeks (intervention) or to continue the two-weekly interval (control). Primary outcome was the cumulative incidence of persistent flares at week 48, defined as at least two of the following parameters for >8 weeks: Harvey-Bradshaw Index (HBI) ≥ 5, C-reactive protein ≥ 10 mg/L or faecal calprotectin > 250 µg/g and a concurrent increase in the ADA dose interval or start of rescue medication, with a 15% non-inferiority margin. Secondary outcomes included transient flares (<8 weeks), clinical remission, rescue medication use, disease activity (HBI), quality of life, drug exposure, and AEs. Missing data were multiply imputed. Risk differences were adjusted for stratified randomisation using the Cochran-Mantel-Haenszel procedure.
Results: We randomized 174 CD patients to the intervention (n=113) or control group (n=61). Four patients in the intervention group and one patient in the control group were excluded from the analysis for not meeting the inclusion criteria. The primary endpoint in the intervention group (observed: 3/109) was non-inferior as compared to the control group (0/60, risk difference (RD): 1.98%, 90% confidence interval (CI): [-0.35%; 4.31%]). The cumulative incidence of transient flares was similar between the control (0/60) and intervention group (2/109) (RD: 2.42%, 95% CI: [-1.13 %; 5.98%]). At week 48, the intervention group was less likely to be in clinical remission (78/109 versus 55/60), (RD: -15.6%, 95% CI: [-30.6%; -0.50%]) and used more rescue medication (RD: 8.79%, 95% CI: [0.45%; 17.1%]). Quality of life and HBI were similar between the two groups (all pooled p-values > 0.05). At week 48, 80% had extended the ADA dose interval in the intervention group. Per 100 person-years, 168 total AEs, 60 infection AEs and 43s gastrointestinal AE occurred in the intervention group versus 136, 75 and 6 in the control group, respectively.
Conclusion: Increasing the ADA dose interval was non-inferior for persistent flares in patients with CD in stable remission and resulted in a reduction of ADA use and infection-related AEs. Clinical remission rates were higher and gastrointestinal AE less frequent with conventional dosing.

Early anti-TNF results in higher sustained steroid free remission rates without treatment escalation in newly diagnosed paediatric Crohn's disease patients

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Background: For paediatric Crohn's disease (CD) patients with a high risk of complicated disease (B2 or B3), guidelines recommend early anti-tumor necrosis factor-alpha (anti-TNF) therapy to halt disease progression. The role of early anti-TNF in achieving medium-term targets, such as sustained steroid free remission (SSFR) is yet to be investigated. We aimed to evaluate outcomes of disease at 1 year in paediatric CD patients, and to investigate the role of early anti-TNF.
Methods: Since January 2017, children (<18 years) with newly diagnosed CD were prospectively enrolled in the international PIBD-SETQuality inception cohort study in 28 centers. Demographic and clinical data were collected at baseline and at 3, 6 and 12 months. The primary outcome was SSFR at 1 year (defined as a weighted Paediatric CD Activity Index <12.5 without steroids between 3 and 12 months) without treatment escalation. Secondary outcomes included biochemical remission (CRP < 5 mg/dl), and steroid free remission (SFR) at 3 and 12 months. Outcomes were compared between the early anti-TNF cohort (anti-TNF within 90 days after diagnosis) and the no early anti-TNF cohort.
Results: Up to April 2022, 274 children with new-onset CD were included that had a minimum of 1 year follow-up (61.3% male, median age at diagnosis 13.8 years [IQR 11.5-15.2]). 108 (39.4%) patients were treated with early anti-TNF (57% Infliximab). While 61% of all patients were in SFR at 1 year, only 57/257 (22%) were in SSFR at 1 year. Six patients had required treatment escalation (1 in early anti-TNF cohort), resulting in 51/257 (20%) patients in SSFR without treatment escalation. Rates of SSFR without treatment escalation were higher in the early anti-TNF cohort (30/103 [29%] vs. 21/154 [14%], p=0.002). At 3 months, the early anti-TNF cohort also had higher rates of SFR (54% vs. 40%, p=0.034) and normalized CRP [<5 mg/l] (80% vs. 54%, p<0.001), suggesting a deeper level of induced of remission. Of those patients in SFR at 3 months, 51/110 (46%) achieved SSFR at 1 year without treatment escalation, which did not significantly differ between the early anti-TNF cohort (30/54 [56%]) and the no early anti-TNF cohort (21/56 [38%], p=0.06).
Conclusion: Paediatric CD patients treated with early anti-TNF had higher chances of achieving SSFR without treatment escalation at one year than those started on other immunosuppressive treatment. This might be caused by better short-term response of early anti-TNF. This study highlights the importance of initial response to induction treatment. Future studies should identify patients that require early anti-TNF therapy to minimize risk of complications as a result of disease progression.

Fecal Microbiota Transplantation with pre-selected donors after budesonide or placebo in patients with active ulcerative colitis: a randomized study

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Background: The microbiome seems to play an important role in the dysregulation of the immune system in inflammatory bowel disease(IBD). Analysis of the microbiome in ulcerative colitis(UC) patients with active disease indicates a lower diversity and an imbalance of dominant species. We investigated the effects of pretreatment with budesonide on engraftment of donor microbiota after fecal microbiota transplantation(FMT) in patients with mild-to moderate active UC.
Methods: Patients ≥ 18 years old with (by endoscopy) confirmed mild to moderate active UC (a full MAYO score of 4-9) were enrolled. Patients with just proctitis were excluded. Patients were randomly assigned to three weeks budesonide (9 mg) or placebo followed by four weekly infusions (weeks 3 to 6) of a donor fecal suspension. At week 10 (4 weeks after FMT), the clinical outcome was defined as remission when there were no complaints and as partial response in case of a decrease of at least 3 points at the partial MAYO score. At week 14 (8 weeks after FMT) the outcome was based on the full MAYO score, so including the endoscopic MAYO score, of which also a decrease of at least 1 point at the endoscopic MAYO score was required to meet (partial) remission. Donor feces preparations from two rationally selected donors were used. The primary endpoint was engraftment of donor microbiota after FMT. Engraftment was calculated as the total abundance of donor-derived species, the fraction of engrafting species and the similarity between the recipient patient and donor microbiome.
Results: From May 2019 through October 2020, 24 patients were enrolled. The median age was 42 years (33.0-57.5) and 50% of patients was male. The median UC disease duration was 13.5 years (5.5-20.3). The baseline full MAYO score was 7 (5-9) with a median fecal calprotectin level of 944 ug/g (369-1719). We found that pre-treatment with budesonide increased donor engraftment overall (p=0.047). Engraftment was associated with a good clinical response at week 10 (p=0.02). At week 14, 42% of patients achieved (partial) clinical remission. Of note, 80% of the responders received feces from donor B compared to 20% who received feces from donor A (p=0.036). Pre-treatment with budesonide did not influence the response rate.
Conclusion: Pre-treatment with budesonide increased engraftment of donor microbiota, and engraftment was associated with clinical response at 4 weeks after FMT. Importantly, there appeared to be a strong donor dependent effect. Future studies have to address the optimal selection of patients and donors, the timing of FMT and the combination of FMT with certain immunosuppressants or life style interventions.

HLA-DR+CD38+ effector T helper cells distinguish Crohn's disease-associated perianal fistulas from cryptoglandular fistulas

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Background: Perianal fistulas are a complication of Crohn's disease (CD). Of all fistulas, 90% occur in non-CD patients (cryptoglandular fistulas). While cryptoglandular fistulas respond well to surgical treatment, CD-associated fistulas are frequently therapy-refractory (combined surgical/medical therapy). It is crucial to differentiate between them to develop targeted therapies for CD-associated fistulas. Here, we aimed to characterize the composition and spatial localization of immune cell types in both types of fistulas by using suspension and imaging mass cytometry (SMC and IMC, respectively).
Methods: We analyzed freshly isolated fistula scrapings (n=15), rectum biopsies (n=16), and peripheral blood mononuclear cells (PBMC) samples (n=21), collected from CD patients (n=14) and non-CD patients (n=7). We applied SMC to resolve single cells and analyzed the data with unbiased Hierarchical-SNE. IMC was performed on CD-associated formalin-fixed paraffin-embedded fistula specimens (n=5) to reveal the spatial distribution and cell-cell interactions of immune cell subsets around the fistula tract.
Results: We identified 124 distinct immune cell subsets in fistula and rectum samples encompassing 2.9 million immune cells. An HLA-DR+CD38+CD4+ TEM cell population was significantly increased in CD-associated fistulas compared to cryptoglandular fistulas (p=0.0013). Additionally, adaptive HLA-DR+CD38+ CD8+ TEM cell, innate HLA-DR+CD123+CD11c- dendritic cell (DC), CD11c+HLA-DR+CCR7+ myeloid cell, and CD56brightCD16- innate lymphoid cell (ILC) populations were significantly enriched in CD fistulas compared to cryptoglandular fistulas. Spearman rank's correlation analysis showed a strong correlation between all of these subsets. Notably, we identified a higher abundance of HLA-DR+CD38+CD4+ TEM cells in blood samples of fistula-bearing CD patients compared to blood samples of fistula-bearing non-CD patients. Using IMC, HLA-DR+ CD4+ T cells, of which some had a proliferating (Ki-67+) phenotype, were identified in situ and showed a dispersed or clustered pattern around the tract. Spatial analysis revealed HLA-DR+ $CD4^+$ T cells interacted closely with other $CD4^+$ T cells, B cells, and $CD8^+$ T cells.
Conclusion: In this work, we have identified HLA-$DR^+CD38^+CD4^+$ T_{EM} cells as a distinctive feature of CD-associated fistulas. This phenotype was strongly correlated with other innate and adaptive immune cells in the fistula tract of CD patients. Strikingly, these activated $CD4^+$ T_{EM} were located close to B cells, suggestive of B-cell help. Further elucidation of the role of this particular cell type may provide clues to both a more efficient use of current treatments and for the development of new targeted therapies.

CD44v6, EpCam, cMet, Rock2 and DUOX2 as targeted biomarkers for the identification of micrometasasis in colon carcinoma

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Background: Colon carcinoma (CC) has the second-highest cancer-related morbidity in Europe and its prevalence is rapidly rising due to screening and an aging population. To treat the disease and prevent recurrence via micrometasases in lymph nodes, a hemicolectomy is performed but this increases the postoperative mortality and morbidity risk. The sentinel lymph node (SLN) procedure could avoid unnecessary surgery and could be enhanced by using a targeted near infrared tracer based on a biomarker. In this research, various targeted biomarkers for the identification of micrometastasis were evaluated.
Methods: Previously, we identified CD44v6, Rock2, DUOX2, cMET, and EpCam as promising biomarkers for identification of micrometastatis using functional genomic mRNA profiling. To select the most promising targeted biomarker, tissue of 50-100 patients with CC (stage T1 up to T4) was selected. Tissue of the primary tumor and metastatic deposits of each patient was immunohistochemically stained with a CD44v6, Rock2, DUOX2, cMet, and EpCam targeted antibody. The expression intensity in the different tissue types was scored using the H-score by two independent researchers. Using a two-tailed non-parametric Mann-Whitney U test was used to compare mean H-scores. Spearman correlation between the paired H-scores obtained from the two independent researchers was used to assess the inter-observer agreement.
Results: CD44v6 showed stable high H-scores in both metastatic deposits (average of 133) and the primary tumor (average of 140). In addition, the surrounding non-cancerous tissue showed negligible expression, which implies a high specificity. Only three tissue slices showed no expression among CC cells indicating a high sensitivity. Preliminary results of the EpCam and DUOX2 staining showed a lower H-score in the primary tumor tissue than in the metastatic deposits. Rock2 and cMet showed stable results in both the primary tumor and metastatic deposits, but lower H-scores were found than with the other antibodies. Furthermore, Epcam, DUOX2, Rock2, and cMet showed staining in the germinal centers of the lymph nodes.
Conclusion: Based on the results found so far, CD44v6 forms a promising basis for the development of a fluorescent tracer that should enhance identification of metastatic deposits in CC. The preliminary results of EpCam, cMET, DUOX2, and Rock2 show promising comparable results, however, staining of the germinal centers may be a shortcoming. The here described results pave the way for in vivo identification of metastatic deposits and an enhanced SLN procedure with a targeted fluorescent tracer preventing unnecessary burdens for the patient.

Endoscopic submucosal dissection does not affect outcome of completion surgery in early colorectal cancer patients

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Background: Endoscopic submucosal dissection (ESD) is increasingly used to excise suspected T1 colorectal cancers (T1CRC). However, due to adverse histology a substantial proportion of patients require completion surgery. Currently it is unknown whether or not a prior ESD increases the morbidity of completion surgery. The aim of this study is to compare morbidity-related outcomes and 90-day mortality of completion surgery after ESD to primary surgery.
Methods: In this retrospective cohort study, suspected T1CRC patients who underwent completion surgery after ESD were selected from a multicenter prospective ESD database (2014-2020). The primary surgery group consisted of pT1CRC patients from a nationwide surgical registry (2017-2019). Patients with rectal or sigmoidal cancers were selected. Patients receiving neoadjuvant therapy were excluded. Propensity score adjustment was used to correct for: age, sex, tumor location, surgical approach and type of surgery (total mesorectal excision or sigmoidal resection). The following morbidity-related outcomes were compared: stoma rate, incidence of (surgical) adverse events, reinterventions, stoma rate as result of a reintervention, intensive care admissions as result of a complication and occurrence of permanent injury.
Results: 54 patients were included in the completion surgery group (39 pT1, 15 pT2) and 357 pT1CRC patients in the primary surgery group. Of these patients, 173 underwent rectal surgery;37 in the completion surgery group and 136 in the primary surgery group. The incidence of adverse events within 90 days was 24.1% after completion surgery and 21.3% after primary surgery. The stoma rate was 20.4% in the completion group (3 temporary ileostomies, 4 permanent colostomies) and 12.0% in the primary group (23 temporary ileostomies, 1 permanent ileostomy, 1 temporary colostomy and 18 permanent colostomies). Within 90 days no deaths occurred after completion surgery; in the primary surgery group one patient died (chi-square test for difference between groups; p=0.70). After propensity score adjustment, morbidity-related outcomes did not differ significantly between completion and primary surgery. Among others, procedures resulting in (temporary) ileo- or colostomies (OR 1.298 95%-CI 0.587-2.872, p=0.519) and adverse events within 90 days (OR 1.162; 95%-CI 0.570-2.370, p=0.679) did not differ significantly. Morbidity-related outcomes also did not differ significantly between completion surgery and primary surgery within the subgroup of 173 rectal surgeries.
Conclusion: For suspected T1CRCs, ESD does not appear to increase morbidity and 90-day mortality of completion surgery.

Gluteal Fasciocutaneous Flap Reconstruction after Salvage Surgery for Pelvic Sepsis

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Background: Chronic pelvic sepsis mostly originates from complicated pelvic surgery and failed interventions. This is a challenging condition that often requires extensive salvage surgery consisting of complete debridement with source control and filling of the dead space with well-vascularized tissue such as an autologous tissue flap. The abdominal wall (rectus abdominis flap), or leg (gracilis flap) are mostly used as donor sites for this indication, while gluteal flaps might be attractive alternatives. The aim of this study was to describe the outcomes of gluteal fasciocutaneous flaps for the treatment of secondary pelvic sepsis.
Methods: Patients who underwent salvage surgery at a tertiary referral hospital for pelvic sepsis using a gluteal flap between January 2012 and December 2020 were retrospectively identified.
Results: In total, 27 patients were included, of whom 22 underwent index rectal resection for cancer and 21 patients had undergone (chemo)radiotherapy. A median of three (IQR 1-5) surgical and one (IQR 1-4) radiological intervention preceded salvage surgery during a median period of 62 (IQR 20-124) months. Salvage surgery included partial sacrectomy in 20 patients. The gluteal flap consisted of a V-Y flap in 16 patients, superior gluteal artery perforator flap in eight, and a gluteal turnover flap in three patients. Median hospital stay was nine (IQR 6-18) days. During a median follow up of 18 (IQR 6-34) months, wound complications occurred in 41%, with a re-intervention rate of 30%. The median time to wound healing was 69 (IQR 33-154) days with a complete healing rate of 89% at the end of follow-up.
Conclusion: In patients undergoing major salvage surgery for chronic pelvic sepsis, the use of gluteal fasciocutaneous flaps is a promising solution due to the high success rate, limited risks, and relatively simple technique.

Required Distal Mesorectal Resection Margin in Partial Mesorectal Excision: a Systematic Review on Distal Mesorectal Spread

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Background: The required distal margin in partial mesorectal excision (PME) is controversial. This systematic review aimed to determine incidence and distance of distal mesorectal spread (DMS).
Methods: A systematic search using PubMed, Embase and Google Scholar databases was performed. Articles eligible for inclusion were studies reporting on the presence of distal mesorectal spread in patients with rectal cancer who underwent radical resection.
Results: Out of 2493 articles, 19 studies with a total of 1742 patients were included, of whom 340 underwent neoadjuvant chemoradiotherapy (CRT). DMS was reported in 176 of 1742 (10.1%) specimens (1.2% in CRT group and 12.3% in non CRT group), with specified distance of DMS relative to the tumor in 84 (47.7%) of the cases. Mean and median DMS were 20.2 and 20.0 mm, respectively. Distal margins of 40 mm and 30 mm would result in 10% and 32% residual tumor, respectively, which translates into 1% and 3% overall residual cancer risk given 10% incidence of DMS. The maximum reported DMS was 50 mm in 1 of 84 cases. In subgroup analysis, for T3 the mean DMS was 18.8 mm (range: 8-40 mm) and 27.2 mm (range: 10-40 mm) for T4 rectal cancer.
Conclusion: DMS occurred in 10%, with a maximum of 50 mm in less than 1% of the DMS cases. For PME, substantial overtreatment is present if routinely a distal margin of 5 cm is utilized. Prospective studies evaluating more limited margins based on high quality preoperative MRI and pathological assessment are required.

Risk factors for a permanent stoma after resection of left-sided obstructive colon cancer – A prediction model

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Background: Patients with a permanent stoma (PS) suffer from different types of stoma related complications. However, risk factors for a PS in left-sided obstructive colon cancer (LSOCC) remain unclear. Our objective was to develop a prediction model using risk factors for a PS.
Methods: A national retrospective multicentre cohort study was performed in the Netherlands. Data was obtained from 75 hospitals in the Netherlands. Patients who had curative resection of LSOCC between January 1, 2009 to December 31, 2016 were included. Emergency resection (ER), stoma as bridge-to-surgery (BTS) and SEMS as BTS were analysed as interventions. The main outcome measure was a PS, with a minimum follow-up of 180 days after resection. Multivariable logistic regression analysis was performed to identify risk factors for a PS. These risk factors were used to construct a web-based prediction tool. Two separate analyses were performed: risk of a PS at T_0 (primary presentation) and after T_1 (stoma in situ after resection of the primary tumour), respectively.
Results: A total of 2099 patients were included in the study (T_0), 779 had a PS (37.1%). A total of 1275 patients had a stoma in situ directly after resection (T_1), of whom 674 had a PS at the end of follow-up (52.9). At T_0 multivariable analysis showed high age, female sex, high ASA-score, tumour location, high CRP, low serum Hb, presence of metastases, open approach, and ER to be independent risk factors for a PS. At T_1 multivariable analysis showed high age, female sex, high ASA score, open approach, subtotal colectomy, no primary anastomosis, end colostomy, pTNM IV and adjuvant chemotherapy to be independent risk factors for a PS. Using these variables two predictive models were build, with an AUC of 0.72 for T_0 and an AUC of 0.80 for T_1.
Conclusion: Not only patient and tumour characteristics, but also treatment strategies affect the risk of a PS. This should be taken into account when treating LSOCC. The role of the risk models developed should be further tested in clinical practice.

Colorectal Cancer in Patients with Ulcerative Colitis: A National Cohort Study between 1991-2020

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Background: Patients with ulcerative colitis (UC) have an increased risk of colorectal cancer (CRC), principally resulting from the pro-neoplastic effects of chronic intestinal inflammation.The impact of this effect remains debated, as data on the risk of CRC in UC patients are conflicting. The aim of the current study was to assess if there is an indication shift for surgery in patients with UC from refractory disease to malignant degeneration over the last 3 decades.
Methods: All patients with histologically confirmed UC who underwent a colorectal resection between 1991 and 2020 were extracted from the nationwide Dutch Pathology Registry (PALGA). The primary outcome was the CRC rate in the colon specimens. Outcomes were compared between 3 periods (P1: 1991-2000, P2: 2001-2010, P3: 2011-2020).
Results: Overall, 6,094 UC patients were included of which 4,854 underwent a (procto)colectomy and 1,240 a segmental resection. In 1,031 (16.9%) patients, CRC was demonstrated in the pathological resection specimen after a median disease duration of 11 years [IQR 3.0-19.0]. The CRC rate increased from 11.3% in P1, to 16.1% in P2, and 22.8% in P3 ($p<0.001$). Median disease duration at the time of resection increased from 4 years in P1, to 10 years in P2, and 17 years in P3 ($p<0.001$). The proportion of patients diagnosed with advanced malignancy (pT3/T4) (P1: 61.2% vs. P2: 65.2% vs. P3: 62.4%, respectively, $p=0.633$) and lymph node metastasis (N+) (P1: 33.0% vs. P2: 41.9% vs. P3: 38.2%, respectively, $p=0.113$) did not change over time.
Conclusion: This nationwide pathology study demonstrated an increased surgical indication rate for CRC over the last 3 decades. We hypothesize that the expanding therapeutic armamentarium for UC leads to exhausting medical options and hence postponed colectomy. This however, might be at the expense of an increased risk of CRC in the long term.

Laparoscopic ischemic conditioning prior to esophagectomy in high-risk esophageal cancer patients – a multicenter feasibility trial

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Background: Transthoracic esophagectomy as standard care for patients with esophageal cancer displays a significant postoperative morbidity with anastomotic leakage (AL) being the most severe surgical complication. Arterial calcifications on preoperative CT-scan have been recognized as an important risk factor of AL. Ischemic conditioning (ISCON) of the stomach prior to esophagectomy might reduce the incidence of AL by improving the intramural vascularization. The current trial is the first to prospectively investigate the safety and feasibility of ISCON in a selected cohort of well-defined high-risk patients.
Methods: This study was designed as a multicenter, prospective single-arm safety and feasibility trial classified as a , phase 2a-development study' according to the IDEAL guidelines for surgical innovation with a recommended inclusion of 20 subjects. Patients with resectable esophageal cancer were eligible in case of major calcifications in the thoracic aorta, based on the Uniform Calcification Score, or a stenosis in the celiac trunc, based on the modified NASCET score. Included patients underwent a laparoscopic ISCON by occlusion of the left gastric artery and the short gastric arteries using a stapler and/or dissection device. After an interval of 12-18 days esophagectomy with curative intent was followed. The primary endpoint was defined as complications Clavien-Dindo (CD) grade 2 or higher after ISCON and before esophagectomy.
Results: In total, 20 included patients underwent ISCON and esophagectomy. The median duration of ISCON was 50 minutes (range 25-230). Intraoperative complications during ISCON occurred in 1 patient (5%); a minor bleeding from a branch of the left gastric artery. None of the patients developed postoperative complications after ISCON. Median hospital stay after ISCON was 2 days (range 2-4 days). Esophagectomy was completed in all patients after median 14 days (range 12-28). Three patients (15 %) developed AL and 1 patient gastric tube necrosis. Major complications following esophagectomy (CD≥III) were recorded in 7 patients (35%), 30- and 90-day mortality was 0%.
Conclusion: ISCON demonstrated to be technically feasible and safe in selected patients at risk for AL. However, several patient related factors such as excessive intra-abdominal fat, arterial variations and hiatal hernia impeded the laparoscopic dissection of arterial vessels were identified as technically challenging. Most importantly, the laparoscopic ISCON procedure does not compromise the planned esophagectomy with gastric reconstruction. Further phase II/III trials have to prove whether this innovative strategy aid to reduce the incidence of AL.

Surgical treatment of esophago-tracheobronchial fistulas after esophagectomy with gastric conduit reconstruction

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Background: Esophago-tracheobronchial fistula (ETBF) is a troublesome complication after esophagectomy with a reported incidence up to 3%. An effective treatment strategy is essential to optimize the chance of recovery. However, literature on this topic mainly consists of case reports. The aim of this study was to evaluate the surgical treatment of ETBF that occurred after esophagectomy with gastric conduit reconstruction in a tertiary referral center for Esophageal surgery.
Methods: All patients who underwent surgical repair for ETBF after esophagectomy with gastric conduit reconstruction were included. The primary outcome was successful recovery after surgical treatment ETBF, defined as a patent airway at 90 days after the surgical fistula repair. Secondary outcomes were details on the clinical presentation, diagnostics, and postoperative course after fistula repair.
Results: Between 2007-2022, 14 patients who underwent surgical repair for ETBF were included. Out of 14 patients, 9 had undergone an esophagectomy with cervical anastomosis and 13 patients had developed anastomotic leakage. Surgical treatment consisted of thoracotomy to cover the defect with a patch and intercostal flap in 11 patients, a patch without interposition of healthy tissue in 1 patient, and fistula repair via cervical incision with only a pectoral muscle flap in 2 patients. After surgical treatment, 12 patients recovered (86%). Mortality occurred in 2 patients (14%) due to multiple organ failure.
Conclusion: This single-center study evaluated the techniques and outcomes of surgical repair of ETBF following esophagectomy with gastric conduit reconstruction in 14 patients. Treatment was successful in 12 patients (86%) and generally consisted of thoracotomy and coverage of the defect with a bovine patch followed by interposition with an intercostal muscle. This technique carries a high success rate and is advised as the first line of treatment for ETBF after esophagectomy.

Endoscopic suturing as salvage therapy for anastomosis leakage after colorectal surgery

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Background: Anastomotic leakage is a serious complication after colorectal surgery. Over the past two decades the number of complications has been reduced by implementation of ERAS protocols, prehabilitation and the laparoscopic approach. Still inadequate healing occurs in around 8 % with an even higher percentage in low anastomoses. Defects in the anastomoses may lead to a chronic sinus leading to, sometimes, debilitating soiling and loss of quality of life. These situations are known to be long lasting and often non-solvable with a frequent need for surgical re-interventions. Endosponge™ therapy is a renowned option to support tissue healing in case of anastomotic leakage. In our experience since 2009 there is a range of sponge changes from 1 to 33 with a median of 6. This therapy usually takes 1 to 6 months. Early aggressive onset of endosponge therapy improves outcome compared to onset after prolonged conservative treatment. We describe secondary endoscopic closure as a potential definitive treatment option.
Methods: Three patients with anastomotic leakage were treated using a new endoscopic suturing device (OverStitch Sx™). Two patients had an anastomotic leakage after low anterior resection for rectal cancer. The third patient underwent a sigmoid resection for complicated diverticulitis. Initial postoperative complains occurred 7-15 days after primary surgery (pain, diarrhea, fever). Radiologic imaging (CT) was performed. Infection was treated with antibiotics.
Results: First, a loop ileostomy was created for deviation of stools. Second, Endosponge™ therapy was initiated to support tissue healing in the of the contaminated sinus (4-6 sponges). After 2-3 weeks the final sponge was removed and under deep sedation the defect was closed using the OverStitch Sx™ system on a gastroscope (Pentax EG34-i10). Two non-absorbable threads were needed for closure (suturing time: 78;46;50 minutes). Endoscopic follow up after 6 weeks and 15 weeks showed adequate healing without signs of stenosis. Third, the ileostomy was taken down 4 to 8 months after initial surgery. No complications were noted due to endoscopic procedures.
Conclusion: All three procedures were successful. Endoscopic suturing as salvage seems feasible for rectal and distal colonic anastomotic leakage. We suggest a skills lab training for all teams involved in this advanced endoscopic procedure.

Metachronous peritoneal metastases in patients with pT4b colon cancer: an international multicenter analysis of intraperitoneal versus retroperitoneal tumor invasion.

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Background: It was hypothesized that colon cancer with only retroperitoneal invasion is associated with a low risk of peritoneal dissemination. This study aimed to compare the risk of metachronous peritoneal metastases (mPM) between intraperitoneal and retroperitoneal invasion.
Methods: In this international, multicenter cohort study, patients with pT4bN0-2M0 colon cancer who underwent curative surgery were categorized as having intraperitoneal invasion (e.g. bladder, small bowel, stomach, omentum, liver, abdominal wall) or retroperitoneal invasion only (e.g. ureter, pancreas, psoas muscle, Gerota's fascia). Primary outcome was 5-year mPM cumulative rate, assessed by Kaplan-Meier analysis.
Results: Out of 907 patients with pT4N0-2M0 colon cancer, 198 had a documented pT4b category, comprising 170 patients with intraperitoneal invasion only, 12 with combined intra- and retroperitoneal invasion, and 16 patients with retroperitoneal invasion only. At baseline, only R1 resection rate significantly differed: 4/16 for retroperitoneal invasion only versus 8/172 for intra- +/- retroperitoneal invasion (p=0.010). Overall, 22 patients developed mPM during a median follow-up of 45 months. Two patients with only retroperitoneal invasion developed mPM, both following R1 resection. The overall 5-year mPM cumulative rate was 13% for any intraperitoneal invasion and 14% for retroperitoneal invasion only (Log Rank, p=0.878), which was 13% and 0%, respectively, in patients who had an R0 resection (Log Rank, p=0.235).
Conclusion: This study suggests that pT4b colon cancer patients with only retroperitoneal invasion who undergo an R0 resection have a negligible risk of mPM, but this is difficult to prove because of its rarity. This observation might have implications regarding individualized follow-up.

Identification of a distinct microbiota signature in Crohn's disease-associated and cryptoglandular perianal fistulas

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Background: Crohn´s disease (CD) is thought to result, in part, from a dysregulated mucosal immune response towards the commensal gut microbiota. Perianal fistulas are a severe complication of CD, but also occur in patients without CD, so called cryptoglandular fistulas. The gut microbiota of CD patients is known to be different from healthy controls. However, the existence of a fistula-specific microbiota in CD-associated perianal fistulizing disease has not been unraveled yet. The main objective of this pilot study was to characterize the microbial composition found in CD-associated perianal fistulas, in comparison with cryptoglandular fistulas.
Methods: We analyzed fecal (n=15) and fistula swab (n=15) samples from 23 patients with perianal fistulas (CD: n=13; cryptoglandular: n=10) using 16S rRNA sequencing. From seven patients we obtained both fecal and fistula swab samples. No patients, apart from one CD patient, used antibiotics. Eleven out of thirteen CD patients used biologics, including infliximab, adalimumab, and/or vedolizumab, during sample collection. Microbiota analyses and visualizations were performed in R (v4.0.4). Differential abundance analysis was performed at genus level using DESeq2 with the Wald test. P-values were adjusted using Benjamini-Hochberg correction and adjusted p-values < 0.05 were considered significant. In addition, RNA in situ hybridization (RNAscope®) was applied on formalin-fixed, paraffin-embedded specimens for the detection of bacterial RNA using a 16S RNA probe for eubacteria.
Results: Analyses of the fecal and fistula microbiota revealed a different microbial composition between the two locations, including more skin bacteria (e.g. *Lawsonella*, *Cutibacterium*, *Staphylococcus*), bacteria belonging to the Peptostreptococcus-Tissierellales family, and a high relative abundance of the phylum Fusobacteriota in the fistula tracts. Fusobacteriota was especially abundant in CD-associated fistula tracts. Comparison of CD and cryptoglandular fistula microbiota showed a significantly higher level of oral disease-associated bacteria (*Fretibacterium, Aneroglobus, Eikenella*) in CD fistulas compared to cryptoglandular fistulas, next to enrichment of *Snaethia*, *Gardnerella* and *Ruminococcus gnavus*. In cryptoglandular fistulas higher levels of bacteria associated with protection against colitis (*Coprostanoligenes*, *Holdemanella*, *Christensenellaceae*, *Subdoligranlum*) were found.
Conclusion: In this study we revealed the existence of microbiota specific for CD-associated perianal fistulas. Observed differences in the fistula microbiota between CD and non-CD patients could lead to identification of new biomarkers to distinguish both diseases.

Contrast-enhanced radiologic evaluation of gastric conduit emptying after esophagectomy

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Background: Nasogastric tube (NGT) insertion is standard of care in many hospitals after esophagectomy for gastric conduit decompression. An upper gastrointestinal contrast passage evaluation (UGI-CE) is a diagnostic test to evaluate passage through the gastric conduit. We hypothesized that introducing routine UGI-CE after esophagectomy results in earlier removal of the NGT and resumption of oral intake.
Methods: This retrospective study evaluated two consecutive series of patients undergoing esophagectomy, one before (control group) and one after the introduction of a routine UGI-CE on postoperative day (POD) 3 or 4 (UGI-CE group). If there was contrast passage on the UGI-CE, the NGT was capped and removed. In the control group the NGT was routinely capped and removed on day 5 after surgery. Primary outcome was the first POD on which oral diet was resumed. Secondary outcomes were the day of NGT removal, NGT reinsertions, postoperative complications and length of hospital stay.
Results: 74 patients were included in each cohort. In the UGI-CE group, the contrast test was conducted on median POD 3.5 (IQR 3-4). Median day of NGT removal, initiation of clear liquids-, full liquid- and solid intake was 1-2 days earlier in the UGI-CE group (i.e. POD 4, 4, 5 and 6 versus POD 5, 5, 6.5 and 8) than in the control group (all $p<0.001$). There were no significant differences in NGT reinsertions, pneumonias, anastomotic leakages and hospital stay.
Conclusion: The routine use of a UGI-CE after esophagectomy led to earlier removal of the NGT and earlier resumption of oral intake.

Exploring the impact of urogenital organ displacement after abdominoperineal resection on urinary and sexual function

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Background: Substantial urogenital organ displacements were observed after abdominoperineal resection, and based on clinical observations patients might have related functional complaints. This study aimed to establish the functional impact of displacement of urogenital organs after abdominoperineal resection (APR) using validated questionnaires.
Methods: Patients who underwent APR for primary or recurrent rectal cancer (2001-2018) with evaluable pre- and post-operative radiological imaging, and completed urinary (UDI-6, IIQ-7) and sexual questionnaires (male: IIEF, female: FSFI, FSDS-R) were included from 16 centres. Absolute displacement of the internal urethral orifice, posterior bladder wall, distal end of the prostatic urethra and cervix were correlated to urogenital function by calculating Spearman's Rho (ρ). Median function scores were compared between minimal or substantial displacement using median split.
Results: There were 89 male and 36 female patients included. The absolute displacement of the internal urethral orifice and posterior bladder wall were not correlated with the UDI-6 in men (ρ=0.119 P=0.29 and ρ=0.022 P=0.84) nor in women (ρ=0.098 P=0.60 and ρ=-0.154 P=0.39). The absolute displacement of the distal end of the prostatic urethra was not correlated with the IIEF (ρ=0.128 P=0.54), whereas the cervix and FSFI were correlated (ρ=0.450 P=0.22). In women with minimal and substantial displacement of the internal urethral orifice, median UDI-6 scores were 25 (IQR 10-46) and 21 (IQR 16-36) (P=0.83), respectively, with corresponding scores of 10 (IQR 0-22) and 17 (IQR 5-21) in men (P=0.33).
Conclusion: We could not demonstrate a correlation between urogenital organ displacement and urinary function, but there seemed to be a correlation with sexual function in women. Larger studies are needed to confirm these findings.

Development and validation of a condition-specific quality of life instrument for adults with esophageal atresia

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Background: The importance of multidisciplinary long-term follow-up for adults born with esophageal atresia (EA) is increasingly recognized. To enable assessment of the psychosocial wellbeing of this population, a valid, condition-specific instrument to measure health-related quality of life (HRQoL) is imperative. This study aimed to develop and validate such an instrument for adults with EA.
Methods: The SQEA ('Specific Quality of life in EA Adults') questionnaire was developed through focus group-based item generation, pilot testing and item reduction, followed by a nationwide field test, in compliance with the COSMIN guidelines. Feasibility (by analysis of missing responses), internal reliability (Cronbach's alpha) and external reliability (test-retest agreement, intra-class coefficients) were evaluated. Lastly, we evaluated the validity by assessing structural validity (using item-response theory), construct validity (comparing scores for known clinical subgroups), criterion validity (correlating SQEA scores with dysphagia and airway obstruction) and convergent validity (correlating SQEA scores with previously validated HRQoL scales).
Results: After pilot testing (n=42), the items generated through focus groups were reduced from 144 to 36 questions. After field testing (n=447), three items were discarded based on item-response theory results. The final SQEA questionnaire (33 items) forms a unidimensional scale generating an unweighted total score. Feasibility (no missing values), internal reliability (Cronbach's alpha 0.94), and test-retest agreement (ICC 0.92, 95% CI 0.89-0.94) were good. The SQEA was able to discriminate patients that underwent esophageal replacement ($p<0.001$), experience dysphagia ($p<0.001$) and have airway obstruction ($p=0.029$). Additionally, a good correlation with dysphagia (AUC 0.736, 95% CI 0.689-0.782) was found, with a Youden index of 80.86. Correlation with long function was moderate (AUC 0.669, 95% CI 0.558-0.779), with a Youden index of 85.98. SQEA scores correlated well with other validated disease-specific HRQoL scales such as the GIQLI (symptoms, $r_s=0.672$; total, $r_s=0.709$) and SGRQ ($r_s=0.630$), but poorly with the more generic RAND-36.
Conclusion: Overall, this first condition-specific instrument for EA adults showed satisfactory feasibility, reliability and validity. Additionally, it shows discriminative ability to detect disease burden in these patients. Therefore, the SQEA questionnaire is not only a valid instrument to assess HRQoL in EA adults, but also an interesting signaling tool, enabling clinicians to recognize more severely affected patients.

A Computer-Aided Diagnosis (CADx) system for characterization of Barrett's neoplasia

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Background: Endoscopic detection of early neoplasia in Barrett esophagus (BE) generally is a two-step process of primary detection using white-light endoscopy (WLE) in overview, followed by targeted characterization of abnormalities by optical chromoscopy techniques such as narrow-band imaging (NBI). Characterization of areas of interest by NBI may be improved by a computer-aided diagnosis (CADx) system. Such a targeted CADx system may also dismiss false positive detections by a primary computer aided detection (CADe) system using WLE in overview.
Methods: Our aim was to develop and validate a deep-learning NBI-based CADx system. The CADx system was pre-trained using ImageNet, followed by domain-specific pre-training with GastroNet using a dataset of 5 million images of wide endoscopic variety. This pre-trained system was subsequently trained and internally validated using 1.268 NBI images (320 patients) of early BE neoplasia (defined as high-grade dysplasia or cancer in the corresponding endoscopic resection specimen) and 843 NBI images (141 patients) of non-dysplastic BE (all confirmed histologically in targeted biopsies). Images were obtained from 7 international centers using Olympus HQ190 and EZ1500 gastroscopes and Excera-190 and X1-processors. The CADx system was then tested on an independent test set consisting of 30 images (20 patients) of BE neoplasia and 60 images (31 patients) of non-dysplastic BE.
The CADx system was designed to classify imagery as either neoplastic or non-dysplastic using probability scores >0.8 and <0.2, respectively. Imagery classified with an intermediate probability was registered as "failure to classify". The primary outcome was the diagnostic performance of the CADx system for classification of neoplasia, described in terms of sensitivity and specificity in a per image analysis. Secondary outcome was the per patient sensitivity and specificity.
Results: Image-based sensitivity and specificity were 96.4% and 90.6%, respectively, with 10% of images being classified as 'failure to classify'. Per patient sensitivity and specificity were 100% and 87.1%, respectively.
Conclusion: Our NBI-CADx system allows accurate differentiation between areas containing neoplasia and areas of non-dysplastic BE. This may assist endoscopists in characterization of areas of interest and may lower the number of false positive detections by a primary CADe system. Ongoing research focusses on video-based performance of CADx and evaluating endoscopists' assessment of NBI-imagery without CADx versus their performance with CADx assistance.

Incidence of recurrent cholangitis in patients with a non-stenotic hepaticojejunostomy

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Background: Cholangitis in patients with a hepaticojejunostomy (HJ) occurs in about 10% of cases.[1] In the majority of patients it is caused by a stenosis at the surgical anastomosis.[2] However, in some cases no obstruction can be identified and the cause of cholangitis remains unknown.[3-5] Little is known about this group of patients, while recurrent cholangitis can have major impact on quality of life. The aim of this study was to assess the incidence of cholangitis in patients after HJ without a significant anastomotic stenosis.

Methods: This retrospective cohort study conducted at two Dutch tertiary referral hospitals included patients who had undergone hepatobiliary or pancreatic surgery requiring HJ between October 2015 and December 2020. Data were obtained from the Dutch Pancreatic Cancer Audit and the Dutch Hepatobiliary Cancer Audit. Follow-up data were collected until December 2021. The primary outcome was recurrent cholangitis in patients without a significant stenosis of the HJ. Secondary outcome was the number of cholangitis episodes.

Results: A total of 796 patients were eligible for inclusion, of whom 97 appeared to have developed a stenosis (12.1%). Of the 699 patients without stenosis, 376 were male (53.8%) and median age at time of surgery was 67 years (IQR 57-73). Primary indication for surgery was malignant disease in 519 (74.2%) of these patients. Twenty-three patients (3.3%) with a non-stenotic HJ developed recurrent cholangitis. A total follow-up period of 1169 person-years and a median of 16 months (IQR 8-29) was available for all patients without a stenosis, resulting in an incidence rate of recurrent cholangitis of 2.0 per 100 person-years. In contrast, the incidence rate in patients with a stenosis was 15.6 per 100 person-years. Of the 23 patients with recurrent non-stenotic cholangitis, 19 were male (82.6%) and median age at the time of surgery was 70.0 years (IQR 54-72). Thirteen patients (56.5%) underwent surgery because of a malignant disease. Sixteen patients (69.6%) underwent pancreatoduodenectomy and 7 (30.4%) a Roux-en-Y reconstruction. Five patients (21.7%) had a pre-operative episode of cholangitis. The median number of episodes of cholangitis in the non-stenotic patients was 6.0 (IQR 4.5-9.25) during a median follow-up of 26 months (IQR 15-43), leading to an incidence rate of 2.8 episodes per person-year despite treatment.

Conclusion: This study shows that over 3% of patients after HJ suffer from recurrent cholangitis without an apparent cause. This number and associated persistent significant burden for patients warrants further research to identify possible causes and optimal management of this problem.

Random biopsies from the gastro-esophageal junction after complete eradication of Barrett's esophagus: utile or futile?

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Background: Endoscopic eradication therapy (EET) is standard of care for Barrett's esophagus (BE) with early neoplasia. Although random histological sampling from the gastroesophageal junction (GEJ) after successful eradication of BE is recommended, its clinical relevance is questionable. We aimed to assess the incidence and risk for future BE recurrence for findings from random GEJ biopsies in a nationwide cohort with long-term follow-up.

Methods: We included all patients with successful EET for early BE neoplasia, defined as complete endoscopic eradication of all endoscopically visible BE, from a nationwide registry in the Netherlands. Patients were treated and followed-up in 9 expert centers according to a joint protocol. Outcomes included the incidence of intestinal metaplasia (IM) or dysplasia in random GEJ sampling and the association between IM at the GEJ and BE recurrence (either ≥C0M1 and/or islands).

Results: A total of 1,154 patients were included with a median follow-up of 43 months (p25-p75 22-69). Persisting IM after EET was found in 7% (78/1,154) and this was reproduced in 46% (42/78). In these patients with persisting IM, non-dysplastic BE recurrence was found in 9/78 (Annual risk [AR] 2.9% [95%CI 1.6-5.6]), whereas 2/72 patients developed a dysplastic BE recurrence (AR 0.7% [95%CI 0.2-2.4]). No significant association existed between persisting IM and recurrent non-dysplastic or dysplastic BE (Hazard ratio [HR] 1.15 [95%CI 0.6-2.13] and 0.73 [95%CI 0.17-3.06], resp.). Among patients with complete eradication of IM after EET (1,043/1,154; 90%), the risk for recurrent IM was 7% (72/1,043) which was reproduced in 26% (19/72). In these patients with recurrent IM, 13/72 patients developed recurrent non-dysplastic BE (AR 1.8% [95%CI 0.9-3.6]), and recurrent dysplastic BE occurred in 1/72 (AR 0.2% [95%CI 0.0-1.3]). No association was found between recurrent IM at the GEJ and non-dysplastic or dysplastic BE recurrence (HR 1.18 [95%CI 0.67-2.06] and 0.27 [95%CI 0.04-1.96], resp.). Besides IM, random GEJ biopsies showed low-grade dysplasia in 9/1,154 (0.8%) patients, of which none progressed to neoplasia during further follow-up. None of the random GEJ biopsies showed high-grade dysplasia or cancer.

Conclusion: In this nationwide cohort, persisting or recurrent IM at the GEJ was not associated with BE recurrence. In fact, random sampling from a normal appearing GEJ did not result in clinically relevant findings. Therefore, random biopsies from the GEJ after successful EET can safely be abandoned, under condition that care is provided in expert centers, the esophagus including the GEJ is carefully inspected, and targeted biopsies of visible abnormalities are performed at a low threshold.

Improving patient-centred cancer care with the Assessment of Burden of ColoRectal Cancer (ABCRC)-tool

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Background: Commonly used patient-reported outcome measures (PROMs) may not be appropriate for regular use in daily clinical practice for colorectal cancer patients. They are often too long, are developed for research purposes and visual feedback is lacking. Therefore we developed the ABCRC-tool for colorectal cancer patients: a concise instrument that measures the experienced burden of disease and lifestyle parameters, visualizes the results and provides treatment advice.
Methods: The ABCRC-tool was developed together with patient representatives, healthcare professionals and methodologists. Based on a literature review, focus groups with patients, patient interviews and expert opinion, the content of the questionnaire was determined. Eventually, the items were selected from existing validated PROMs and the EORTC Item library bank. The face and content validity were evaluated through interviews with patients and healthcare providers.
Results: The ABCRC-tool consists of generic oncological questions, disease specific questions and lifestyle questions. Three colorectal-specific modules were developed: colon cancer with anastomosis, rectal cancer with anastomosis and colon or rectal cancer with stoma. An algorithm with cut-off points was developed to visualize outcomes in a balloon chart and to provide treatment advice.
Conclusion: The ABCRC-tool fills a gap between current PROMs for colorectal cancer and the demands of patients and healthcare professionals in daily care and shows good face and content validity. By combining a PROM focused on the experienced burden of colorectal cancer with lifestyle assessment, visual patient feedback and treatment advice, a complete personalised follow-up tool for the colorectal cancer patient is developed.

Impact of the COVID-19 pandemic on procedure volumes in gastroenterology: a nationwide study

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Background: In the past two years, the SARS-CoV-2 outbreak challenged healthcare systems around the globe. We aimed to study the impact of the COVID-19 pandemic on gastroenterological procedures during the first and second COVID-19 waves in The Netherlands.
Methods: Data on diagnostic and interventional gastroenterological procedures were extracted from a nationwide database and analysed according to type of procedure and diagnostic code. Number of procedures during and after the COVID-19 outbreak were compared to reference volumes in 2019.
Results: We analysed 980,075 procedures performed from 01-2019 to 03-2021. During the peak of the first COVID-19 wave, the total number of procedures decreased by 64%; the overall deficit at the end of the first wave was 43,052 procedures (-34·5%, p=0·004 vs 2019). The decrease was most pronounced for colorectal cancer (CRC) screening (-45·9%), CRC surveillance (-43·1%), procedures related to chronic abdominal pain (-38·8%), motility disorders (-36·6%), and inflammatory bowel disease (-31·7%); the smallest decrease was observed for procedures related to pancreatic and biliary neoplasia (-7·0%; p<0·001). Overall procedure volumes returned to reference levels after resolution of the first COVID-19 wave (deficit -1·2%), with the exception of CRC screening (-49·3% versus reference volume). During the second wave, overall procedure volumes were maintained at or above reference levels (+0·5%), except for the CRC screening program, which showed the largest absolute (+2,342) and relative (+7·3%) increase compared to the reference volumes in 2019. At the end of the study period, a total deficit of 42,882 (8·6%) procedures remained.
Conclusion: In this nationwide study we observed a 34·5% reduction in the number of gastroenterological procedures during the first COVID-19 wave. While overall procedure volumes returned to reference levels during subsequent phases of the pandemic, a significant deficit remained. The long-term effects on the quality of life, morbidity and mortality of affected patients requires careful evaluation.

Benefit of risk-stratified prophylactic treatment on clinical outcome in post-operative Crohn's disease

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Background: While immediate post-operative treatment has shown effectiveness in reducing endoscopic post-operative recurrence (POR), evidence regarding the clinical benefit is limited. We compared rates of clinical POR in Crohn's disease (CD) patients receiving immediate prophylactic treatment with patients receiving endoscopy-driven treatment.
Methods: We collected data from 376 consecutive CD patients that underwent an ileocecal resection with anastomosis between 2007 and 2018 with at least 3 years of follow-up at 3 sites. Subsequently, high- and low-risk patients categorized by established guidelines who underwent endoscopy within 12 months postoperatively were grouped according to a prophylactic- or endoscopy-driven approach. We defined clinical POR as IBD-related symptoms associated with elevated biomarkers (CRP and/or fCal), colonoscopy/radiologic imaging or start, switch and intensification of drug therapy.
Results: Prophylactic treatment of low-risk patients did not reduce rates of- and time till *endoscopic* POR in the first year (HR 0.90, 95%CI 0.32-2.56, p=0.85) and *clinical* POR in the first 3 years following surgery (HR 1.17, 95%CI 0.41-3.29, p=0.75) compared to an endoscopy-driven approach. Conversely, in high-risk patients, prophylactic treatment significantly reduced rates of- and time till endoscopic POR in the first year (HR 0.48, 95% CI 0.27-0.86, p=0.04, NNT=5) but *not* clinical POR in the first 3 years (HR 1.06, 95%CI 0.63-1.79, p=0.82, NNT=22). Combining both risk-groups resulted in a similar benefit of prophylactic treatment on endoscopic (HR 0.58, 95%CI 0.35-0.96, p=0.06)- but not on clinical POR (HR 1.08, 95%CI 0.68-1.72, p=0.73).
Conclusion: Our observations favor step-up treatment guided by early endoscopic evaluation rather than immediate prophylaxis in order to avoid potential overtreatment of a significant number of patients.

Fatigue associates with frailty in older patients with Inflammatory Bowel Disease

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Background: Fatigue is a common and debilitating symptom experienced by patients with inflammatory bowel disease (IBD). Studies focusing on fatigue in IBD were conducted in a relatively young population. Fatigue in older patients could be a symptom related to underlying frailty. However, little is known about the prevalence and factors associated with fatigue in the older population with IBD.
Methods: The aim of this study was to determine the prevalence of fatigue and to identify factors associated with fatigue in older patients with IBD. We also evaluated the course-- of fatigue over 18 months. Data were used from a prospective, multicenter cohort study, that included both older patients with IBD (aged ≥65 years) and younger patients with IBD (aged <65 years). Patients aged <65 years served as a control group to compare the fatigue prevalence. A geriatric assessment (including the Geriatric 8 (G8) questionnaire) was performed to measure frailty at baseline in older subjects. Fatigue was evaluated using one item from the Short Inflammatory Bowel Disease Questionnaire (SIBDQ). Univariable and multivariable regression analysis were performed to assess factors associated with fatigue in older patients with IBD. Active disease was defined as the presence of clinical or biochemical disease activity.
Results: Fatigue prevalence in 405 older patients with IBD varied between 45.5% (70/154) in active disease to 23.9% (60/251) in disease in remission. In 153 younger IBD patients, fatigue prevalence ranged from 60.1% (45/74) in patients with active disease to 55.7% (44/79) in patients in remission. Multivariable analysis showed a significant association between fatigue and depression (Odds ratio (OR) 2.45, 95% confidence interval (CI) 1.01-4.05), anxiety (OR 2.08, 95% CI 1.07-4.05), sleeping disturbances (OR 3.90, 95% CI 2.18-6.98), use of immunomodulators (OR 2.18, 95% CI 1.12-4.27), and an abnormal frailty screening (G8) (OR 1.99, 95% CI 1.12-3.53). Frailty measured by geriatric assessment (OR 2.47, 95% CI 1.49-4.12) was independently associated with fatigue. Of all older patients reporting fatigue at baseline, 71.3% remained fatigued during follow-up while 28.7% reported no fatigue at follow-up. No significant factors were found to associate with change in fatigue over time.
Conclusion: Fatigue has a lower prevalence in older patients with IBD compared to younger patients with IBD, but increases sharply when active disease is present. Fatigue in older patients is associated with depression, anxiety, sleeping disturbances and use of immunomodulators. Moreover, both risk on frailty in frailty screening and frailty measured in a geriatric assessment associate with fatigue in older patients with IBD.

The impact of sex on treatment and outcome in relation to histologic subtype in patients with resectable gastric cancer

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Background: In this study, we investigated the impact of sex on outcome measures stratified by histological subtype in patients with resectable gastric cancer (GC).
Methods: A post-hoc analysis of the CRITICS-trial, in which patients with resectable gastric cancer were treated with perioperative therapy, was performed. Baseline characteristics, pathological response according to Mandard and survival outcomes were evaluated for males and females stratified according to histological subtype (intestinal/diffuse). In addition, therapy-related toxicity and compliance were compared between males and females.
Results: A total of 781 patients were available for analyses. Female sex was associated with a more distal tumor localization in both histological subtypes and a younger age in diffuse type GC. (Near-)complete histopathological response (TRG 1-2) was achieved in 142 (24%) males versus 17 (29%) females (p=0.464) with intestinal type GC and in 11 (8%) males versus 15 (16%) females (p=0.077) with diffuse type GC. Survival was not significantly different between sexes. During preoperative chemotherapy, severe toxicity occurred in 327 (63%) males and 184 (71%) females (p=0.015). During postoperative chemotherapy, severe toxicity occurred in 94 (56%) males and 41 (63%) females (p=0.323), and during postoperative chemoradiotherapy this occurred in 72 (44%) males and 39 (47%) females (p=0.705). Relative dose intensities and completion rates were not significantly different between males and females.
Conclusion: After stratifying for histological subtype, sex-differences were observed for age and tumor localization. In addition, higher chemotherapy-related toxicity was observed for females compared to males. Survival was not affected by sex. Stratification in future studies should include both histological subtype and sex.

A computer aided detection system for Barret's neoplasia improves neoplasia detection

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Background: Early neoplasia in Barrett's esophagus (BE) often shows only subtle endoscopic changes. State-of-the-art endoscopes enable visualization of most subtle neoplastic changes. Most endoscopists are unfamiliar with their appearance and do not recognize the changes. Computer Aided Detection (CAD) systems may assist in the recognition of neoplasia. The aim is to assess if CAD improves detection of early BE neoplasia by general endoscopists and if CAD performs comparable to BE-expert endoscopists.
Methods: We constructed a CAD system that classifies imagery as neoplastic or non-dysplastic (ND), followed by the projection of a bounding box to localize lesions, if present. The CAD system was pretrained using ImageNet followed by domain specific pretraining using GastroNet, consisting of 5.084.494 images of wide endoscopic variety. The system was trained and validated on data from 15 international hospitals to increase heterogeneity and robustness. Neoplastic images were delineated by 14 experts. The training dataset consisted of 6.237 images (1.304 pts) of early BE neoplasia (HGD/EAC in histopathology) and 7.595 images (1.103 pts) of NDBE (no dysplasia in histopathology). The validation dataset consisted of 100 neoplastic (58 pts) and 100 NDBE images (36 pts). After training and validation, the CAD system was tested on an independent test set, containing 100 neoplastic (50 pts) and 300 NDBE images (125 pts). The test set was enriched with subtle neoplastic lesions representing the challenging cases. The test set was benchmarked by 40 general endoscopists and 10 independent BE-expert endoscopists in an online module.
Results: Sensitivity and specificity of the CAD system were 90% and 80%, resp. Median sensitivity and specificity of general endoscopists were 73% and 89%, resp. Fifty percent of the endoscopists missed >25% of neoplasia, indicating a relative increase in neoplasia detection of 23% when CAD assistance is available for general endoscopists. Median sensitivity of the expert endoscopists was 85%, specificity was 92% ($p<0.01$ for non-inferiority compared to CAD).
Conclusion: This CAD system has been trained and tested on the largest reported dataset of Barrett's images, originating for 15 international hospitals. The heterogeneity of training data ensures robustness of the system. The CAD system demonstrated a superior detection performance compared to general endoscopists with a relative increase of 23% for neoplasia detection. Performance of the CAD system was non-inferior compared to expert endoscopists. Ongoing research evaluates if offering CAD assistance to general endoscopists improves their performance and evaluated CAD performance on videos.

Early detection of Barrett's esophagus and esophageal cancer in primary care using transnasal endoscopy: a prospective cohort study

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Background: The ongoing increasing incidence of esophageal adenocarcinoma (EAC) during the last few decades and its dismal prognosis have stimulated interest in screening for EAC and its precursor Barrett's esophagus (BE). Although unsedated transnasal endoscopy (uTNE) is an accurate endoscopic procedure for the detection of esophageal columnar epithelium only the American College of Gastroenterology considers uTNE to be an alternative to conventional esophagogastroduodenoscopy for BE-screening.
Methods: The primary aim of this prospective screening study was to assess the feasibility, diagnostic yield, and acceptability of BE/EAC screening using uTNE. Patients aged 50-75 years who were diagnosed with reflux symptoms in primary care were eligible for participation. Patients underwent uTNE by an experienced endoscopist. BE was diagnosed by the presence of columnar epithelium of any length above the gastroesophageal junction during uTNE. All patients in whom BE was suspected during uTNE underwent cEGD to confirm the diagnosis and obtain biopsies according to the Seattle protocol. Confirmed BE was defined as the endoscopic presence of >1 cm columnar epithelium combined with presence of intestinal metaplasia in biopsies.
Results: Between April 2021 and April 2022, 370 patients were invited to undergo screening using uTNE, of whom 166 patients were included (participation rate 44.9%; 95% CI 39.9-50.0). During uTNE, fourteen cases of BE were detected (8.4%) of which eleven were confirmed during cEGD and two were not because no intestinal metaplasia was detected in the obtained biopsies and one patient is scheduled for cEGD. Of the BE cases detected during uTNE, 85.7% were male (12/14), aged 53-74 years, and BE-length ranging from C0M1-C5M6. Other relevant endoscopic findings were reflux esophagitis grade A (N = 18, 10.8%), reflux esophagitis grade B (N = 17, 10.2%), reflux esophagitis grade C (N = 3, 1.8%), and hiatal hernia (N = 37, 22.4%). No dysplasia was detected in the biopsies. In 77 participants (46.4%), no abnormalities were found. No (severe) adverse events were seen. Mean patient tolerability measured using a validated 10-point visual analogue scale was 6.3 (0 being worst and 10 being best experience).
Conclusion: The diagnostic yield of detecting BE using uTNE followed by cEGD was 6.6% (95% CI 3.7-11.5) in patients with reflux symptoms in primary care. uTNE is a safe and well-tolerated alternative to cEGD as a screening tool for BE and EAC that can potentially be used in an office-based setting. As further evidence is needed on the yield of uTNE-guided biopsies to detect neoplasia, uTNE should only be used as a triage test, after which confirmatory cEGD is indicated when BE is suspected.

Long-term efficacy of plastic versus metal stents in inoperable perihilar cholangiocarcinoma; a retrospective cohort study

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Background: In patients with inoperable perihilar cholangiocarcinoma (pCCA) uncovered metal stents are preferred over plastic stents because of longer stent patency and fewer re-interventions in the short term. However, concerns have risen regarding the number and complexity of re-interventions in the long term. This is of increasing importance considering the expected improvement in systemic and/or locoregional therapy and subsequent life expectancy. Aim of the study was to assess the long-term efficacy (>6 months) of metal versus plastic stents.
Methods: This retrospective study was performed at two Dutch tertiary referral hospitals and consisted of patients with inoperable pCCA who underwent biliary drainage between 2001 and 2021 and survived at least 6 months. Patients were divided in two groups; 1. plastic stent placement(s) for the full extent of follow-up and 2. metal stent(s) which had been in situ for at least 6 months. Primary outcome was the estimated number of re-interventions per patient-year and need for permanent external or internal/external percutaneous drainage catheters. Secondary outcome included re-interventions between 6 and 12 months in patients with at least 12 months follow-up.
Results: A total of 127 patients were found eligible, of whom 40 patients (31%) only underwent plastic stent placement(s) and 87 patients (69%) had metal stent(s) placed. Metal stents were placed at the initial procedure in 7 patients. In the remaining 80 patients plastic stents or percutaneous drainage catheter(s) were placed first. Patients in the metal stent group underwent fewer re-interventions compared with the plastic stent group corrected for the length of follow-up (4.8 vs. 3.1 per patient-year; incidence rate ratio (IRR), 0.64; 95% CI, 0.47 to 0.88). When only non-elective re-interventions were included no significant difference was present (2.8 vs. 2.1 per patient-year; IRR, 0.77; 95% CI, 0.55 to 1.09). At final follow-up, 7 patients (18%) had a percutaneous drainage catheter in situ in the plastic stent group versus 12 patients (14%) in the metal stent group (risk ratio (RR), 0.79; 95% CI, 0.34 to 1.85). In patients who had at least 12 months follow-up (n=71) patients in the plastic stent group (n=16) underwent a median of 2 re-interventions (IQR 1-2) between 6 and 12 months versus 1 re-intervention (IQR 0-3) in the metal stent group (n=55; p=0.229).
Conclusion: This study confirms previous short-term data that the placement of metal stent(s) leads to fewer re-interventions compared with plastic stent(s) in patients with inoperable pCCA. Also in patients who survive beyond 6 months. To confirm this conclusion prospective data with long-term sufficient follow-up is warranted.

Endoscopy training in the Netherlands: a national survey among gastroenterologists

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Background: Endoscopy training is a key objective of gastroenterology residency programs. There is currently no standardized or systematic endoscopy training approach. After a previous inventory among gastroenterology residents, this study evaluates the current status of gastrointestinal (GI) endoscopy training in all teaching hospitals in the Netherlands from a trainers' perspective.
Methods: A national online survey with open and closed questions on GI endoscopy training and supervision was administered to all gastroenterologists working in the 26 teaching hospitals in the Netherlands. Descriptive statistics were used to analyze the responses.
Results: A total of 158 gastroenterologists completed the survey (52% response rate). All 26 teaching hospitals were represented. Gastroenterologists working in university hospitals were significantly less likely to be satisfied with the endoscopy training program in their teaching hospital than those working in general teaching hospitals (64% and 84% respectively; p=0.008). Criteria used to determine the level of supervision differed greatly between teaching hospitals (e.g. assessed endoscopy competence, predefined period of time or number of procedures). In addition, our analyses revealed extensive heterogeneity in survey responses regarding the number of residents supervised simultaneously, the setting and evaluation of learning objectives, and the endoscopy teaching methods used for training experienced residents (EPA 3/4). Nearly half of the participants (45%) reported absence of uniformity in teaching methods between different supervising gastroenterologists in their teaching hospital. Forty-nine gastroenterologists (31%) reported having participated in a train the endoscopy trainer course and 111 (70%) stated that course participation should be mandatory for endoscopy trainers.
Conclusion: This study identified considerable variability in GI endoscopy training programs and teaching methods used in teaching hospitals in the Netherlands. Structural implementation of a train the endoscopy trainer course might contribute to improvement of standardized endoscopy training in gastroenterology residency.

Intraductal fully covered self-expanding metal stent versus multiple plastic stents for treating biliary anastomotic strictures after liver transplantation

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Background: Fully covered metal stents (FCSEMS) are increasingly used in the treatment of biliary anastomotic strictures (AS) after liver transplantation (LT), as it requires less endoscopic interventions compared to conventional treatment with multiple plastic stents (MPS). However, adverse events such as stent migration and pancreatitis have been reported in studies with transpapillary placed FCSEMS. The relatively new intraductal fully covered self-expanding metal stent with a transpapillary extraction string (ID-FCSEMS) combines the advantages of a metal covered stent while potentially avoiding its disadvantages. The aim of this study was to assess the efficacy and safety of ID-FCSEMS compared to MPS for treatment of AS after LT.
Methods: Between 2010 and 2019, a retrospective cohort study was conducted in two Dutch centers including LT patients in whom AS was treated by endoscopic retrograde cholangiopancreatography (ERCP). Patients were eligible if they were treated with ID-FCSEMS in one center, and with MPS in the other center.
Results: In total, 80 patients (n=44 ID-FCSEMS vs. n=36 MPS) were included. Stricture resolution was achieved in 93% in the ID-FCSEMS vs. 97% in the MPS group (p=1.00) after a median of 19 weeks (IQR 16-26) and 26 weeks (IQR 16-37), respectively (p=0.03). The median number of ERCPs was 2 (IQR 2-3) in the ID-FCSEMS group vs. 4 (IQR 3-5) in the MPS-group (p<0.05), and the median number of admission days was 6 (IQR 4-9) vs. 10 (IQR 7-19) (p<0.05). The median follow-up after stent removal was 52 weeks (IQR 28-71) for ID-FCSEMS vs. 64 weeks (IQR 41-80) for MPS (p=0.18). Stricture recurrence occurred in 33% of ID-FCSEMS vs. 29% of MPS patients (p=0.65) after a median of 24 weeks (IQR 14-127) and 55 weeks (IQR 21-150), respectively (p=0.40). Stent migration occurred in 16% of ID-FCSEMS vs. 39% of MPS patients (p=0.02). Post-ERCP fever was observed in 34% of ID-FCSEMS patients compared to 25% with MPS (p=0.04). The incidence of cholangitis and other procedure-related complications such as pancreatitis was similar in both groups.
Conclusion: Intraductal fully covered self-expanding metal stent for treatment of anastomotic strictures after liver transplantation reduces patient burden in comparison to multiple plastic stents, as stricture resolution was achieved earlier with less ERCPs and admission days, while offering similar effectiveness for stricture resolution and recurrence. A follow-up randomized controlled trial is required to see whether the treatment of anastomotic strictures with an intraductal fully covered metal stent is cost effective over multiple plastic stents.

Motorized spiral enteroscopy-assisted ERCP in surgically altered upper gastrointestinal anatomy: preliminary experience

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Background: The motorized spiral enteroscopy (MSE) has been recently introduced into clinical practice and has been shown to be safe and effective for small bowel enteroscopy in even in patients with surgically altered gastrointestinal anatomy or previous abdominal surgery. ERCP in patients who need device assisted enteroscopy, in particular after Roux-en-Y anastomosis is challenging. Balloon assisted enteroscopy is often used for these indications but is often time consuming and technically challenging. As yet, there is only one report on MSE for ERCP in a patient after Roux-en-Y reconstructive surgery.
Methods: Patients who underwent MSE-assisted ERCP after Roux -en-Y anastomosis were retrospectively analyzed to evaluate feasibility, success and adverse event rates.
Results: Thirteen patients (9 female, 4 male) with a median age of 52 years (range 35-85) underwent 15 ERCP procedures. Indications for ERCP included: stricture of the common bile duct (n=3), stricture of hepatico-jejunostomy (n=4), choledocholithiasis (n=3), sphincter of Oddi dyskinesia (n=1), cholangitis (n=1) and post-cholecystectomy biliary leakage (n=1). All patients had a Roux-en-Y anastomosis, either after bariatric Roux-en-Y gastric bypass (n=7), classical Whipple operation (n=3) or hepatico-jejunostomy (n=3). Technical success rate in reaching the papilla of Vater or bilioenteric anastomosis was 60% (9/15). Complete technical success rate of ERCP (successful cannulation with obtaining a cholangiogram) was 66.6% (6/9) with 50% (3/6) for a normal biliary anatomy and 100% (3/3) for biliodigestive anastomosis. After biliary cannulation, therapeutic interventions were successfully performed including balloon-dilation (n=6), stenting (n=4), stone extraction (n=1), precut-sphincterotomy (n=1), sphincterotomy (n=3) and obtaining brush cytology from stricture (n=1). In one patient a pre-emptive dilatation of the gastro-jejunostomy was performed. Median total procedure time was 90 minutes (range 30-120). Adverse event rate was 13.3% (one case of mild post-ERCP pancreatitis and one perforation at the site of sphincterotomy).
Conclusion: This series showed that MSE is feasible for ERCP in patients with surgically altered upper gastrointestinal anatomy. The results indicate that biliary access and therapeutic interventions can be achieved in with a low rate of adverse events. These initial data pave the way for future prospective studies on MSE for ERCP.

Comorbidities, information needs and lifestyle changes in patients with NAFLD

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Background: Advanced stages of NAFLD can be prevented or reversed by lifestyle changes. However, NAFLD patients experience difficulties in changing their lifestyle. eHealth can support patients in this process. This study explored multiple aspects related to NAFLD as well as the needs and wishes of NAFLD-patients regarding a future eHealth intervention.
Methods: An online survey was distributed via Dutch patient organizations. The questionnaire included disease-specific questions, as well as questions about the received information on NAFLD-related topics, information needs, illness perceptions, motivators and barriers for lifestyle changes and preferences regarding eHealth features. The data was analyzed using descriptive statistics.
Results: The questionnaire was completed by 469 NAFLD patients (19% males, age 55 ± 11 years). Patients experienced a high rate of comorbidities, including joint problems (n=216, 46%) and 84 sustained cardiovascular disease (18%). Information about NAFLD was mainly provided by a gastroenterologist (n=266, 57%) or general practitioner (n=91, 19%). Only 13% of the participants indicated that they received sufficient information about NAFLD-related topics and 78% would like more information on almost all NAFLD-related topics including disease specifics and therapies. The majority of patients attempted lifestyle changes including attempts for weight loss (n=314, 75%). A low rate of participants succeeded in permanently changing their diet (38%), exercise pattern (37%) or losing weight (17%). Most frequently mentioned motivators for lifestyle changes were NAFLD symptoms (e.g. pain and fatigue), discomfort from being overweight, the desire to stay healthy, and concerns about the progression of NAFLD. Barriers in lifestyle changes were stress, lack of motivation and lack of knowledge of NAFLD-related topics. Regarding a future eHealth intervention, respondents mentioned that they were highly interested in information about NAFLD (63%) and practical examples (58%), but less interested in contact with other NAFLD-patients (17%).
Conclusion: Our study in a large NAFLD population provided insight into the impact of NAFLD and comorbidities in daily life. Patients had a high rate of comorbidities, which was one of the key motivators to attempt lifestyle changes. Although the majority of patients attempted lifestyle changes, a minority of them were able to sustain improvements long-term. Lack of knowledge about NAFLD related topics was one of the barriers in improving lifestyle. Results of this study will be integrated into a serious game to improve knowledge and lifestyle in NAFLD patients.

Evaluation of medication-related problems in liver transplant recipients with and without an outpatient medication consultation by a clinical pharmacist: a cohort study

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Background: Transplant recipients undergo significant changes in their medication regimen during follow-up and are at an increased risk for medication-related problems (MRPs). This study aimed to compare the prevalence and types of MRPs and interventions in liver transplant recipients with and without an outpatient medication consultation by a clinical pharmacist as well as the satisfaction with information about medicines and medication adherence.
Methods: We performed a single-center, observational cohort study. A retro- and prospective cohort were used and subdivided in a group that did and did not receive a medication consultation. The prevalence and types of MRPs and interventions were identified and categorized. The satisfaction parameters were evaluated using validated questionnaires.
Results: Included were 291 patients. In total, 368 MRPs were identified in 197 patients in the non-medication consultation cohort (median 1; range 1–3 per patient) and 248 MRPs in 94 patients in the medication consultation cohort (median 2; range 1–4 per patient). In the medication consultation cohort, significantly fewer MRPs as unnecessary drugs (17.3% *versus* 58.7%, p<0.001), suboptimal therapy (2.4% *versus* 9.5%, p<0.001), untreated indication (2.8% *versus* 6.8%, p=0.040) and underdosed drugs (0.4% *versus* 6.3%, p<0.001) were identified. In the non-medication consultation cohort significantly more patients used unnecessary drugs (72.1% *versus* 39.4%, p<0.001) compared to the medication consultation cohort. Patients in both cohorts are satisfied with the information about medicines and reported a high medication adherence.
Conclusion: Patients in the medication consultation cohort had significantly fewer MRPs and used significantly less unnecessary drugs. Including a clinical pharmacist to the post-transplant care has an added value.

Ductular bilirubinostasis is a diagnostic biomarker for acute-on-chronic liver failure: results from a well-defined cohort of patients with alcoholic steatohepatitis

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Background: Alcoholic steatohepatitis (ASH) is one of the main precipitating events for the development of acute-on-chronic liver failure (ACLF). Ductular bilirubinostasis (DB) is identified as a marker of ACLF in alcoholic cirrhosis, but overall, the histological features of ACLF are not well characterized. We assessed the diagnostic and prognostic value of DB and other histological features in addition to clinical features for the presence and development of ACLF in a well-defined cohort of ASH patients.
Methods: Prospective study in consecutive patients admitted with a diagnosis of ASH to a tertiary referral center between 03-2008 and 04-2021. Diagnosis of ASH was based on clinical presentation and confirmed by transjugular liver biopsy. All biopsies were assessed by a dedicated liver pathologist who was blinded for clinical data and outcome. Clinical and histological data were collected from time of biopsy until 1 year follow-up. Diagnosis of ACLF was based on EASL-CLIF criteria. Differences between patients with and without ACLF at baseline were assessed using chi-square test. Predictors for development of ACLF within 28 days were assessed using Cox regression.
Results: 184 patients with biopsy-confirmed ASH were enrolled, with a median follow-up time of 365 days (IQR 83.5-365). At baseline, ACLF was present in 73 patients (39.7%). Another 30 (16.3%) patients developed ACLF within 28 days (median 7.5 days, IQR 2-20). At baseline, DB was significantly more present in patients with ACLF compared to patients without ACLF (50.7% vs. 30.6%, p=0.007). Presence of DB was not correlated with level of c-reactive protein, level of white blood cell count, presence of infection or positive blood culture (all p>0.05). None of the other histological features, including the histological severity of ASH, was associated with presence of ACLF. The CLIF-C AD score predicted the development of ACLF at 28-days (HR_{cs} 1.09, p <0.001). However, no association between histological features and development of ACLF could be found.
Conclusion: In this well-defined cohort of patients with biopsy-proven ASH, we show that DB is a histological feature of the presence of ACLF. Presence of DB was independent of presence of clinical features of sepsis within this group. The CLIF-C AD score had a high performance in predicting the development of ACLF, while the additional role of histology seems limited.

The effect of consecutive fecal microbiome transplantation (FMT) on hepatic steatosis in patients with non-alcoholic fatty liver disease (NAFLD)

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Background: The increasing prevalence of non-alcoholic fatty liver disease (NAFLD) poses a major burden on patients and healthcare systems. Besides lifestyle changes, there is currently no treatment available for NAFLD. This double blinded randomized controlled trial assesses the effect of consecutive fecal microbiota transplantation (FMT) on hepatic steatosis as a potential treatment strategy for NAFLD.
Methods: We recruited patients with NAFLD, diagnosed by ultrasound or fibroscan, from hepatology outpatient clinics of the LUMC and affiliated hospitals. Participants were randomized 1:1 to three times (t=0; t=3; t=6 weeks) autologous or allogeneic FMT, performed directly into the duodenum during gastroscopy. FMT donor material was derived from two different donors (1:1) containing a stable, highly diverse and butyrate-rich microbiome. We assessed the change in hepatic steatosis (MRI-PDFF) and the effect on liver biochemistry over a period of 12 weeks.
Results: In total 20 patients participated (10:10). We found no significant change in MRI-PDFF in patients receiving allogeneic (18.6% (SD 9.1%) to 17.7% (SD 9.8%) (p=0.37)) or autologous FMT (15.7% (SD 8.4%) to 15.4% (SD 7.4%) (p=0.59)) (between-group difference: -0.54%, p=0.63) after 12 weeks. Triglycerides decreased over time after allogeneic FMT (coeff: -0.46 (95% CI: -0.90;-0.017), p=0.042) compared to autologous FMT, whilst no difference in effect was observed in ALAT, ASAT, AF and gGT.
Conclusion: Triple allogeneic FMT significantly decreased plasma triglycerides in patients with NAFLD over the course of 12 weeks, but did not affect hepatic steatosis. No effect on ALAT, ASAT, AF or gGT could be observed.

Three-year results of renal function in De Novo liver transplant recipients with low-dose sirolimus and tacrolimus versus normal-dose tacrolimus: multicenter randomized, controlled trial

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Background: The hypothesis of this study was that a combination of sirolimus (SRL) and low-dose tacrolimus (TAC) compared to normal-dose TAC will result in superior renal function with comparable rates of rejection, graft and patient survival.
Methods: In this multicenter, open-label, randomized, controlled trial, patients were enrolled between 02-2011 until 03-2018 and randomized between 80-100 days after liver transplantation (LT) in a 1:1 ratio to 1) once daily normal-dose extended-release TAC with target trough levels 5–10 µg/L (control group) or 2) once daily combination therapy of SRL and low-dose extended-release TAC with target trough levels 3–5 µg/L for both SRL and TAC (interventional group). The primary endpoint was chronic kidney disease (CKD) defined as eGFR ≤60 mL/min/1.73m^2 at 36 months after Tx. Secondary endpoints included: treated biopsy proven acute rejection (tBPAR), retransplantation (re-Tx), mean eGFR, incidence of de *novo* diabetes mellitus (NODAT), incidence of and time to *de novo* or recurrent malignancy and safety. Data in this analysis were approached in an intention-to-treat (ITT) and per protocol (PP) analysis.
Results: In total, 196 patients were included and baseline characteristics were comparable for both groups. At baseline, the eGFR in the control and interventional group was 70.2 and 71.8 ml/min/1.73m^2. At 36 months, the primary endpoint was reached in 50.8% (95%-CI: 39.7% - 59.9%) and 44.8% (95%-CI: 33.8% - 53.9%) of the patients in the control and interventional group. The ITT analysis showed no relevant difference at 36 months in the eGFR for the control and interventional group: 68.3 *versus* 68.4 ml/min/1.73m^2. The TAC and SRL mean trough levels were within the target range for both groups. These results persisted in the PP analysis. No differences were found in the control and interventional group for tBPAR (2% *versus* 4.1%), NODAT (2% *versus* 4.1%), re-Tx (1% *versus* 3.1%) and malignancy (6.1% *versus* 9.2%). In total, 42.3% (83/196) of the patients developed serious adverse events (SAEs, n=178). SAEs most frequently reported were fever (22.5%), infections (18.5%) and cholangitis (14.6%).
Conclusion: Low-dose SRL combined with extended-release TAC is a safe strategy to minimize TAC exposure in LT recipients. However, this combination does ultimately not provide a better renal function at 36 months compared to normal-dose extended-release TAC.

Dietary Dicarbonyls and Intestinal Inflammation in Inflammatory Bowel Disease and Irritable Bowel Syndrome Patients

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Background: The Western diet is associated with both inflammatory bowel disease (IBD) and irritable bowel syndrome (IBS). In general, a Western diet is rich in processed food and comprises high levels of dicarbonyls. These highly reactive compounds are precursors of advanced glycation endproducts, and have oxidative and inflammatory properties. We aimed to investigate the intake of dietary dicarbonyls in IBD and IBS patients, and the association with intestinal inflammation.
Methods: A cross-sectional study was performed in 238 IBD patients, 261 IBS patients and 195 healthy controls (HC). Habitual dietary intake over the previous month was assessed using validated food frequency questionnaires. These data were combined with a database of dietary dicarbonyls in food products measured by ultra performance liquid chromatography-tandem mass spectrometry. We calculated the daily intake of three important dietary dicarbonyls: methylglyoxal (MGO), glyoxal (GO) and 3-deoxyglucosone (3-DG). Faecal calprotectin was measured using a fluorescent enzyme immune assay (for IBD) or enzyme-linked immunosorbent assay (for IBS and HC) as marker of intestinal inflammation. For each group, the associations between these dietary dicarbonyls and faecal calprotectin were analysed using multivariable linear regression.
Results: The intake of MGO (4.04±1.59, 3.94±1.45 vs. 3.53±1.46 mg/day resp.), GO (3.32±1.04, 3.49±1.06 vs. 3.09±0.96 mg/day, resp.) and 3-DG (15.55±6.44, 15.93±5.75 vs. 13.76±5.85 mg/day, resp.) were all higher in IBD and HC compared to IBS (all $p<0.05$). However, after adjustment for total energy, the intake of GO was significantly lower in IBD (1.55±0.32 mg per 1000kcal/day) compared to IBS (1.62±0.35 mg per 1000kcal/day, $p=0.021$) and HC (1.62±0.30 mg per 1000kcal per day, $p=0.040$). The energy-adjusted intake for MGO and 3-DG was not different between subgroups. Mean faecal calprotectin levels were 197.27±426.33mg/g for IBD, 64.39±87.06mg/g for IBS and 39.28±63.55mg/g for HC. Faecal calprotectin levels were not significantly associated with absolute intake or energy-adjusted intake of dietary dicarbonyls in either of the subgroups (all $p>0.05$).
Conclusion: The intake of dietary dicarbonyls was not significantly associated with intestinal inflammation in IBD and IBS patients. However, further insight is needed on other putative biological consequences of dietary dicarbonyls.

General life satisfaction in IBS patients is associated with psychological symptom burden and quality of life, rather than gastrointestinal symptom severity

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Background: Irritable bowel syndrome (IBS) is a disorder of gut-brain interaction. IBS symptoms have major impact on a person's emotional, social, and professional life. Previous research showed the high disease burden in IBS patients, but studies on general life satisfaction in IBS populations are lacking. The current study aims to evaluate general life satisfaction in IBS patients and to determine which factors are associated with higher life satisfaction.
Methods: IBS patients (n=195, median age 53 years (interquartile range 29 years), 73.8% female) recruited from primary and secondary/tertiary care completed questionnaires regarding gastrointestinal symptoms (Gastrointestinal Symptom Rating Scale-IBS), quality of life (36-item Short-Form Health Survey, physical and mental composite score), psychological factors (Hospital Anxiety and Depression Scale), gastrointestinal-specific anxiety (Visceral Sensitivity Index), and life satisfaction. Life satisfaction was measured by the Satisfaction With Life Scale (SWLS, 5 items, range 5-35). This instrument assesses the judgement of one's life as a whole and does not measure satisfaction in specific life domains. Multivariable linear regression was used to identify variables associated with life satisfaction.
Results: Overall, 76.4% of the patients had a SWLS-score ≥ 20, corresponding with a neutral score or higher on life satisfaction. When a cut-off of SWLS-score ≥ 21 was used, corresponding with scores between slightly satisfied and extremely satisfied, 71.3% of the patients scored satisfied about their life. The mean of the SWLS-score was 23.9 (standard deviation 6.4). Female gender (B (unstandardized coefficient)=1.926, p=0.025), higher physical quality of life (B=0.229, p<0.001), higher mental quality of life (B=0.216, p<0.001), and fewer general anxiety symptoms (B=-0.334, p=0.032) were associated with higher life satisfaction. No significant association was found between gastrointestinal symptom severity and life satisfaction.
Conclusion: Higher quality of life and less anxiety symptoms, but not gastrointestinal symptom severity, were associated with higher general life satisfaction in IBS. These findings support the clinical need in IBS treatment to take psychological factors into account in order to enhance life satisfaction.

Cost-effectiveness analysis of increased adalimumab dose intervals in patients with Crohn's disease in stable remission: the randomised controlled LADI trial

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Background: Adalimumab (ADA) for the treatment of Crohn's disease (CD) leads to high healthcare costs while increasing ADA dose intervals may reduce these costs without impacting quality of life. We present the economic evaluation of a randomised controlled trial (RCT) that compared increased ADA dose intervals with conventional dosing in CD patients in stable remission.
Methods: We included adult CD patients who were in steroid-free clinical remission on ADA maintenance therapy in a pragmatic open label multicentre non-inferiority RCT. Patients were randomly assigned (2:1) to either increase ADA-intervals to 3 and then 4 weeks or to continue the two-weekly dose interval. Quality-adjusted life-years (QALYs) were measured with the EQ-5D-5L. Costs were measured from a societal perspective and included healthcare costs, productivity costs (using the friction cost method) and patient costs (informal care). Missing data were multiply imputed. Results are presented as mean differences and incremental net monetary benefit of the intervention (iNMB) at a willingness to accept (WTA) level of €50,000 with bootstrapped 95% confidence intervals (95% CI). WTA is a measure of the monetary compensation required to accept the loss of one QALY, which is €50,000 in the Netherlands for a population with medium disease burden. A positive iNMB means that adopting the intervention is preferable over continuing the conventional dose interval at the given WTA level.
Results: We randomised 174 patients to the intervention (n=113) or control group (n=61). Four patients in the intervention group and one patient in the control group were excluded from the analysis for not meeting the inclusion criteria. Utility (mean difference: —0.018, 95% CI [—0.051; 0.001]) and total costs (—€1,132, [—€2,547; €1,498]) were comparable over the 48 week study period between the intervention and control group. Medication costs per patient were significantly lower (—€2,667, [—€2,899; —€2,431]) in the intervention group, but other healthcare (+€414, [€110; €860]) and patient costs (+€359, [€94; €1,152]) were higher. iNMB was €256 [—€3,259; €2,141] at the WTA level of €50,000 per QALY loss. In 58% of the bootstrap replications adopting increased dose intervals led to a positive monetary benefit at the WTA level of €50,000.
Conclusion: When the small QALY loss is compensated by the amount society minimally wants to gain in order to accept a QALY loss, increasing ADA dose intervals will result in money savings, meaning that this strategy is likely to be cost-effective.

Implications of tioguanine dosing in IBD patients with a homozygous TPMT deficiency

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Background: Tioguanine (TG), one of the thiopurine derivatives, has recently been registered for IBD treatment in The Netherlands, where it is currently being used in over 8,000 patients who previously failed conventional thiopurine therapy due to adverse drug events and/or a skewed thiopurine metabolism. TG is metabolized in less enzymatic steps, without formation of (toxic) 6-methylmercaptopurine ribonucleotides. However, thiopurine S-methyl transferase (TPMT) does play a role in TG metabolism leading to 6-methyltioguanine formation. Hence, polymorphism of the *TPMT* gene may result in TG myelotoxicity due to elevated 6-thioguanine nucleotides (6-TGN) concentrations. The aim of this study was to evaluate dose strategies and safety profiles of TG use in homozygous *TPMT* deficient patients and to consequently propose preventative measures to increase safety.
Methods: In this retrospective observational study in IBD patients, TPMT statuses of current or formal TG users from January 2016 – December 2021 were evaluated for an aberrant thiopurine metabolism due to a homozygous *TPMT* deficiency. Consequently, data on disease type, baseline characteristics, dose regimen, 6-TGN concentrations and clinical laboratory parameters from these patients were collected.
Results: In total, five female patients with ulcerative colitis (n= 3) or Crohn's disease (n=2) with a homozygous *TPMT* deficiency, were included. In three patients, standard TG maintenance dosages of 10 – 20 mg once daily were initiated. Consequently, (extremely) elevated 6-TGN concentrations up to 14,000 pmol/8x10^8 red blood cells (RBC) were measured (therapeutic range: 250 – 900 pmol/8x10^8 RBC). Two patients developed severe pancytopenia after four and eight weeks respectively, with sequelae necessitating hospitalization and TG treatment was discontinued indefinitely. In the third patient and two other patients, TG treatment was (re)started under close monitoring with strongly reduced TG dosages of 10 mg weekly, 10 mg two weekly and 5 mg monthly. These patients all reached clinical remission without adverse drug events and steady-state 6-TGN concentrations within the therapeutic range.
Conclusion: The TPMT enzyme has a pivotal role in TG metabolism. *TPMT* genotyping, or at least 6-TGN metabolite measurement, is mandatory to prevent TG associated (delayed) myelotoxicity. However, even with homozygous *TPMT* deficiency, patients can be safely and successfully treated with strongly reduced dosages of TG under close monitoring of blood cell counts and 6-TGN metabolites for at least three months until steady-state has been reached.

Smoking and colitis-associated colorectal neoplasia: exploring the relationship

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Background: Prior studies examining the effect of smoking on the risk of colitis-associated colorectal neoplasia (CRN) report conflicting results. We aimed to investigate the association between smoking, including possible dose-effects, and CRN in patients with inflammatory bowel disease (IBD).
Methods: We performed a prospective multicenter cohort study including adult patients with colonic IBD enrolled in a surveillance program between 2011 and 2021 (NCT01464151). The prospective follow-up period was five years. Data collection was completed until 07-2021 for all patients. The effects of smoking status (ever versus never) and pack-years at study entry on recurrent events of CRN (including indefinite, low-grade, and high-grade dysplasia and colorectal cancer) were evaluated by uni- and multivariable Prentice, Williams, and Peterson (PWP) total-time Cox proportional hazard models. In the multivariable model, adjustment for extensive disease, dysplasia prior to or at index (indefinite for dysplasia or low-grade dysplasia), primary sclerosing cholangitis, male sex, first-degree relative with colorectal cancer, and age (continuously) was performed. A PWP-total time Cox proportional hazards model allows for the baseline hazard function and coefficients to differ between the sequential events and assumes that the occurrence of a first event increases the likelihood of recurrent events. The maximum number of evaluated recurrent events was three due to otherwise too few data. To account for left truncation, disease duration at study index was used as the timescale in our model.
Results: In total, for 501 of the included 576 patients at least one follow-up procedure was available (median follow-up 5 years). CRN occurred at least once during follow-up in 105 patients. Smoking status at study entry was ever smoking for 246 patients (49%), with a median number of pack-years of 9 (p25-p75 4-20, range 78). In univariable and adjusted analyses smoking status (ever versus never) was not associated with recurrent CRN risk (adjusted hazard ratio 0.97, 95% confidence interval 0.70-1.36). An increase in the number of pack-years was associated with an increased risk of recurrent CRN (adjusted hazard ratio per 10 pack-years 1.16, 95% confidence interval 1.02-1.31). Separate analyses per IBD type did not reveal differences.
Conclusion: This study suggests that an increase in pack-years is associated with a higher risk of recurrent CRN in patients with IBD after adjustment for confounders. No association was observed for smoking status. The suggestion of a dose-effect may be an extra motivation for patients to quit smoking.

Hyperferritinemia and liver iron content determined with MRI: a new role for the liver iron index

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Background: Hyperferritinemia is found in around 12% of the general population. Analyzing its cause can be difficult. In case of doubt about the presence of major iron overload most guidelines advice to perform an MRI as a reliable non-invasive marker to measure liver iron concentration (LIC). In general, a LIC of ≥36 μmol/g is considered to be elevated however in hyperferritinemia associated with for example obesity or alcohol (over)consumption the LIC can be ≥36 μmol/g in absence of major iron overload. So unfortunately, a clear cut-off value to differentiate iron overload from normal iron content is lacking. Previously the liver iron index (LII) (LIC measured in liver biopsy (LIC-b)/age (years)), was introduced to differentiate between patients with major (LII≥2) and minor or no iron overload (LII<2). Based on the good correlation between the LIC-b and LIC measured with MRI (LIC-MRI), our goal was to investigate whether a LII-MRI ≥2 is a good indicator of major iron overload, reflected by a significantly higher amount of iron needed to be mobilized to reach iron depletion.
Methods: We compared the amount of mobilized iron to reach depletion and inflammation-related characteristics in two groups (LII-MRI ≥2 versus LII-MRI <2) in 92 hyperferritinemia patients who underwent *HFE* genotyping and MRI-LIC determination.
Results: Significantly more iron needed to be mobilized to reach iron depletion in the LII-MRI≥2 group (mean 4741 SD±4135 mg) versus the LII-MRI<2 group (mean 1340 SD±533 mg), P < 0.001. Furthermore, hyperferritinemia in LII-MRI<2 patients was more often related to components of the metabolic syndrome while hyperferritinemia in LII-MRI ≥2 patients was more often related to *HFE* mutations.
Conclusion: The LII-MRI seems with a cut-off value of 2 is an effective method to differentiate major from minor iron overload in patients with hyperferritinemia.

Time-trends in disease characteristics and comorbidities in patients with chronic hepatitis B

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Background: The incidence of chronic hepatitis B (CHB) is declining due to successful implementation of vaccination programs and widespread use of antiviral therapy. We aimed to study time-trends in disease characteristics and comorbidities in newly referred CHB patients.
Methods: We collected information on HBV related disease characteristics (including HBeAg status, viremia, stage of liver fibrosis and indication for treatment and/or HCC surveillance) and presence of (metabolic) comorbidities in all CHB patients referred to our center from 1980 through 2020. Patient characteristics were compared according to referral date (before 2000, between 2000 and 2010 and after 2010).
Results: We identified 1515 eligible patients. Patients referred after 2010 were older (36 versus 34 years, p<0.001), more often non-Caucasian (82.3% versus 55.0%, p<0.001) and more frequently HBeAg negative (81.5% versus 49.8%, p<0.001) when compared to patients referred before 2000. Adjusted for ethnicity, sex and age, patients referred after 2010 were less likely to have significant fibrosis (adjusted odds ratio [aOR]:0.178, p<0.001) or an indication for antiviral therapy (aOR:0.342, p<0.001) but were more likely to be affected by the metabolic syndrome (aOR:1.985, p=0.013), hepatic steatosis (aOR:1.727, p<0.001) and metabolic dysfunction associated fatty liver disease (aOR:1.438, p=0.013).
Conclusion: The characteristics of the CHB populations are changing. Newly referred patients are older, have less active HBV related liver disease but are more likely to be co-affected by metabolic dysfunction associated fatty liver disease. These findings provide guidance for adequate allocation of resources to cope with the changing characteristics of the CHB population.

The measured distance between tumor cells and the peritoneal surface predicts the risk of peritoneal metastases and offers an objective means to differentiate between pT3 and pT4a colon cancer

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Background: Substantial variability exists in what pathologists consider sufficing as pT4a in colorectal cancer when tumor cells are within 1 mm to the free peritoneal surface. This study aimed to determine if the measured sub-millimeter distance between tumor cells and the free peritoneal surface would offer an objective means of stratifying patients according to the risk of developing peritoneal metastases.
Methods: Histological slides of patients included in the COLOPEC trial, with resectable primary c/pT4N0-2M0 colon cancer, were centrally reassessed. Specific tumor morphological variables were collected, including distance from tumor to free peritoneal surface, measured in micrometers (µm). The primary outcome, 3-year peritoneal metastasis rate, was compared between four groups of patients stratified for relation of tumor cells to the peritoneum: 1) Full peritoneal penetration with tumor cells on the peritoneal surface, 2) 0-99 µm distance to the peritoneum, 3) 100-999 µm to the peritoneum, and 4) ≥1000 µm to the peritoneum, by using Kaplan-Meier analysis.
Results: In total, 189 cases were included in the present analysis. Cases with full peritoneal penetration (n=89), 0-99 µm distance to the peritoneal surface (n=34), 100-999 µm distance (n=33), and ≥1000 µm distance (n=33), showed significantly different 3-year peritoneal metastases rates of 25% vs 29% vs 6% vs 12%, respectively (Log Rank, p=0.044). N-category did not influence the risk of peritoneal metastases in patients with a tumor distance beyond 100 µm, while only the N2 category seemed to result in an additive risk in patients with a distance of 0-99 µm.
Conclusion: The findings of this study suggest that the measured shortest distance between tumor cells and the free peritoneal surface is useful as an objective means of stratifying patients according to the risk of developing peritoneal metastases. This simple measurement is practical and may help in providing a precise definition of pT4a.

Incidence and survival of patients with oligometastatic esophagogastric cancer: a multicenter cohort study

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Background: This multicenter study assessed the incidence and survival of patients with esophagogastric cancer and oligometastatic disease (OMD) in two tertiary referral cancer centers in The Netherlands and Switzerland.
Methods: Between 2010-2021, patients with metastatic esophagogastric cancer were identified. Patients with de-novo OMD were included (firs-time diagnosis of ≤5 distant metastases on ^{18}F-FDG-PET/CT). Control of the primary tumor was considered in patients who underwent primary tumor resection or definitive chemoradiotherapy without locoregional recurrence. Treatment of OMD was categorized into 1) systemic therapy, 2) local treatment (stereotactic radiotherapy or metastasectomy), 3) local plus systemic therapy, or 4) best supportive care. The primary outcomes were overall survival (OS) and independent prognostic factors for OS. Independent prognostic factors for OS were analyzed using multivariable Cox proportional hazard models.
Results: In total, 830 patients with metastatic esophagogastric cancer were identified of whom 200 patients with de-novo OMD were included (24%). The majority of included patients had esophageal cancer (73%) with adenocarcinoma histology (79%) and had metachronous OMD (52%). The primary tumor was controlled in 68%. Treatment of OMD was systemic therapy (25%), local treatment (43%), local plus systemic therapy (13%), or best supportive care (18%). Median follow-up was 14 months (interquartile range: 7-27). Median OS was 16 months (95% CI: 13-21). Improved OS was independently associated with local plus systemic therapy compared with systemic therapy alone (hazard ratio [HR] 0.47, 95% confidence interval [CI]: 0.25-0.87). Worse OS was independently associated with squamous cell carcinoma (HR 1.70, 95% CI: 1.07-2.74), bone oligometastases (HR 2.44, 95% CI: 1.28-4.68), and 2 metastatic locations (HR 2.07, 95% CI: 1.04-4.12). Median OS after local plus systemic therapy was 35 months (95% CI: 22-NA) as compared with 13 months (95% CI: 9-21, $p<0.001$) after systemic therapy alone for OMD.
Conclusion: 25% of patients with metastatic esophagogastric cancer had de-novo OMD. Local treatment of OMD plus systemic therapy was independently associated with long-term OS and independently improved OS as compared with systemic therapy alone. Randomized controlled trials are warranted to conform these results.

Oligometastatic liver disease in synchronous metastatic gastric cancer: a nationwide population-based cohort study

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Background: Patients with gastric cancer and oligometastatic liver disease (OMLD) may benefit from resection of the primary tumor and oligometastases. This population-based cohort study analyzed treatment, overall survival (OS), and independent prognostic factors for OS in gastric cancer patients with metastatic disease limited to the liver.
Methods: All patients in the Netherlands with synchronous metastatic gastric or gastroesophageal junction adenocarcinoma diagnosed between 2015 and 2017 were identified. Patients with metastatic disease limited to the liver were eligible for inclusion. OMLD was defined as ≤3 liver metastases. The primary outcomes were OS and independent prognostic factors for OS. Independent prognostic factors for OS were analyzed using multivariable Cox regression analysis.
Results: A total of 2,092 patients were identified, of whom 295 patients were included (14%). The incidence of OMLD among included patients was 26%. The primary tumor was resected in 3%. Treatment for liver metastases consisted of chemotherapy (31%), trastuzumab plus chemotherapy (5%), surgery (1%), or best supportive care (63%). In patients with OMLD, 3% underwent resection of the primary tumor and liver metastases, and 60% best supportive care. Median OS across all included patients was 4.0 months (95% confidence interval [CI] 3.1-4.5). Higher OS was independently associated with OMLD versus no-OMLD (hazard ratio [HR] 0.66, 95% CI: 0.50-0.87), trastuzumab versus no-trastuzumab (HR 0.41, 95% CI: 0.23-0.72) but not with triplet compared with doublet chemotherapy (HR 0.94, 95% CI: 0.57-2.87). Worse OS was independently associated with monotherapy (HR 1.72, 95% CI: 1.03-2.87) and best supportive care (HR 3.61, 95% CI: 2.55-5.10) as compared with doublet chemotherapy.
Conclusion: 14% of synchronous metastatic gastric cancer patients presented with metastatic disease limited to the liver, of whom 26% had OMLD. OMLD was independently associated with higher OS. OS among patients with OMLD remained poor.

Fluorescence molecular endoscopy using cetuximab-800CW to evaluate the response to neoadjuvant chemoradiotherapy in locally advanced rectal cancer

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Background: Treatment of patients with locally advanced rectal cancer consists of neoadjuvant chemoradiotherapy (nCRT) followed by surgery. Remarkably, standard treatment does not consider the fact that 15-27% of rectal cancer patients achieve a pathological complete response (pCR) after nCRT and may not need the surgery. Unfortunately, current imaging modalities lack sensitivity and specificity to adequately predict a pCR. Previously, we have proven the potential of bevacizumab-800CW for assessing the pCR. Cetuximab-800CW targets endothelial growth factor receptor (EGFR) and is tumor-specific and may therefore be even more promising as biomarker.
Methods: This study aims to determine the feasibility of fluorescence molecular endoscopy (FME) using cetuximab-800CW for the evaluation of response to nCRT in rectal cancer. Eleven patients received an intravenous dose of 15 mg cetuximab-800CW preceded by 75 mg unlabeled cetuximab 2-4 days prior to the endoscopy. In vivo FME was performed to visualize the fluorescence in both the area of the potential residual tumor and healthy tissue and biopsies were taken from both sites. Additionally, both in vivo and ex vivo the fluorescent signal intensity was quantified using spectroscopy. Subsequently, extensive ex vivo analyses were performed on the biopsies including immunohistochemistry and fluorescence microscopy for specific localization of the fluorescent drug.
Results: Five patients had residual tumor after nCRT, three patients had a pCR after surgery, two patients were diagnosed as T0N0 and selected for a wait and see policy, and one patient went for 2nd opinion. In vivo and ex vivo quantification shows a significantly higher fluorescent signal in the (former) tumor area when compared to healthy tissue in both patients with a partial ($p<0.0001$) and complete response ($p<0.0001$). Although our immunohistochemical analysis of the EGFR expression in the biopsies shows a significantly higher expression in tumor epithelium when compared to healthy mucosa ($p=0.0070$) and fibrosis ($p=0.0083$), a clear difference between tissue with residual tumor and tissue with a pCR could not be distinguished using cetuximab-800CW ($p=0.5334$). Fluorescence microscopy will be performed to identify the localization and tissue distribution of cetuximab-800CW and related to the EGFR expression of the tumor cells.
Conclusion: Preliminary results show that cetuximab-800CW can be visualized in the (former) tumor area using FME and during subsequent ex vivo analysis of the biopsies. However, further analysis will be performed and updated results will be presented to show if this has clinical relevance in the monitoring of nCRT treatment.

Presence of metabolic comorbidities is associated with reduced HCC-free survival in patients with chronic hepatitis B

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Background: Patients with chronic hepatitis B (CHB) are at increased risk of hepatocellular carcinoma (HCC) and (liver-related) mortality. Recent studies indicate that the risk of HCC may be predicted using the age-male-ALBI- and platelet (aMAP) score. In addition to HBV related factors, presence of metabolic comorbidities may also contribute to the progression of fibrosis and development of HCC. Therefore we studied the association between metabolic comorbidities with adverse clinical outcomes in patients with CHB, both in the overall population and across aMAP risk groups.
Methods: We conducted a single-center retrospective cohort study of all patients with HBV mono-infection attending a tertiary care center in the Netherlands. The aMAP risk score was calculated and used to classify patients as at low, intermediate or high risk of HCC. Presence of metabolic comorbidities (ie. overweight, diabetes mellitus, hypertension and dyslipidemia) was assessed based on chart review. The primary endpoint was HCC-free survival, defined as a time until HCC, liver transplantation or death.
Results: We analyzed 1194 patients, 638 of whom had one or more metabolic risk factors (46.7% overweight, 9.5% hypertension, 7.7% dyslipidemia and 4.9% diabetes) and 904 (75.7%) patients had a low, 206 (17.3%) an intermediate, and 84 (7%) a high aMAP score. During a median follow-up of 6.6 years (IQR 2.3-12.7) a total of 107 first events were recorded (44 (3.7%) HCCs, 38 (3.2%) liver transplants, and 25 (3.1%) deaths). Overweight (Hazard Ratio [HR] 1.6, p=.013), hypertension (HR 9.98, p<.001), dyslipidemia (HR 3.7, p<.001) and diabetes (HR 6.7, p<.001) were associated with reduced HCC-free survival. Presence of multiple metabolic risk factors (RF) further increased the risk of adverse outcomes (1 RF: HR 3.8 and ≥2 RF: HR 12.7, p<.001). These findings were consistent after adjusting for aMAP score in multivariable Cox-regression (1 RF: adjusted HR 2.7, ≥2 RF: adjusted HR 5.8, p<.001). Furthermore, presence of metabolic RF increased the risk of adverse outcomes in patients with low (1 RF: HR 3.0, ≥2 RFs: HR 9.4, p=.001), intermediate (1 RF: HR 2.1, ≥2 RF: HR 6.3, p<.001), and high (1 RF: HR 2.3, 2 RFs: HR 3.8, p=.04) aMAP scores.
Conclusion: Presence of metabolic comorbidities is associated with reduced HCC-free survival in patients with CHB, with the highest risk observed in patients with multiple risk factors. Findings were consistent across aMAP risk categories, suggesting that presence of metabolic comorbidities should be taken into consideration when applying such risk scores to guide management.