Gender Inequalities In Colorectal Cancer Screening Among People Living With Severe Obesity: Findings From A Large Canada-Wide Population Study

Dr. Ellina Lytvyak

1University Of Alberta, Edmonton, Canada

Background And Purpose
Worldwide, Colorectal Cancer (Crc) Is Among The Top Three Most Commonly Diagnosed Cancers And The Second Leading Cause Of Cancer Death. Timely Crc Screening Is An Essential Part Of Preventive Continuum Of Care. Obesity Is A Proven Crc Risk Factor (Rf) And There Is Dose-Response Relationship Between Increases In Crc Risk And Bodyweight. Our Study Aimed To Appraise The Association Between Severe Obesity And Crc Screening Aspects Considering Other Important Contributors.

Methods
Data Were Obtained From Seven Cycles Of The Canadian Community Health Survey (Cchs2005–Cchs2017-18). In Canada, Crc Screening Is Recommended For 50-74 Y.O. Utilizing Fecal Occult Blood Test Q2years Or Sigmoidoscopy Q10years. Crc Screening Aspects Were Assessed By Questions Regarding Having Fobt/Sigmoidoscopy/Colonoscopy And Timelines. Logistic Regression Was Used To Determine Associations.

Results
Data From 326,343 (50-74 Y.O.; 177,004 Females) Cchs Participants Were Included. Among Individuals With ≥1rf (Physical Inactivity, Low Fruits/Vegetable Consumption, Alcohol Use, Smoking), Screening Rates Were Significantly Higher Compared To Those Without Rfs (65.1% Vs. 51.7%;P<0.001), And They Were 1.7 Times More Likely To Be Screened (Or1.74; CI95%1.71-1.77). However, People With Severe Obesity Exhibited Less Difference In Screening Rates (68.9% Vs. 64.9%;P<0.001), And Likelihood Of Being Screened Was Lower (Or1.20; CI95%1.19-1.20). Severe Obesity Was Strongly Independently Associated With Not Meeting Recommended Screening Interval (Rsi) In Females (Or1.13; CI95%1.12-1.13) With No Association Observed In Males (Or0.99; CI95%0.99-1.00); While Presence Of ≥1rf Was Strongly Associated With Meeting Rsi In Both Females (Or1.74; CI95%1.68-1.79) And Males (Or2.06; CI95%1.96-2.17). After Adjusting For ≥1rf/Income/Education, The Association Between Severe Obesity And Not Meeting Rsi Remained Strong For Females And Negligible For Males.

Conclusions
Robust Association Between Severe Obesity And Not Meeting Rsi Among Females Requires Actions Towards Mitigating Gender Inequalities. Our Results Also Highlight The Crucial Need For Considering Severe Obesity As One Of The Key Rfs And Promoting Screening To Improve Early Crc Detection.
Striking Findings On Early Onset Colorectal Cancers In Ethiopia- A Multi-Centre Retrospective Study.

Dr. Guda Roro1
1Addis Ababa University College Of Health Sciences, Addis Ababa, Ethiopia

Background And Purpose
The Burden Of Early Onset Colorectal Cancer Has Been Increasing Globally In The Last Three Decades And Currently Contributing 10-12% Of The Total Disease Burden In Developed Countries. Increasing Trend Has Also Been Observed In Developing Countries. Data From Africa And Other Developing Countries Regarding The Magnitude Of Colorectal Cancer In The Young Are Scarce. The Purpose Of Our Study Is To Evaluate The Relative Prevalence Of This Cancer Among Ethiopian Patients Younger Than 50 Years Of Age.

Methods
A Multi-Center Retrospective Evaluation Of Colonoscopy Registrations And Computer Database Was Performed. Results Of All Consecutive Patients For Whom Colonoscopy Findings Were Documented Were Collected Using Microsoft Xl. Then All Patients With Colonoscopic Diagnosis Of Colorectal Masses With Features Of Malignancy Were Sorted Out And Categorized Based On Age And Gender. The Results Were Analyzed Using Tables And Described On Bar Graphs.

Results Of The Total 3076 Colonoscopy Procedures, 549 (17.8%) Were Diagnosed With Colonoscopic Features Of Colorectal Malignancy. Of These 309 (56.3%) Were Male And 240 (43.7%) Female. Among These, 52 /117(44.4%) Of The Patients Seen In The Peripheral Centers Were Age 50 Years Or Younger. Also 210/432(48.6%) Of The Patient Diagnosed With Colorectal Malignancy The Central Referral Hospital Were Younger Than 45 Years Of Age And 70% Were Below The Age Of 55. In Addition, 12% Were Diagnosed With Colorectal Polyps, Of Which About 40% Were Again In People Age 50 Years And Below.

Conclusions
Colorectal Cancers Were Among The Most Common Abnormal Findings At Colonoscopy Procedures In Ethiopia. Up To 50% Of The Colorectal Masses And 40% Of Polyps Were Diagnosed In Patients Younger Than 50 Years Of Age. Future Screening Guidelines And Clinicians Practicing In Ethiopia Must Be Aware Of This Peculiar Age Distribution For The Effective Prevention And Early Diagnosis Of Colorectal Cancers.
Effectiveness Of Endoscopic Vacuum Therapy For Anastomotic Leaks In Rectal Surgery - A Tertiary Oncologic Centre’s Cohort

Dr. Daniel Conceição¹, Mr. Luís Correia Gomes¹, Mrs. Joana Lemos Garcia¹, Mr. João Cortez Pinto¹, Mrs. Joana Moleiro¹, Mrs. Inês Marques¹, Mrs. Carolina Simões¹, Mr. João Maciel¹, Mr. Manuel Limbert¹, Mrs. Isabel Claro¹

¹Instituto Português De Oncologia De Lisboa De Francisco Gentil, Lisboa, Portugal

Background
Nowadays The Number Of Sphincter Preservation Procedures Has Increased Dramatically But Also Did The Number Of Anastomotic Leaks (Al). For Selected Patients, Endoscopic Vacuum Therapy (Evt) Appears As A Valid Alternative, Sparing Patients From A Surgical Re-Intervention.

Purpose
Primary: To Evaluate The Efficacy (Defined As The Complete Closure Of Al In Endoscopic And Radiologic Exams) Of Evt And The Rate Of Patients Undergoing Reconstruction Of Bowel Continuity.
Secondary: To Assess Complications, Duration Of Treatment And Relapses Of Al.

Methodology
We Analysed The Patients’ Demographics, The Type Of Surgery Performed, The Number Of Evt (Endo-Sponge®) Sessions And Their Effectiveness.

Results
N = 13; Age 18-77 (Median 59); Male 8/13; Smoking Habits: 2/13;
Ileo-Anal Anastomoses - Surgery For Familial Adenomatous Polyposis: 2/13; Colorectal Anastomoses – Low Anterior Resections For Rectal Adenocarcinomas: Mid Rectum 7/13; Low 4/13;
Neoadjuvant Chemoradiotherapy: 11/11; Protective Stoma 13/13; Adjuvant Therapy 9/11;
Postoperative Day At Al Diagnosis: Median 25 (Aiq 7-56); Antibiotherapy 13/13; Days Until Start Of Evt: Median 26 (Aiq 1-245); Leak Dimensions 6-120mm (Median 38mm);
Endo-Sponge® Number Of Sessions: 3-17 (Median 9); Median Duration Of Treatment: 31 Days (Aiq 14-76);
Evt With 2 Sponges: 3/13; Other Endoscopic Treatments: 7/13 (6 Through-The-Scope Clips; 1 Over The Scope Clip).
Primary Efficacy 9/11 (81%; 2/13 Still Under Treatment); Adverse Events: 1/13 (1 Sponge Migration);
Late Relapses 2/9 (1 Surgical Approach; 1 Evt Again);
Reconstruction Of Bowel Continuity: 7/9 (78%; 1 Permanent Stoma; 1 Died From Disease Progression).

Conclusions
Evt For Colorectal And Ileo-Anal Al Has Been Safe And Effective, With Huge Positive Impact On Patient’s Quality Of Life, By Making The Intestinal Tract Reconstruction Possible. The Complementarity Of Evt And Other Endoscopic Therapeutic Modalities Achieves Better Results.
Ace2 Expression In Colorectal Cancer Patients’ Survival Infiltrated With Macrophage Associated With Covid-19 Pandemic: Integration Of Real-World Data And Biomedical Informatics

Prof. Kuang-Tsu Yang1,2,3,4, Prof. Ming-Hong Tai4, PhD Tian-Huei Chu5, Prof. Ping-I Hsu6, Prof. Deng-Chyang Wu7, Prof. Yao-Tsung Yeh8, Dr./Ph.D. Ming-Yih Lee9, Prof./Dr./Ph.D. Chun-Yu Lin10, Prof./Ph.D./Dr. Chia-Chi Yen11

1Division Of Gastroenterology & Hepatology, Department Of Internal Medicine, Kaohsiung Municipal Min-Sheng Hospital, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C), 2College Of Medicine, National Taiwan University, Taipei, Taiwan (R.O.C), Taipei, Taiwan (R.O.C), 3Division Of Family Medicine, Department Of Community Medicine, Kaohsiung Municipal Min-Sheng Hospital, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C), 4Institute Of Biomedical Science, National Sun Yat-Sen University, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C), 5Medical Laboratory, Medical Education And Research Center, Kaohsiung Armed Forces General Hospital, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C), 6Division Of Gastroenterology & Hepatology, Department Of Internal Medicine, An Nan Hospital, China Medical University, Tainan, Taiwan (R.O.C), Tainan, Taiwan (R.O.C), 7Division Of Gastroenterology, Department Of Internal Medicine, Kaohsiung Medical University Chung Ho Memorial Hospital, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C), 8Aging And Disease Prevention Research Center, Fooyin University, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C), 9Division Of Cardiology, Department Of Internal Medicine, Kaohsiung Municipal Min-Sheng Hospital, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C), 10Division Of Infectious Disease, Department Of Internal Medicine, Kaohsiung Municipal Min-Sheng Hospital, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C), 11Superintendent Office, Kaohsiung Municipal Min-Sheng Hospital, Kaohsiung, Taiwan (R.O.C), Kaohsiung, Taiwan (R.O.C)

Colorectal cancer (CRC) is emphasized more and more nowadays. CRC is the world's fourth most deadly cancer with almost 900,000 deaths annually. Old age, Western dietary habits, lack of micronutrients. Also, the tumor microenvironment (TME) is frequently reported in CRC development.

Angiotensin Converting Enzyme 2 (ACE2) is known to be expressed in various human organs, and its organ- and cell-specific expression suggests that it may play a role in the regulation of cardiovascular and renal function, as well as fertility. In addition, the encoded protein is a functional receptor for the spike glycoprotein of the human coronavirus HCoV-NL63 and the human severe acute respiratory syndrome coronaviruses, SARS-CoV and SARS-CoV-2, the latter is the causative agent of Coronavirus Disease-2019 (Covid-19).

Moreover, Covid-19 Big Data is gradually developed globally. Previous studies show some correlation between Covid-19 and CRC. Hence, we launched this study using integration of real-world data laboratory biomedical informatics to investigate the possible pathways.

We retrieved data from Timer 2.0 for CRC TME and genomics. Who epidemiology website revealed Covid-19 infected population difference. String database, KEGG 2.0, Gepia2, and Genemania were enrolled for dataset integration of CRC associated clinical survival researches. Finally, we established the Taiwan's own Covid-19 prevalence database for validation of our study.

We discovered that in CRC TME, two-year overall survival of CRC patients was better with low ACE2 gene expression and high macrophage infiltration (Hazard ratios 0.139, P-value 0.0014). The detailed translational process and signal transduction of CRC were found and would be shown in the conference. In Taiwan, Covid-19 prevalence was the highest in northern part compared with other regions. The above-mentioned content brought us further promising viewpoints of establishing precision medicine toward CRC and public health strategy adjustment.
Background And Purpose: Artificial Intelligence (AI)-Aided Colonoscopy Using The Gi-Genius™ Technology Improves Adenoma Detection. We Thus Now Evaluate The Cost-Effectiveness Of Gi-Genius In A Canadian Healthcare Setting.

Methodology: An Excel-Based Markov Simulation Model With One-Year Cycles And Lifetime Horizon Is Used To Estimate The Incremental Cost-Effectiveness Ratio (Icer) Comparing Standard Colonoscopy To AI-Aided Polyp Detection With Colonoscopy (Gi-Genius™). The Target Population Is Comprised Of Patients Undergoing Colonoscopy After A Positive Fecal Immunochemical Test. Outcomes Of Effectiveness Include Life Years (Ly) Gained And Quality-Adjusted Life Years (Qaly). The Analysis Adopts A Canadian Provincial Payer Perspective With Direct Costs Associated With Healthcare Resource Utilization (HCU), Including Procedure (Diagnostic, Surgery, Chemotherapy) And Follow-Up Visits Expressed In 2021 Canadian Dollars Yearly Discounted At 3.5%. Patient-Reported Outcomes And Costs Associated With HCU Are Sourced From The Published Literature And Publicly Accessible Databases. Deterministic And Probabilistic Sensitivity Analyses Are Performed To Assess Robustness Of The Model.

Results And Discussions: In The Base-Case Analysis, Applied To 1,000 Patients Yearly, Lys Gains Achieved In The Gi-Genius Assisted And Colonoscopy Alone Groups Are 19.144 And 19.125 (Difference = 0.019), Respectively. Similarly, Qaly Gains For Gi-Genius Assisted And Colonoscopy Alone Are 17.137 And 17.113 (Difference = 0.024), Respectively. The Per-Case Cost Of Gi-Genius Assisted, And Colonoscopy Alone Are $3,004.59 And $2990.74, Respectively (Saving Of Approximately $14). With A Willingness-To-Pay Value Set At $50,000 Per Qaly, The Icer Is A Dominant Strategy For Both Outcomes, Showing Gi-Genius Is Cost-Effective. The Deterministic Sensitivity Analysis Shows The Model Is Sensitive To The Incidence Risk Ratio Of Adenoma Per Colonoscopy For Larger Adenomas As Main Cost Driver. The Probabilistic Sensitivity Analysis Shows Gi-Genius Use Is Cost-Effective In Up To 73% Of Cases.

Op06

Development Of Janus Microspheres Of Polydioxanone And Poly Lactic Acid To Address Multifactorial Persistence Of Complex Anal Fistula

**Mr. Daniel Fitzpatrick**, Dr. Carmel Kealey, Dr. Damien Brady, Dr. Noel Gatley

1, Technological University Of The Shannon, Material Research Institute, Athlone, Ireland,
2, Technological University Of The Shannon, Department Of Pharmaceutical Sciences And Biotechnology, Athlone, Ireland,
3, Technological University Of The Shannon, Bioscience Research Institute, Athlone, Ireland,
4, Carlow Institute Of Technology, Department Of Science And Health, Carlow, Ireland,
5, Technological University Of The Shannon, Applied Polymer Technologies (Apt), Athlone, Ireland

Bioresorbable Polymers Are Of Great Interest To The Medical Sector As A Means Of Invasive Interventions, As They Can Be Subjected To Degradation In The Human Body. Polydioxanone Is A Synthetic Biodegradable Polymer That Has Been Around Since The 1980’s, Yet The Majority Of Its Medical Application Has Been As Suture Material.

Wound Care Is Continuously Adapting To The Emerging Advances In Surgical, Biological And Biomaterial Interventions For Treating Complex Wounds. The Prevalence Of Chronic Wounds In Society Remains At 1.5% Of The Population Worldwide. The Increasing Prevalence And Incidence Of Chronic Wounds Is A Considerable Source Of Patient Morbidity And A Substantial Financial Burden To Both Hospital And Community Healthcare Providers. The Multifactorial Interplay Of Disease Persistence Factors Such As Bacterial Infection And Adverse Inflammation; Can Hinder The Regenerative Capacity Of Wound Tissues And Are Often Not Treated Locally At The Wound Site.

To Address This, Novel Janus Microspheres Of Biodegradable Polymers; Polydioxanone (Pdo) And Polylactic Acid (Pla), Were Produced By The Solvent Evaporation Technique. The Physicochemical Characteristics Of These Novel Microspheres Were Characterised By F tir, Dsc, Xrd And Sem. Processing Conditions Were Not Observed To Alter Innate Polymers However, The Retention Of Residual Solvent Within The Polymer Matrix Reduced The Thermal Stability By 5%. The Integration Of Drugs By Solvent Evaporation Was Observed To Convert The Drug From Its Crystalline State Into An Amorphous State With Spatial Distribution Throughout The Microsphere.

Impact Of The Covid-19 Pandemic On The Colorectal Cancer Screening In South Korea: A Population-Based Study

Dr. Jae Myung Cha¹, Dr. Su Bee Park¹, Dr. Min Seob Kwak¹
¹Kyung Hee University Hospital, South Korea

Background/Purpose
The Covid-19 Pandemic Had A Negative Effect On Colorectal Cancer (Crc) Screening In Western Countries, But, There Is Little Data From Asian Countries. This Study Aims To Evaluate The Impact Of Covid-19 Pandemic On The Crc Screening In South Korea.

Methodology: We Conducted A Population-Based Study For Colonoscopy Claims On The Basis Of The Health Insurance Review And Assessment (Hira) Service Database From 2019 To 2021. The Number Of Patients Who Underwent Colonoscopy And Polypectomies, Treated And Operated For Crc In 2020 And 2021 Were Compared With Those In 2019.

Results And Discussion: The Annual Volume Of Diagnostic Colonoscopies In 2020 And 2021 Was Reduced By 6.9% And 00%, Respectively, Compared With Those In 2019. The Annual Number Of Patients Treated For Crc In 2020 And 2021 Was Reduced By 3.7% And 00%, Respectively, And The Annual Number Of Patients Operated For Crc In 2020 And 2021 Was Reduced By 4.2% And 00%, Respectively, Compared With Those In 2019. In March 2020, The Monthly Number Of Diagnostic Colonoscopies Was Reduced By 43.8% And The Monthly Number Of Patients Treated For Crc Was Reduced By 11.3% As Compared To Those In March, 2019. In April 2020, The Monthly Number Of Patients Operated For Crc Was Reduced By 7.3% As Compared To Those In April, 2019.

Conclusions: The Covid-19 Pandemic Has Led To A Transient Reduction In The Number Of Patients Screened, Diagnosed, And Operated For Crc. However, Negative Impact Of Covid-19 Pandemic On Crc Screening Was Rapidly Overcame In South Korea.
The Utility Of Lymphocyte To Monocyte Ratio And Neutrophil To Lymphocyte Ratio In Predicting Colorectal Cancer Prognosis.

Mrs. Dorina Osmanaj1, Dr. Marsela Sina1, Mr. Ilir Akshija2, Mr. Altin Hysa1, Prof. Skerdi Prifti1

1division Of Gastrohepatology, University Hospital Center, “Mother Theresa”, Tirana, Albania., Tirane, Albania,
2department Of Statistics, University Hospital Center, “Mother Theresa”, Tirana, Albania., Tirane, Albania

Background And Purpose
Colorectal Cancer (Crc) Is The Third Most Common Cancer Worldwide. Prognosis Depends Mostly On Stage And Cancer Histological Type. The Aim Is To Evaluate The Utility Of Inflammatory Biomarkers Such As Lymphocyte To Monocyte Ratio (Lmr) And Neutrophil To Lymphocyte Ratio (Nlr) In Predicting Crc Prognosis.

Methods
This Is A Prospective Study Carried Out At University Hospital “Mother Theresa”, Tirana, Albania, From January To December 2020. Each Patient Was Diagnosed With Crc Based On Colonoscopy And Confirmed By Biopsy. All Patients Underwent Surgical Resection In The Department Of Surgery In Our Hospital. Based On Postoperative Data, Crc Was Classified Using The 7th Edition Of Ajcc. Then, We Created Two Groups; Early Crc (Stage I+Ii) And Advanced Crc Group (Stage Iii+Iv). The Sensitivity, Specificity, And Cut-Off Values Were Assessed Using A Receiver Operating Characteristic Curve Analysis.

Results: 83 Patients With A Mean Age Of 63.05 ± 11.63 Years Were Included In This Study. 61.4% Were Males And 38.6% Females. 64% Were Diagnosed With Colon Cancer While 36% With Rectal One. 63% Were Diagnosed At An Advanced Stage And 37% At An Early One. Moderately Differentiated Adenocarcinoma Was The Predominant Histological Type (79.5%). No Association Was Found Between Lmr And Nlr Values And Crc Location (P=0.113, P=0.595 Respectively); And Histological Type (P=0.111, P=0.311 Respectively).

Roc Curve Analyses Revealed That Lmr (Auc=0.616, 95% Ci: 0.475-0.758) Is Satisfactory In Differentiating Early Stage Crc. A Lmr Cutoff Value Of >3.401 Has A Sensitivity Of 66.7% And A Specificity Of 62.3% For Early Crc (P=0.061). No Association Was Found Between Nlr And Crc Stage (P=0.365).

Conclusion: Our Study Shows That Lmr Can Be Helpful In Differentiating Between Local And Advanced Crc Stage. Measuring Preoperative Lmr May Be Helpful In Determining The Best Treatment Strategy For This Patients.
Participation In Colorectal Cancer Screening Programme In The Czech Republic: Analysis Of The Affecting Factors.

Ms. Alexandra Romanová, Rndr., Phd Michala Lustigová, Md, Phd Jana Urbanová, Ms. Ankita Verma, Mr. Tung Anh Duong, Md Jan Brož

1department Of Internal Medicine, Second Faculty Of Medicine, Charles University, Prague, Czech Republic, 2national Institute Of Public Health, Prague, Czech Republic, 3department Of Social Geography And Regional Development, Faculty Of Science, Prague, Czech Republic, 4third Faculty Of Medicine Of Faculty Hospital Kralovske Vinohrady, Charles University, Prague, Czech Republic

Background And Purpose
Fecal Occult Blood Test (Fobt) Once A Year Or Colonoscopy Once In Ten Years Are The Two Options Approved For Colorectal Cancer (Crc) Screening Individuals Aged ≥ 50 Years In The Czech Republic. We Analysed Participation In The Screening Programme To Design Strategies For Improving General Participation.

Methodology
Data Was Collected From 4044 Participants (1866 Men, 2178 Women) Aged ≥ 50 Years By Questionnaires. Individuals Who Underwent Colonoscopy Within The Last 10 Years Or Fobt Within The Last 2 Years Were Classified As Participants In The Screening. The Separate Binary Logistic Regression Was Used To Estimate The Odds Ratio For A Set Of Variables.

Results
Among 4044 Participants, 1050 Individuals (26%) Participated In Fobt, 464 (11.5%) In Colonoscopy And 558 (13.8%) In Both. After Adjusting For Age, Sex And Education, The Following Results Were Statistically Significant (P < 0.05). A Higher Participation In The Screening Programme Was Observed In These Groups: Non-Smokers (Or = 1.25; 95% Ci 1.051–1.479), Ex-Smokers (Or = 1.51; 95% Ci 1.257–1.825), Respondents Consuming Smoked Meat Products Less Than Once A Week (Or = 1.26; 95% Ci 1.089-1.453), Practicing Physical Activity At Least Once A Week (Or = 1.25; 95% Ci 1.033–1.514), Hospitalized In The Past 12 Months (Or = 1.73; 95% Ci 1.466–2.048) And Those Consulting The Gp In The Past 12 Months (Or = 2.26; 95% Ci 1.872–2.735). The Participation Of Individuals Possessing A Risk Factor For Crc (Obesity, Smoking, Diabetes, Low Physical Activity, Drinking Of Alcohol) Was Not Higher.

Conclusions
Respondents Having A Tendance To A Healthy Lifestyle And Those Being In A Recent Contact With The Healthcare System By Various Means, Mainly Visiting Their Gp, Had A Higher Participation In The Screening Programme For Crc. Higher Participation Was Not Shown Among The Groups With An Increased Risk For Crc.
Deep Learning And Colon Capsule Endoscopy: Automatic Panendoscopic Detection Of Protruding Lesions

Dr. Miguel Mascarenhas¹,², Dr. Tiago Ribeiro¹, Dr. João Afonso¹, Dr. Pedro Cardoso¹, Dr. Patrícia Andrade¹,², Dr. Helder Cardoso¹,², Professor João Ferreira³, Professor Dr. Guilheme Macedo¹,²
¹ centro Hospitalar São João, Porto, Portugal, ² faculty Of Medicine Of The University Of Porto, Porto, Portugal, ³ faculty Of Engineering Of The University Of Porto, Porto, Portugal

Background And Purpose
Colon Capsule Endoscopy (Cce) Is An Alternative For Patients Unwilling Or With Contraindications For Conventional Colonoscopy. Colorectal Cancer Screening May Benefit Greatly From The Widespread Acceptance Of A Non-Invasive Tool Such As Cce. However, Reviewing Cce Exams Is A Time-Consuming Process, With The Risk Of Overlooking Important Lesions. Our Group Aimed To Develop An Artificial Intelligence (Ai) Algorithm Using A Convolutional Neural Network (Cnn) Architecture For The Automatic Detection Of Protruding Colonic Lesions In Cce Images.

Methodology
An Anonymized Database Of Cce Images Collected From A Total Of 124 Patients Was Used. This Database Included Images Of Patients With Colonic Protruding Lesions Or Patients With Normal Colonic Mucosa Or Other Pathologic Findings. A Total Of 5715 Images Were Extracted For Cnn Development. Two Image Datasets Were Created And Used For Training And Validation Of The Cnn, Containing 80% And 20% Of The Images, Respectively.

Results And Discussions
The Auroc For The Detection Of Protruding Lesions Was 0.99. The Sensitivity, Specificity, Positive Predictive Value And Negative Predictive Value Were 90.0%, 99.1%, 98.6% And 93.2%, Respectively. The Overall Accuracy Of The Network Was 95.3%.

Conclusions
The Developed Deep Learning Algorithm Accurately Detected Protruding Lesions In Cce Images. The Introduction Of Ai Technology To Cce May Increase Its Diagnostic Accuracy And Acceptance For Screening Colorectal Neoplasia.
Topical Mesalazine For Familial Adenomatous Polyposis And Mutyh-Associated Polyposis Patients With Rectal Stump/Ileal Pouch Adenomas

Prof. Isadora Rosa¹, Dr Ricardo Fonseca¹, Dr Sara Mata¹, Dr Joao Cortez-Pinto¹, Dr Sara Ferreira¹, Dr Pedro Lage¹, Dr Cristina Albuquerque¹, Dr Isabel Claro¹

¹Instituto Portugues De Oncologia, Lisboa, Portugal

Background And Purpose
Familial Adenomatous Polyposis (Fap) And Mutyh-Associated Polyposis (Map) Are Hereditary Syndromes With High Colorectal Cancer (Crc) Risk. Affected Patients Who Undergo Colectomies/Proctocolectomies Can Still Develop Rectal Stump/Ileal Pouch Adenomas And A Second Surgery May Imply A Definitive Stoma. Mesalazine Has An Established Role For Crc Prevention In Inflammatory Bowel Disease And May Interfere With Wnt Carcinogenesis, The Altered Pathway In Fap And Map.

Methodology
Investigator-Driven Pilot Clinical Trial- Efficacy Study, Before-After Design, Non-Randomized, Unblinded. Consecutive Fap/Map Patients With Rectal Stump/Ileal Pouch Adenomas In The Previous Year Were Proposed For Mesalazine Enema Application (1g/Day) For 12 Months. Sigmoidoscopies With Excision Of All Polyps Larger Than 5 Mm Were Scheduled Every 6 Months For 18 Months. Adenomas’ Incidence, Number, Size And Grade Of Dysplasia And Non-Dysplastic/Endoscopically Normal Mucosal Proliferative Index [Pi(Ki-67)] And Nuclear Beta-Catenin Imunoexpression Were Compared Before And After Treatment.

Results
Two Patients Were Included Before The Trial Was Stopped Due To The Covid Pandemic. One Patient (Male, 49 Years Old, Fap) Completed 12 Months Therapy– No Differences In Adenomas’ Incidence, Number, Size And Grade Of Dysplasia Between The Year Before/Year Under Therapy; Normal Mucosa Ki-67 Pi Decreased From 20% At 0 And 6 Months To 10% At 12 Months Treatment; One Patient (Female, 66 Years Ols, Map) Completed 6 Months Therapy (Lack Of Compliance)- 1 High Grade Dysplasia 45mm Adenoma The Year Before Therapy, 0 Adenomas Under Therapy; Normal Mucosa Ki-67 Pi Decreased From 30% At 0 Months To 25% At 6 Months Treatment. Beta-Catenin Imunoexpression Remained Unchanged In Both Patients.

Conclusions
The Pilot Data Support The Need For Further Studies Of Mesalazine’s Preventive Role In Fap/Map. This Work Was Supported By Inova4health – Uidb/04462/2020, A Program Financially Supported By Fundação Para A Ciência E Tecnologia (Fct) / Ministério Da Educação E Ciência, Through National Funds.
Lowering The Threshold Age For Screening Colonoscopy Seems Justified In Iran

Dr. Anahita Sadeghi1, Dr. Amirhossein Mousavian1, Dr. Maryam Rayatpisheh1, Dr. Ahmad Sadeghi1, Dr. Shahin Merat1, Dr. Reza Malekzadeh1, Dr. Siavosh Nasseri-Moghaddam1

1digestive Disease Research Institute, Tehran University Of Medical Sciences, Tehran, Iran, Tehran, Iran

Background And Porpose

The Age For Screening Colonoscopy Has Been Lowered To 45 Years In The West. To Assess Whether It Is Needed To Lower The Age Threshold For Colonoscopy In Eastern Countries Like Iran As Well, We Conducted This Study.

Methodology

In A Prospective Study, All Patients Aged 40 Years And Above, Referred For Screening Colonoscopy Or As Assessment Of Irritable Bowel Syndrome Were Enrolled. Polyp Detection Rate And Adenoma Detection Rate Were Recorded For Age Groups Of 40 To 44 Years, 45 To 49 Years And Above 50 Years. The Prevalence Of Polyps In These Age Groups Were Compared And The Descriptive Data Are Reported. Chi Square Test Was Used For Comparison.

Results And Discussions

A Total Of 3821 Colonoscopies Were Recorded During The Study Period. Mean Age Of Participants Was 57.3 (Sd: 10.3) Years And 2066 (54.5%) Were Female. A Total Of 3406 Polyps Were Diagnosed In 1553 Individuals (Polyp Detection Rate= 41.6%). Polyp Detection Rates Were 25.9%, 36.6%, And 44.7% For 40 To 44 Years, 45 To 49 Years And Above 50 Years. Overall Adenoma Detection Rate Was 36.4%. Of The Polyps Detected, 92.7% Were Adenomas Among Those 50 Years And Over As Compared To 50.5% In Those 40 To 44 Years Old. In Our Study More Than 88% Of The Polyps Were Smaller Than 10mm And The Most Common Site For Polyp Detection Was The Sigmoid (24.6%).

Conclusions

According To Our Data, Polyps And Adenomas Are Fairly Common Among 45 To 49 Years Old Average Risk Iranians. This Suggests That A Lower Threshold Age For Screening Colonoscopy May Be Justified.
10-Year Experience In Assessing The Effectiveness Of Peroxide Hemostasis

Prof. Alexey Korotkevich¹, Doctor Anton Leontiev¹, Inna Shestak¹, Semyon May¹, Ilya Savostyanov¹, Yana Marinich¹
¹hospital Nr.29, Novokuznetsk, Russian Federation, ²Novokuznetsk Institute For Postgraduate Medical Education, Novokuznetsk, Russian Federation

Background And Purpose
Progress In The Emergence And Improvement Of New Methods Of Endoscopic Hemostasis Indicates The Dissatisfaction Of Physicians With The Reliability And Universality Of The Methods. We Analyzed The Results Of 10-Year Use Of Infiltration Hemostasis By 1% Hydrogen Peroxide Solution As A Patented Technology Of Endoscopic Hemostasis.

Methods
In 2010-2021, All Patients With Clinical Upper Gastrointestinal Bleeding (Ugib) Underwent Gastroscopy On Admission And Hemostasis By 10-30 Ml 1% Hydrogen Peroxide Solution At The Height Of Bleeding (Forrest 1, Forrest 2a/B). For Dielafos Defects Or Mallory-Weiss Tears, Infiltration Was Used After Clipping. Statistical Analysis Was Performed Using Statistica 10 Software (Statsoft, Russia). Chi-Square Test, Yates' Correction For Continuity (Yates' Chi-Square Test), Or Fisher's Exact Test Were Used. Interpretation Of Statistical Significance Of Differences Was Based On The Criterion P < 0.05.

Results
Endoscopic Hemostasis Was Performed In 1487 Patients (74%). All Patients Had A Glasgow-Blatchford Bleeding Score Of 4 To 16. The Most Frequent Causes Of Ugib Were Chronic Gastric Ulcers 368 (20%) And Duodenum Bulb Ulcers 335 (17%), Variceal Bleeding 170 (14%) And Mwt 238 (15%). The Overall Recurrence Rate Of Bleeding Was 7% (104 Cases). The Highest Recurrence Rate Was In Chronic Gastric Ulcers - 13% (48 Patients). At Effective Hemostasis The Area Of Infiltration With Hydrogen Peroxide Solution (Hemostatic Cushion) Persisted From 3 Hours To 30 Days. At Recurrent Bleeding The Hemostatic Cushion Was Not Preserved ($X^2=44.71$, $P=0.0000$). Emergency Operations At The Height Of Bleeding In 2010 Were 10% (18 Patients), In 2021 - 3% (4 Patients) ($X^2= 5.207$, $P=0.023$). There Were No Complications From The Use Of 1% Hydrogen Peroxide Solution.

Conclusions
Infiltration Endoscopic Hemostasis By 1% Hydrogen Peroxide Solution Is A Cheap, Highly Effective And Safe Way To Stop Ugib.
Comparison Of Histoacryl® Plus Lipiodol® Versus Histoacryl® Plus Vitamin D3 In The Management Of Isolated Fundal Varices

Dr. Muhammad Kamran Hassan¹, Dr Ahmad Babar¹, Dr Dilaram Khan¹, Dr Hashmat Khan¹, Dr Mujahid Aslam¹
¹Lady Reading Hospital Peshawar, Peshawar, Pakistan

Background & Purpose
Recent Guidelines Recommend Histoacryl® (N-Butyl-2-Cyanoacrylate) Injection As The First Line Therapy For The Endoscopic Obliteration Of Gastric/Fundal Varices. Lipiodol Is Commonly Used As A Priming Agent For Endoscopic Injection Histoacryl® But Lipiodol Is Expensive And Not Easily Available In Our Setup. The Purpose Of This Study Is To Compare Lipiodol With Vitamin D3 Injection As Priming Agents For Histoacryl Injection In Terms Of Efficacy And Safety In The Management Of Isolated Fundal Varices.


Results
All The Cases In Both Groups Were Treated Successfully. There Were No Adverse Events Related To Procedure In Either Group. Twenty Six Patients Developed Upper Gi Re-Bleeding, Which Did Not Differ Significantly Between The Two Groups. There Was Also No Difference Between The Groups In Terms Of Treatment Failure, Complications, Varices Obliteration, And Mortality. Conclusion: Vitamin D3 Is As Safe And Effective As Lipiodol When Used As Priming Agent For Histoacryl Injection For Obliteration Of Isolated Fundal Varices And Can Be Used As A Cheaper Alternative To Lipiodol.
Non-Invasive Screening Of Esophageal Varices In Patients With Liver Cirrhosis

Dr. Ahmad Babar¹, Dr Dure Nayab², Dr Mujhahid Aslam¹
¹lady Reading Hospital Peshawar, Peshawar, Pakistan, ²prime Teaching Hospital, Peshawar, Pakistan

Purpose & Background

Methodology
In This Analytical Cross Sectional Study We Had 110 Patients With Liver Cirrhosis Without A History Of Variceal Bleeding. Demographic, Clinical, Biochemical And Ultrasonographic Parameters Were Recorded. We Used Selected Non-Invasive Parameters Such As, Ast To Platelet Ratio Index (Apri), Platelet Count To Spleen Diameter (Pc/Sd), fibrosis-4-Index (Fib-4), Bonacini Score And King’s Score. Esophageal Varices Were Confirmed By Endoscopy.

Results
The Study Population Had Mean Age Of 43 ± 9 Years. On Evaluation Of The Studied Non-Invasive Parameter In Predicting Ev It Was Noted That Fib-4 Was Significant (Sensitivity Of 86%, Specificity 64%) With Cutoff Of 3.15, Bonacini Score Was Significant (Sensitivity 81%, Specificity 61%) With A Cutoff Of 6, Pc/Sd Was Significant (Sensitivity Of 80%, Specificity 57%) With A Cutoff Of 884.3 And King Score Was Significant (Sensitivity Of 76%, Specificity 54%) With A Cutoff Of 36.7. By Multivariate Regression Analysis Of The Significant Parameters, We Reported That Fib-4 Was The Most Significant Parameter Followed By Bonacini Score, Pc/Sd And King Score Respectively.

Conclusion
Non-Invasive Methods Have Provided Alternatives For Screening Egd In Cirrhotic Patients. However, This Is An Area That Could Still Benefit From Further Research
Peroxide Hemostasis: Analysis Of Recurrent Upper Gastrointestinal Bleeding (Ugib)

**Prof. Alexey Korotkevich**, Doctor Anton Leontiev, Inna Shestak, Semyon May, Ilya Savostyanov

1 **Hospital Nr.29, Novokuznetsk, Russian Federation**, 2 **Novokuznetsk Institute For Postgraduate Medical Education, Novokuznetsk, Russian Federation**

**Background And Purpose**


**Methods**

In 2000-2010 (Period 1), A Combination Of Saline Infiltration With Adrenaline Or Aminocaproic Acid Solution, Clipping And/Or Electrocoagulation, And Alcohol Irrigation Were Used For Endoscopic Hemostasis In 1569 Of 2312 Patients. In 2010-2021 (Period 2), 1487 Of 2011 Patients With Clinical Ugib Underwent Gastroscopy On Admission And Hemostasis By 10-30 Ml Of 1% Hydrogen Peroxide Solution (Before Or After Clipping And/Or Alcohol Irrigation). Statistical Analysis Was Performed Using Statistica 10 Software (Statsoft, Russia). We Used Chi-Square Test, Yates Correction For Continuity (Yates Chi-Square Test), Or Fisher's Exact Test. Interpretation Of Statistical Significance Of Differences Investigated In Simple Analyses Was Based On The Criterion P < 0.05.

**Results**

Both Periods Were Comparable In Terms Of Bleeding Source Structure, Gender, Age. The Overall Recurrence Rate Of Bleeding From The Type Of Hemostasis Was 23% Vs 7% (Χ²=151.770, P<0.001). The Recurrence Rate For Chronic Ulcer Was 33% Versus 13% (Χ²=43.279, P < 0.001). The Recurrence Rate For Mellori-Weiss Tears Was 9% Versus 1% (Χ²=15.105, P < 0.001). The Recurrence Rate For Variceal Bleeding Was 28% Versus 11% (Χ²= 17.407, P < 0.001).

**Conclusions**

1% Hydrogen Peroxide Solution For Hemostasis Of Ugib Is Highly Effective, Significantly Reducing The Recurrence Rate Regardless Of Other Prognostically Unfavorable Factors
Prognostic Value Of Risk Scoring Systems In Predicting Clinical Outcomes And Intervention In Patients With Non Variceal Upper Gastro-Intestinal Bleeding

Dr. Sara Nacer1, Prof Fatima Zahra El Rhaoussi1, Prof Mohamed Tahiri Joutei Hassani1, Prof Fouad Haddad1, Prof Wafaa Hliwa1, Prof Ahmed Bellabah1, Prof Wafaa Badre1
1chu Ibn Rochd, Casablanca, Morocco

Introduction

Non-Variceal Upper Gastrointestinal Bleeding (Nvugib) Remains A Common Medical Emergency. The Early Use Of Risk Stratification Scores Is Recommended For Follow Up And Treatment Selection In Patients With Nvugib. The Most Used Risk Scoring Systems Are The Glasgow–Blatchford (Gbs), The Rockall Score (Rs) And Aim65. We Aimed To Determine The Prognostic Value For Each Scoring System In Predicting The Need For Blood Transfusion, Endoscopic Treatment, Surgery Requirement, Short-Term Mortality, And Re-Bleeding Among Patients With Nvugib.

Methods
Retrospective Descriptive And Analytical Study Conducted Between January 2020 To December 2021 Including Patients With Nvugib. Gb, Rs And Aim65 Were Calculated. The Accuracy Of The Scores In Predicting Patient’s Outcomes Was Assessed By The Receiver Operating Characteristic Curve (Roc) And The Area Under The Curve (Auc). P-Value<0.05 Was Considered To Be Statistically Significant.

Results
A Total Of 219 Patients Were Enrolled. The Mean Age Was 54 Years And 67,1% Were Men. Blood Transfusion Was Indicated In 60,7%. Endoscopic Therapy Was Required In 13,3% And 1,7% Underwent Surgery. Rebleeding Occurred In 0,6%. The In-Hospital Mortality Rate Was 3,5%. The Median Risk Scores Were As Follows: Gbs: 2, Rs: 4 And Aims65: 7 . Aim65 Performed The Best In Predicting The Need For Transfusion (Auc=0,928, P<0,001) And Endoscopic Therapy (Auc=0,342, P=0,03). The Cut-Off Points Were 7 And 3; Respectively. The Performance Of The Gbs Was Similar To Both Rs And Aim65 (Auc=1, P<0,001) In Predicting Surgery. Gbs Showed The Best Discriminative Ability In Predicting Mortality (Auc=0,988,P<0,001). A Cut-Off Of 4 On The Gbs Predicted This Outcome With 100% Sensitivity And 98.8% Specificity. All Three Scores Were Unable To Predict Rebleeding (P>0,05)

Conclusion
Gbs, Rs, And Aim65 Are Not Precise Scoring Systems For Assessing The Risk Of Re-Bleeding. The Aim65 And Gb Performed Well In Predicting The Need For Transfusion, Endoscopic Treatment And Short-Term Mortality.
Op18

Impact Of Lactobacillus Reuteri Supplementation On Clarithromycin-Based Sequential Therapy For Helicobacter Pylori Eradication

Dr. Adeel Rahat, Prof. Lubna Kamani, Dr Mehreen Akmal
Liaquat National Hospital, Karachi, Pakistan

Background And Purpose:

Probiotics Are Under Debate Regarding Efficacy In H.Pylori Eradication As Compared To Conventional Therapies. Therefore, We Aimed To Determine The Efficacy Of Addition Of Lactobacillus Reuteri To Conventional Therapy In Comparison To Conventional Therapy Alone.

Methodology

An Open Label Randomized Control Trial Is Being Conducted At Gastroenterology Department, Liaquat National Hospital, Karachi. Patients Aged 18 - 60 Years With Detection Of H Pylori Via Histopathology, Stool Antigen Or Rapid Urease Test Were Assigned To Two Groups Through Sequentially Numbered Opaque Sealed Envelope Protocol.Sequential Therapy (Control Group) Consisted Of Omeprazole 20mg Twice Daily , Amoxcillin 1g Twice Daily For First 5days, Clarithromycin 500mg Twice Daily And Tinidazole 500mg Twice Daily For Next Five Days. In Intervention Group, Lactobacillus Reuteri 100mg Twice Daily For 2weeks Was Added In Sequential Therapy. Successful Eradication Was Defined As Negative H Pylori Stool Antigen 4 Weeks After Eradication Therapy.

Results

Total 197 Patients Have Been Enrolled In The Study With 70 (35.5%) Patients In Intervention Group.Two Study Groups Did Not Differ On The Basis Of Age (P=0.617) And Gender (P=0.491). Median Duration For The Resolution Of Symptoms Was 8 (Iqr=6 – 12) Days In Intervention Group While It Was 11 (Iqr=8 – 18) Days In Control Group (P=0.043). Post Eradication Hpsa Negativity In Intervention Group Was Achieved In 51(72.9%) Patients And In Control Group, It Was Achieved In 120 (94.3%) Patients (Figure 1). Higher Eradication Rates Were Achieved In Control Group As Compared To Intervention Group (P<0.001) But Addition Of Lactobacillus Resulted In Early Resolution Of Symptoms.

Conclusion

This Study Analysis Showed That There Was No Benefit In H.Pylori Eradication By The Addition Of Lactobacillus Reuteri To Sequential Therapy But It Resulted In Early Resolution Of Symptoms As Compared To Conventional Therapy.
Predictors Of Failure Of Endoscopic Retrograde Cholangiography In Clearing Bile Duct Stone On The Initial Procedure

Dr. Tarik Addajou, Soukaina Rokhsi, Samir Mrabti, Ahlame Benhamdane, Ilhame Elkoti, Fedoua Rouibaa, Ahmed Benkirane, Hassan Seddik

1Military Hospital Mohammed V, Rabat, Morocco

Aims: Evaluate The Predictive Factors Of Failure Rate Of Clearing The Biliary System From Stones At The Initial ERCP.

Methods: This Is A Retrospective Descriptive And Analytical Study From September 2002 To September 2021.

All Patients With Bile Duct Stones, Who Underwent ERCP With Endoscopic Sphincterotomy And Stone Extraction By Standard Techniques (Extraction Balloon Or Dormia Basket) Were Included In This Study.

Results:

A Total Of 1080 ERCPs Were Performed To Extract Biliary Duct Stones. The Mean Age Was 58.9 +/- 14.4 Years And 59.5% Were Females. The Mean Diameter Of The Bile Duct Was 13.4 +/- 4.31 Mm. The Presence Of A Biliary Stricture In 6.3%. The Primary Vacuity Rate Was 75.1%. Supplementary Techniques Were Used In 22.7% Of Cases. On Univariate Analysis, The Predictive Factors For Failure After Use Of Standard Techniques Were: Age(Or: 0.9; CI95%: 0.03--0.01; P<0.001); Gender(Or: 0.7; CI95%: 0.5-0.02; P=0.036); Previous Cholecystectomy (Or: 1.3; CI95%: 0.2-0.6; P=0.035); Presence Of Angiocholitis(Or: 0.4; CI95%: 1.1-0.4; P<0.001); Dilatation Of The CBD >15mm (Or: 0.8; CI95%: 0.2-0.1; P<0.001), Biliary Stricture (Or: 0.3; CI95%: 1.7--0.7; P=0.001) And The Presence Of Impacted And/Or Large Stone (Or: 0.1; CI95%: 2--1; P<0.001).

On Multivariate Analysis, Only The Presence Of Angiocholitis (Or: 1.9; CI95%: 0.2-1; P=0.001), Impacted And/Or Large Stone (Or: 2.5; CI95%: 0.5-1.3; P<0.001), Dilatation Of The CBD >15mm (Or: 0.88; CI95%: 0.17--0.07; P<0.001), And Biliary Stricture (Or: 2.9; CI95%: 0.4-1.7; P=0.002) Were Significantly Associated With Failure Of The Primary CBD Vacuity Rate.

The Overall Vacuity Rate After Using The Supplementary Techniques Was 92.4%.

Conclusion:

In Our Study, Predictive Factors For Failure Of The Primary CBD Vacuity Rate Were The Presence Of Angiocholitis, Impacted And/Or Large Stone, Dilatation Of The CBD (>15mm) And Biliary Stricture.
Involvement Of Heparanase In The Pathogenesis Of Acute Pancreatitis: Implication Of Novel Therapeutic Approaches

Prof. Iyad Khamaysi, Dr. Dalit Ben Hemo, Dr. Saleem Hadad, Dr. Ahmad Fukra, Dr. Aviva Kabala, Prof. Zaid Abassi

rambam Health Care Campus, Haifa, Israel, Faculty Of Medicine, Technion, Haifa, Israel.

Introduction: The pathophysiology of acute pancreatitis (AP) is not well characterized. Heparanase (Hpa) plays an important role in the pathogenesis of AP in an animal model. Aspirin has also been demonstrated to inhibit Hpa activity. Moreover, trehalose was shown to alleviate experimental AP via unknown mechanism. We hypothesize that a combination of Hpa inhibitors and aspirin or trehalose can ameliorate AP more than each drug alone.

Aims: To examine whether combination of pixatimod (Pg545) or roneparstat (Sst0001), two inhibitors of Hpa with aspirin or trehalose, exerts additive or synergistic pancreato-protective effect in cerulein-induced AP in mice.

Methods: Heparanase-overexpressing transgenic mice (Hpa-Tg) and wild-type (Wt) animals were intraperitoneally injected with either cerulein or vehicle, with or without either pixatimod, roneparstat, aspirin, trehalose or combination of these drugs. The animals were sacrificed 24 hours following the induction of pancreatitis. The severity of AP and architectural structure changes were evaluated by serum pancreatic enzyme levels, inflammatory cytokines, pancreatic edema index, tissue inflammatory response and autophagy response.

Results: Cerulein-induced AP in Wt mice was associated with significant rises in the serum levels of amylase and lipase. These increases were characterized by enhancement of pancreatic edema index, tissue inflammation, and autophagy response. All types of responses were more profound in Hpa-Tg mice. The severity of AP was more profound in females Wt and Hpa-Tg mice as compared with male animals. Pretreatment with pixatimod, roneparstat, aspirin or trehalose reduced pancreatic inflammatory response, autophagy, and ultrastructure (electron microscopy) along remarkable reduction in amylase and lipase serum levels in both Wt and Hpa-Tg mice. Noteworthy, combination of aspirin or trehalose with either pixatimod or roneparstat completely abolished AP.

Conclusions: Heparanase, therefore, emerges as a potential new target in AP, and heparanase inhibitors alone or in combination with nsaids or trehalose are hoped to prove beneficial in AP.
The Concentration Of Chitinase-3-Like-1 Protein (Ykl-40) In Serum Of Patients With Acute Pancreatitis As A Potential Novel Biomarker Of Pancreatic Necrosis.

Dr. Nina Blažević¹, Md, Phd, Assistant Professor University Of Zagreb, School Of Medicine Tajana Pavić¹, Medical Biochemistry Specialist, Phd, Professor University Of Zagreb, Faculty Of Pharmacy And Biochemistry Dunja Rogić², Md Stipe Pelajić¹, Md Valentina Ratkajec³, Md Goran Glavčić⁴, Md, Phd, Assistant Professor University Of Zagreb, School Of Medicine Alen Bišćanin¹, Md, Phd, Assistant Professor University Of Zagreb, School Of Medicine Ivan Budimir¹, Md, Phd, Assistant Professor University Of Zagreb, School Of Medicine Davor Hrabar¹

¹University Hospital Centre Sestre Milosrdnice, Division Of Gastroenterology And Hepatology, Department Of Internal Medicine, Zagreb, Croatia, ²University Hospital Centre Zagreb, Department Of Laboratory Diagnostics, Zagreb, Croatia, ³General Hospital Virovitica, Department Of Internal Medicine, Virovitica, Croatia, ⁴University Hospital Centre Sestre Milosrdnice, Department Of Surgery, Zagreb, Croatia

Acute Pancreatitis (Ap) Is An Acute Disease Of The Pancreas With Multiple Etiologies. There Are Several Serum Indicators Of The Disease Severity (C-Reactive Protein (Crp), Procalcitonin (Pct)), But None Of Them Are Accurate. Ykl-40 (Chitinase-3-Like-1 Protein) Is A Glycoprotein That Plays A Major Role In Inflammation And Angiogenesis. The Aim Of This Study Is To Determine The Diagnostic Accuracy Of Ykl-40 In The Evaluation Of Ap Severity Including Pancreatic Necrosis (Pn). In This Prospective Study, We Recruited 32 Patients (10 Male, 22 Female) With Ap At The Uhc Sestre Milosrdnice, Zagreb, From June 2020 Until April 2022. After Obtaining Informed Consent, Crp And Ykl-40 Were Measured On Admission, 48 Hours And 7 Days After Admission. Chi Square And Fisher Exact Test Were Used To Compare Discrete, And Mann Whitney U For Continuous Variables. Receiver Operating Characteristic Curve Was Calculated For Ykl-40 And Crp Values For Three Measurements To Assess Diagnostic Ability For Severe Form Of Ap And Pn. Areas Under The Curve (Auc) Were Compared Using The Bootstrap Method. Both Ykl-40 (Auc 0.66 ; 0.84 ; 0.25) And Crp (Auc 0.77 ; 0.94 ; 0.94) Are Moderately Good Predictors For Ap Severity, With Crp Being Better Predictor (P<0.05 All Measurements). Both Ykl-40 (Auc 0.76 ; 0.91 ; 0.88) And Crp (Auc 0.75 ; 0.72 ; 0.74) Are Moderately Good Predictors For Pn, With Ykl-40 Being Better Predictor (P<0.05 All Measurements). We Have Shown That Ykl-40 May Be A Good Predictor For Pn, Which Is Reasonably Explained By It’s Pathophysiological Role In The Tissue Remodelling, But Due To Our Small Sample Size And Low Study Power Further Measurements Are Needed To Confirm These Preliminary Results.
Op22

Novel Treatment Of Covid 19, Evaluation Of Sofosbuvir And Daklatasvir Combo, Single Arm Study

Dr. Abdelrahman Zakaria, Prof. Amr Abdelmoety, Prof. Aly Soliman, Professor Soad Zaki, Professor Azza Baraka, Dr. Hoda Abdelmoety, Dr. Ahmed Youssef

1 alexandria Hepatology Center, Alexandria, Egypt, 2 alexandria Faculty Of Medicine, Alexandria, Egypt, 3 Medical Research Institute, Alexandria, Egypt

Background & Aims

The Coronavirus Disease 2019 (Covid-19) Pandemic is an ongoing global health crisis caused by severe acute respiratory syndrome coronavirus 2 (Sars-Cov-2). Intervening early in the disease course by antivirals can delay progression and improve clinical outcomes. Since direct-acting antivirals (Daas) changed the entire landscape of hepatitis C (Hcv) treatment, there has been considerable interest with these Daas, such as Sofosbuvir and Daclatasvir, as new repurposed options in Covid-19 therapeutics. This study is carried out to determine whether Sofosbuvir/Daclatasvir-based regimens improve clinical outcomes of patients with moderate or severe Covid-19.

Methods: This was a prospective study including patients with PCR-confirmed Covid-19, that were treated with Sofosbuvir and Daklatasvir-based regimen for 14 days. Results: Demographic data of the included 54 patients: Male (57%), Female (43%), Age <50 years (48%), >50 years (52%), Smoking (9%), Diabetes Mellitus (9%) and Hypertension in 28% of patients. Clinical presentation of Covid-19: Fever (87%), Cough (97%), Dyspnea (70%), Chest Pain (61%), Sore Throat (53%), Diarrhea (50%), Mood Changes (43%), Muscle Pain (87%), Oxygen Saturation Median (93.5 +/- 5.5%), and CT chest changes indicating Covid-19 was received in (55%) of patients. Laboratory data: PCR for Covid-19 was positive in (100%), CRP was positive in (87%). Outcome: Complete recovery was observed in 100%, and none of the patients progressed to severe stage. Conclusions: Sofosbuvir/Daclatasvir-based regimen is highly effective and safe in curing patients with Covid-19, preventing progression to severe stage as well as in decreasing mortality.
Different Types Of Carbohydrate Metabolism Disorders In Chronic Pancreatitis

Mrs. Ekaterina Lomakina¹, Elena Belousova¹
¹moscow Regional Research And Clinical Institute (Moniki), Moscow, Russian Federation

Background
Carbohydrate Metabolism Disorders In Chronic Pancreatitis (Cp) Are Considered As Diabetes Mellitus (Dm) Type 3c.

Aim
To Assess The Frequency Of Dm And Insulin Resistance (Ir) In Cp Patients.

Methods: 62 Patients With Confirmed Cp (Mean Age 52±11,5 Years; F:M=18:24) Were Included In A Monocentral Open-Label Study (14 Had A History Of Surgery). Ir Was Assessed By Homa Index (Ir Index). To Calculate Homa The Fasting Blood Insulin Level Was Determined By Elisa And Glycemia Was Assessed On An Automatic Analyzer. The Homa Index Was Considered Elevated At A Value More Than 2.7.

Results
Dm Was Confirmed In 20 Out Of 62 Cp Patients (32%). In This Group Homa Index Was Increased In 14 Patients (70%) At Its Average Meaning 5.3±2.2. Homa Was Not Increased In 6 (30%) Of Patients Only. Other 42 Patients Had No Confirmed Dm Although In Some Of Them Episodic Glycemia Up To 6.5 Mmol/L Was Noted. Among Them Homa Was Increased In 14 (33%) With Mean 2.4±0.7. In Others It Was Normal. There Was No Significant Difference In Homa Value In Cp Patients With And Without Dm.

Conclusion: We Believe That Cp Patients May Have Different Types Of Carbohydrate Metabolism Disorders. The Majority Of Cp+Dm Patients (70%) Demonstrated Ir Which Indicates To Dm 2 Type. Only In 1/3 Of Cp Patients Dm Apparently Can Be Considered As Type 3c. Also, In 1/3 Of Cp Patients Without Obvious Dm Signs, Latent Ir Was Detected. In This Group Blood Glucose Level Or Glycated Hemoglobin (Hba1c) Should Be Monitored Regularly.
Efficacy Of Sacral Nerve Stimulation In Children With Refractory Idiopathic Constipation

Mr. Azadvir Singh¹, Dr. Lev Dorfman¹, Dr. Sherief Mansi¹², Dr. Neha Santucci¹², Dr. Kahleb Graham¹², Dr. Khalil El-Chammas¹², Prof. Ajay Kaul¹²
¹Division Of Gastroenterology And Hepatology, Cincinnati Children’s Hospital Medical Center, Cincinnati, United States,
²Department Of Pediatrics, University Of Cincinnati College Of Medicine, Cincinnati, United States

Background And Purpose
Sacral Nerve Stimulation (Sns) Is Being Increasingly Recommended In Children With Refractory Constipation. The Sparse Pediatric Data On The Efficacy Of Sns In Constipation Is Conflicting, And This Has Led To Ambiguity Over The Use Of Sns For Treating Children With Constipation. The Aim Of Our Study Is To Determine The Outcomes Of Pediatric Patients With Idiopathic Constipation Who Underwent Sns Placement.

Methodology
Electronical Medical Records, Of All Patients With Idiopathic Constipation Who Had Sacral Nerve Stimulators (Sns) Placed For Refractory Idiopathic Constipation, Were Reviewed. Data Retrieved Included Demographics, Symptoms, Imaging, Colonic Manometry Results, Treatment, And Complications.

Results And Discussions
Twenty Patients (12 Females, Median Age 10.2 Years) With Intractable Idiopathic Constipation Who Had Sns Placed Met Our Inclusion Criteria. Colonic Manometry Was Abnormal In 6 (30%) And Showed No Hapcs In The Distal 20-50cm Of Colon. Six (30%) Patients Underwent Sns Placement After Cecostomy, While 2 Patients (10%) Had Cecostomy (For Antegrade Enemas) (Ace) After Sns Placement. Six Patients (30%) Had Resection Of A Dilated Sigmoid (2 Of Them Post Sns Placement). Three (15%) Patients Had Their Sns Removed Due To Complication Or Failure To Respond. Follow Up Data Was Collected From A Mean Of 22.7 Months (Range 7-42 Months) After Sns Placement. Number Of Bowel Movements Improved In 6 (30%), Stool Consistency Improved In 5 (25%), And Soiling Episodes Decreased In 10 (50%) Patients. Laxatives And Enemas Were Able To Be Reduced In 10 (50%) Patients.

Conclusions
This Is The Largest Pediatric Study With The Longest Follow Up Data On The Efficacy Of Sns In Refractory Idiopathic Constipation In Children. Despite Concomitant Antegrade Enemas In 8 (40%), And Sigmoid Resection In 5 Patients With Ace And 1 Without, Placement Of Sns Did Not Uniformly Improve Outcomes Of Idiopathic Constipation In Children.
Percutaneous Drainage Is More Often Applied In The Treatment Of Acute Calculous Cholecystitis During The Covid-19 Pandemic

Bálint Czakó¹, Dr. Szabolcs Ábrahám², Dr. Illés Tóth², Zain Karamaya¹, Dr. Dóra Illés¹, Dr. Máté Tajti¹, Dr. Emese Ivány¹, Ria Benkő³, Mária Matúz³, Dr. András Nagy³, Dániel Vácz³, András Négyessí³, Prof. György Lázár³, Prof. László Czakó¹

¹Department Of Medicine, University Of Szeged, Szeged, Hungary, ²Department Of Surgery, University Of Szeged, Szeged, Hungary, ³Department Of Clinical Pharmacy, University Of Szeged, Hungary, ⁴Central Pharmacy And Emergency Care Department, University Of Szeged, Szeged, Hungary, ⁵Radiology Department, University Of Szeged, Hungary, Szeged, Hungary

Background

Aim
To Assess The Outcome Of Acute Calculous Cholecystitis During The Nationwide Lockdown Period.


Results
Cholecystitis Admission Increased By 42.7% From 152 To 217 Cases In The Lockdown Period When Comparing To Historical Control (P=0.03). There Was No Difference In The Age, Gender Distribution And The Severity Of Cholangitis According To Tokyo Guidelines 2018 (Grade I 34.5% Vs 41.4%, P=0.27; Grade II 55.3% Vs 51.9%, P=0.61; Grade III 10.1% Vs 6.5%, P=0.11) And The Length Of Hospital Stay Between The Two Periods. The Inpatient (5.7% Vs 4.05%, P=0.62) And 30-Day Mortality (3.02% Vs 1.42%, P=0.47) Were Not Significantly Different Between The Two Periods. The Unplanned Readmission Rate Within 30 Days Was Significantly Higher In The Lockdown Period When Comparing To Control (6.84% Vs 1.41%, P=0.03). Percutaneous Drainage Was More Often (24.1% Vs 10.5%, P=0.03) While Conservative Treatment Was Less Frequently (46.7% Vs 55.9%, P=0.01) Applied In The Lockdown Period. Among The Indications Of Interventional Therapy The Rate Of Gallbladder Perforation Was Significantly Higher (32.7% Vs 13.4%, P=0.04) In The Lockdown Period.

Conclusion: A Significant Increase In Cases Of Acute Calculous Cholecystitis And Gallbladder Perforation And A Higher Rate Of Percutaneous Drainage And Unplanned Readmission Was Observed During The Nationwide Lockdown In The Covid-19 Pandemic.
A Rare Presentation Of Pancreatic Pseudo Cyst With Atypical Multi-Loculated Appearance- A Case Report.

Dr. Faisal Ali

Pancreatic Pseudo Cyst Represent A Collection Of Amylase And Other Pancreatic Enzymes Surrounded By A Fibrous Tissue Wall, It Results From Several Weeks After An Episode Of Pancreatitis. Their Presentation On Radiological Imaging Resembles Pancreatic Neoplasm. Therefore A Pancreatic Pseudo Cyst Can Be Misdiagnosed Imaging But Correct Diagnosis Can Be Made Through Aspiration And Microscopic Examination Of The Fluid Via Eus.

Here We Report, Pancreatic Pseudo Cyst Mimicking A Cystic Neoplasm. A 17 Years Old Male Presented With The Complaints Of Epigastric Pain For The Past 6 Months Associated With Vomiting And Diarrhea. His Symptoms Were Progressively Worsening For Last 4 Months With Anorexia And Undocumented Weight Loss. Patient’s Previous Medical, Surgical And Family Histories Were Insignificant.

Computed Tomography Showed A Large Multi-Cystic Lesion Arising From The Head Of Pancreas Measuring 7.5 X 5.7 Cm In Size, Encasing The Right Hepatic Artery, Abutting Superior Mesenteric Vein And Main Portal Vein Which Was Consistent With The Suspicion Of Mucinous Cystic Neoplasm. The Scan Revealed Diffuse Parenchymal Calcification In Pancreas Most Likely Sequelae Of Chronic Pancreatitis.

Endoscopic Ultrasound (Eus) With A Curvilinear Scope And Eus Guided Aspiration Was Performed With A 22g Aquire Needle And Serous Looking Fluid Was Drained From Loculi, Which Was Clear And Non-Viscous. String Test Was Negative. The Fluid Was Sent For Analysis, Which Revealed Findings Consistent With Multiloculated Pancreatic Pseudo Cyst.

It Was Important To Have Pre-Operative Diagnosis Before Considering Any Surgical Intervention. Eus Is Low Risk And Surgical Approach Has Complications. Cystic Fluid Analysis Gives A Definitive Diagnosis And Helps In Management. Conservative Management Can Be Offered Only When Malignancy Is Excluded. So We Conclude That Eus Is A Powerful Tool That Helps In The Diagnosis And Management Of Pancreatic Pseudo Cyst. Eus Not Only Has Low Risk Of Complication But Also Prevent Surgical Intervention And Its Complication.
Op27

Vitamin D Deficiency Among Inflammatory Bowel Disease Patients In Albania.

Dr Marsela Sina\textsuperscript{1}, Dr Xhensila Pemaj\textsuperscript{1}, Dr Ilir Akshija\textsuperscript{2}, Dr Adea Koçollari\textsuperscript{1}, Dr Altin Hysa\textsuperscript{1}, Dr Dorina Osmanaj\textsuperscript{1}

\textsuperscript{1}University Clinic Of Gastroenterology, University Hospital Center Mother Teresa, Tirana, Albania, \textsuperscript{2}Department Of Statistics, University Hospital Center Mother Teresa, Tirana, Albania

Background And Purpose
Vitamin D Insufficiency And Deficiency Is A Common Occurrence In Patients With Inflammatory Bowel Disease (IBD). The Aim Of This Study Is To Evaluate The Prevalence Of Vitamin D Insufficiency And Deficiency Among IBD Patients And Healthy Controls In Our Country.

Methodology
This Is A Prospective Study Carried Out From 2016-2020 And Included 96 Consecutive IBD Patients. As A Control Group, We Analyzed Medical Records Of Healthy Volunteers Who Had Done Their Regular Check-Up. Its Levels Were Considered As: Normal>30 ng/mL, Insufficient 10-30ng/mL, And Deficient <10ng/mL. They Were Further Divided In Two Categories: Normal Vs Low (>30 ng/mL Vs ≤30 ng/mL). Chi-Square Test Was Used For Statistical Analysis.

Results
96 IBD Patients [82 Ulcerative Colitis (UC), 14 Crohn's (CD)] And 563 Controls Were Included In This Study. There Was No Significant Difference On Regard Of Age (43.5±15.8 Vs 46.6±15.2) And Gender Among Two Groups. No Association Was Found Between Vitamin D Level (Normal Vs Low) In Relation To Age (P=0.076) Or Gender (P=0.529) Among The Two Groups.

Vitamin D Among IBD Group Ranged From 3-58 ng/mL, With A Mean Level Slightly Lower In CD Than In UC (17.5±12.4 Vs 18.1±9.5, P=0.826). Mean Vitamin D Level Was Significantly Lower In IBD Than In Control Group (18±9.9 Vs 23.8±11.1, P=0.001). Vitamin D Deficiency Was Significantly Higher In IBD Patients Than Control Group (22.6% Vs 6.6%, P<0.0001). No Statistically Significant Difference Was Observed On Regard Of Vitamin D Insufficiency Among The Two Groups (66.7% Vs 70.9% Respectively, P=0.405)

Conclusions: Vitamin D Inadequacy, Particularly Its Deficiency Is Frequent In IBD, Thus Vitamin D Screening Should Be Advised In All IBD Patients. Our Study Showed Its Insufficiency Even In Healthy Controls, Although We Are A Mediterranean Country.
Total Robotic Median Arcuate Ligament Release

Dr. Marina Epstein¹, Dr. Gabriel Maccapani¹, Dr. Franco Sapuppo¹, Prof. Dr. Vladimir Schraibman¹
¹Albert Einstein Hospital, Sao Paulo, Brazil

Background and Purpose
Median Arcuate Ligament (Mal) Syndrome is a very rare and difficult diagnosis to make due to its nonspecific symptoms and presentation. We present a rare case of significant stenosis of the celiac trunk by the arcuate ligament operated by robotic technique.

Case Report
Male patient, 76 years old, vomiting with abdominal postprandial pain refractory to clinical treatment. Patient with several comorbidities including 3 cardiac stents, 3 previous abdominal surgery and obesity. At examination, her abdomen was a distended, painful to palpation on epigastric region. He was submitted to an upper digestive endoscopy with no changes. Computed tomographic angiography of the abdominal aorta showed an accentuated stenosis in the emergence of the celiac trunk determined by the arcuate ligament, presents good distal opacification. Collateral circulation is associated in the pancreaticoduodenal arch. The patient was submitted to robotic surgery. The upper retroperitoneum was exposed by incision of the gastrohepatic ligament. The location of the common hepatic artery and left gastric artery were identified. Intraoperatively, the clear extrinsic nature of compression of the celiac trunk by the diaphragmatic structures was well assessed visually and compressing pathologic muscular fibers were divided. The ligament was excised with resection of the neural and fibrotic tissues surrounding the aortic and visceral vessels. Careful dissection along the adventitial plane of the celiac trunk allowed elevation of the Mal ligament. Patient improved with no recurrence and was discharged on the second postoperative day.

Conclusions
Surgical treatment should be considered for patients with severe stenosis of the celiac trunk. Use of the Da Vinci Surgical System provides an additional minimally invasive approach that appears to have the benefits of improved visualization and ease of dissection in addition to outcomes approximating those of laparoscopic techniques.
Eus-Guided Restoration Of Bowel Continuity After Complete Postoperative Lumen Obliteration: A Case Report

Phd Evgeniy Solonitsyn¹, Ms. Valeriia Kamalova¹, Mr. Shamil Kireev¹
¹Almazov National Medical Research Centre, Saint Petersburg, Russian Federation

Background And Purpose

Methodology. Recent Advances In Interventional Endoscopy Made It Possible To Create Anastomoses Using Eus-Guided Metal Stents. However, The Recommended Timing Of Stent Removal In Patients With Benign Strictures Remains Controversial.

Results And Discussions


Within 6 Months, 3 Sessions Of Bougienage And 3 Sessions Of Balloon Dilatation Were Performed. Finally A Stable Anastomosis Lumen Of More Than 10 Mm Had Been Achieved, Whereafter The Fistula Closure Was Performed. To Date, The Stricture Is Not Clinically Significant.

Conclusions
Eus-Guided Restoration Of Bowel Continuity Is Safe And Feasible Procedure Which Can Be Perform In Complicated Surgical Cases
Automatic Diagnosis Of Mucinous Pancreatic Cystic Lesions In Endoscopic Ultrasound Using Artificial Intelligence: A Pilot Study

Dr. Tiago Ribeiro1,2, Dr. Miguel Mascarenhas-Saraiva1,2,3, Dr. João Afonso1,2, Prof. Susana Lopes1,2,3, Dr. Pedro Moutinho-Ribeiro1,2,3, Prof. João Ferreira4, Dr. Filipe Vilas-Boas, Prof. Guilherme Macedo1,2,3

1department Of Gastroenterology, Centro Hospitalar Universitário De São João, Porto, Portugal, 2WGO Training Center, Porto, Portugal, 3Faculty Of Medicine Of The University Of Porto, Porto, Portugal, 4Faculty Of Engineering Of The University Of Porto, Porto, Portugal

Background And Purpose
Pancreatic Cystic Lesions (PCLS) Are Common Findings In Clinical Practice. These Lesions Have Varied Etiology And Are Associated With Increased Risk Of Malignancy, Although This Occurs Almost Exclusively In Mucinous Lesions. Endoscopic Ultrasound (EUS) Plays A Pivotal Role In The Characterization Of These Lesions. Nevertheless, Its Accuracy For Differentiating Of Mucinous From Non-Mucinous Lesions Varies Significantly (48-94%). The Introduction Of Artificial Intelligence (AI) To Endoscopic Practice Has Provided Promising Results. Convolutional Neural Networks (CNNs) Are Highly Efficient AI Tools For Image Analysis. We AImed To Develop A CNN-Based Model For Automatic Diagnosis And Differentiation Of Mucinous PCLS Using EUS Images.

Methodology
We Developed, Trained, And Validated A CNN-Based On EUS Images. Each Frame Was Labelled As A Mucinous (Intraductal Papillary Mucinous Neoplasm Or Mucinous Cystic Neoplasm) Or Non-Mucinous (Serous Cystadenoma Or Pseudocyst) PCL. The Diagnosis Of Mucinous PCL Was Dependent On Cyst Fluid Analysis And/Or Histopathologic Analysis Of Intracystic Biopsies Or Surgical Specimens. The Entire Image Dataset Was Split Into Training (80%) And Validation (20%) Datasets, The Latter Used To Evaluate The Performance Of The Model. The Sensitivity, Specificity, Positive And Negative Predictive Values (PPV And NPV, Respectively), Accuracy And Area Under The Curve Were Calculated.

Results
A Total Of 5505 Images From 28 EUS Exams Were Included (3725 Of Mucinous PCLS And 1780 Of Non-Mucinous PCLS). The Model Had An Overall Accuracy Of 98.5%, A Sensitivity Of 98.3%, A Specificity Of 98.9%, A PPV Of 99.5% And A NPV Of 96.4%. The AUC Was 1.00. The Image Processing Speed Of The CNN Was 191 Frames/Second.

Conclusions
In This Pilot Study We Developed A Deep Learning Algorithm For Automatic Differentiation Of Mucinous From Non-Mucinous PCLS Using EUS Images. Subsequent Development Of These Tools May Contribute To Enhance The Diagnostic Performance Of EUS In The Characterization Of PCLS.
Conservative Therapy For Chyloretroperitoneum: Case Report

Dr. Marina Epstein¹, Amanda Domit, Dr Luis Roberto Nadal, Dr Gabriel Maccapani, Dr Marília Fernandes, Prof Dr Vladimir Schraibman
¹albert Einstein Hospital, Sao Paulo, Brazil

Background And Purpose
Lymphatic Fistula Occurs When The Lymph Passage Is Obstructed Or Ruptured. In The Retroperitoneal Cavity Lies The Cisterna Chyli And Lymphatic Trunk.

Objective: Report A Rare Case Of Chyloretroperitoneum Approached With Conservative Therapy.

Case Report:A 49-Year-Old Male Patient Born And From Spain With No Comorbidities Or Previous Surgical Procedures Was Admitted In The Emergency Room With A High Intensity Pain On The Right Hypochondrium Irradiating To The Right Lumbar Region. Examination Showed Good Medical Condition, Abdomen Soft And Tender At Diffuse Palpation. Inflammatory Acute Abdomen Was Considered As The Main Diagnostic Hypothesis. Abdominal Ct Described Possible Primary Retroperitoneal Fasciitis. The Patient Was Hospitalized Due To The Incompatibility Of The Clinical And Radiological Evaluations And It Was Decided To Perform An Abdominal MRI. The MRI Results Put To Question The Possibility Of Rupture Of A Retroperitoneal Lymphatic Duct, Therefore A Complementary Lymphangiography Was Performed Which Confirmed A Rupture Of The Lymphatic System To The Retroperitoneum, A Dilated Chyle Cistern, With Filiform Structures Within It That Probably Obstruct The Thoracic Duct Outflow Tract. The Images Were Obtained Approximately 1 Hour After The Start Of The Injection, Demonstrating Extravasation Of Contrast Into The Retroperitoneum. He Showed Improvement In The Pain After 48 Hours Of Medication And A Low-Fat Diet. A Search For Filariasis Was Carried Out And Empirical Doxycycline Was Chosen Until The Test Result, Which Was Negative, Came Back. He Is Currently Under Outpatient Follow-Up.

Discussion
Treatment Depends On The Etiology. It Should Be As Conservative As Possible. Recommended Treatments Are As Follows. Diet (Rich In Protein And Low In Fat, Supplemented With Medium-Chain Triglycerides, Prioritizing The Oral Route Whenever Possible).

Conclusions
The Management Of Chyloretroperitoneum Should Be Individualised. Further Studies Of Multicentre Clinical Trials Involving More Patients Are Suggested, To Compare The Efficacy Between This Regimen And The Others.
Introduction
Inflammatory Bowel Diseases (Ibd) Have A Significant Impact On Quality Of Life. Clinical And Endoscopic Remission Should Not Disregard The Evaluation And Management Of Disease Psychosocial Impact.
Sexuality Is An Important Aspect Of The Physical And Moral Social Well-Being Of Patients, And Which Is Rarely Addressed In Consultation.
Our Study Aims To Assess The Impact Of Inflammatory Bowel Disease On The Sexuality Of Patients.

Materials And Methods
Its A Descriptive And Analytical Prospective Study In University Hospital Of Rabat; August 2021 And November 2021
We Included All Ibd Outpatients And Excluded Hospitalized Patients, Patients Who Refused To Join The Study And Patients Under 18 Years Of Age
We Studied The Different Aspects Of Sexuality Including: Desire, And Frequency Of Intercourse.
Statistical Analysis Was Performed Using Spss20.0 Software.

Results
42 Patients Were Included.
Mean Age Was 47 Years Old [30-63], With A Sex Ratio F/M = 1.1.
32 Patients (74.4%) Had Crohn's Disease And 10 Patients (23.3%) Uc. 7 Patients (16.3%) Presented Active Ano-Perineal Lesions (Apl) And 5 Patients (24%) Had Already Been Operated.
13 Patients (28.1%) Report A Decrease In The Number Of Intercourses Per Month. A Decrease In The Desire Was Also Reported In 12 Patients (27.9%), Only 9 Patients (18.6%) Expressed Their Need For Help.
In Multivariate Analysis, Only The Apl Are Predictive Of Decreased Desire And Decreased Number Of Intercourses With: (Or: 2.7, 95% Ci [1.28-5.92], P: 0.009) And ( Or: 1.8, 95% Ci [1.58-4.98], P <0.001). The Socio-Economic Level, As Well As Education Level Were Not Associated.

Conclusion
More Than Half Patients Present An Alteration Of Their Sexuality, Anoperineal Lesions Are The Most Associated With Impaired Sexuality.
Sexual Health Problems Should Be Screened And Addressed In Consultation Since Only 18.4% Of Patients Express A Need For Help
The Relevance Of Urokinase-Type Plasminogen Activator In Pathogenesis Of Ulcerative Colitis

**Prof. Tetsuji Takayama**, Dr Yoshifumi Kida, Dr Toshiya Okahisa, Dr Yasushi Sato, Mr Masahiro Bando, Dr Shota Fujimoto, Dr Tomoyuki Kawaguchi, Dr Fumika Nakamura, Dr Koichi Okamoto, Dr Hiroshi Miyamoto, Professor Koichi Tsuneyama, Dr Masahiro Sogabe

1Department of Gastroenterology and Oncology, Tokushima University, Tokushima, Japan, 2Department of Pathology and Laboratory Medicine, Tokushima University, Tokushima, Japan

**Aims**

Although Several Angiogenesis-Related Factors Are Reportedly Involved In The Pathogenesis Of Ulcerative Colitis (UC), The Mechanisms By Which They Contribute To Disease Are Unclear. We Examined The Expression Of Many Angiogenesis-Related Factors In Inflamed Colorectal Tissue Of UC Patients Using Antibody Array, And Ultimately Found The Highest Expression Of Urokinase-Type Plasminogen Activator (Upa). We Examined The Localization Of Upa In Inflamed Colorectal Tissue, And Then Investigated The Relevance Of Upa In The Pathogenesis Of UC Using Upa Knockout (Upa-/-) Mice.

**Methods**

Expression Of Angiogenesis-Related Factors In Colonic Tissue Of UC Patients Was Analyzed Using Antibody Array And Real-Time PCR. The Localization Of Upa In Colitis Tissue Was Determined By Immunohistochemistry Using Mirror Section. The Upa-/- Mice Were Given 2% DSS In Drinking Water For 7 Days And The Colitis Was Evaluated.

**Results**

The 5 Angiogenesis-Related Factors With The Highest Expression In Human Inflamed Colorectal Tissue Were Upa, Matrix Metalloproteinase-8, Angiostatin/Plasminogen, Hepatocyte Growth Factor And Endoglin. The Mrna Level Of Upa Was Significantly Higher In Colitis Tissues Than In Normal Tissues Obtained From Additional UC Patients With The Lowest P-Value, And Correlated With The Severity Of UC. Immunohistochemistry Revealed That Upa Was Expressed In The Neutrophils Of Colitis Tissues. The Disease Activity Index And Histological Score Of Colitis Tissues Were Obviously Lower In Upa-/- Mice Than In Upa+/+ Mice. Among 23 Cytokines Examined, IL-12, Gm-CSF, IL-5 And Rantes Was Significantly Downregulated In The Colitis Tissues From Upa-/- Mice.

**Conclusions**

Upa Was Highly Expressed In Neutrophils Of The Inflamed Mucosa Of UC Patients, Which Expression Level Correlated With The Severity Of UC. Our Data Suggest That Upa Plays An Important Role In Pathogenesis Of UC Through Down Regulation Of Several Cytokines Including IL-12. Upa Can Be A Potent Target Molecule For Anti-Inflammatory Agents In UC.
Transmural Remission By Gi Ultrasound (Gius) Predicts Outcome After One Year In Crohn’s Disease

**Prof. Odd Helge Gilja**¹,², Dr. Fredrik Sævik¹, Dr. Hilde Von Volkmann¹, Dr. Kom Nylund¹,²
¹National Centre For Ultrasound In Gastroenterology, Haukeland University Hospital, Norway, ²Department Of Clinical Medicine, University Of Bergen, Norway

**Background And Purpose**
Gastrointestinal Ultrasound (Gius) Can Be Used To Measure Bowel Wall Thickness (Bwt), Which May Indicate Disease Activity. The Aim Of This Study Was To Investigate Whether Normalisation Of Bwt In Crohn’s Disease (Cd) Patients Affects Risk For Important Negative Endpoints.

**Methods**
Patients With Cd Referred To A Tertiary Hospital For Ileocolonoscopy Were Examined With Gius And Followed For 12 Months. The Clinical Endpoints Examined Were Defined As The Need For Treatment With Corticosteroids, Changes In The Maintenance Treatment, Hospital Admissions, And Surgical Procedures Related To Crohn’s Disease. Patients Were Categorized Into 3 Groups According To Their Findings On Endoscopy And Gius: The Activity Group (A) Consisted Of Patients With Activity On Gius Defined As Any Bowel Wall Segment ≥3mm And Simple Endoscopic Score Of Crohn’s Disease (Ses-Cd) >2. The Group In Transmural Remission (B) Was Defined As All Patients With Bwt <3mm Independent Of Findings On Endoscopy. The Final Group (C) Consisted Of The Patients With Isolated Endoscopic Remission Defined As Ses-Cd ≤2 And Bwt ≥3mm In One Or More Bowel Segment.

**Results**
155 Cd Patients Were Included In The Study. In Total 61/155 Patients Experienced One Or More Negative, Clinical Endpoint During The One Year Follow Up Period. 9/155 Received Treatment With Corticosteroids, 50/155 Had Adjustments In Their Medical Therapy, 32/155 Were Admitted To The Hospital At Least Once And 18/155 Had Surgery. In Group A, 44/92 Experienced One Or More Endpoints While The Corresponding Numbers Were 9/40 In Group B And 8/23 In Group C. The Frequency Of Clinical Endpoints Were Significantly Different Between The Different Groups (P=0,020, Fischer’s Exact Test). Only Patients In Group A Underwent Surgery.

**Conclusions**
The Group With Transmural Remission Had Fewer Patients With Negative Clinical Endpoints Which Implies That Gius Can Predict Prognosis In Cd Patients.
Influence Of An Increase In Eosinophilic Cationic Protein On The Course Of Inflammatory Bowel Diseases

Prof. Gulustan Babayeva1, Dr. Gunay Asadova2, Dr. Umud Makhmudov3, Dr. Farid Quiliyev2, Dr. Khalida Ismayilova1, Dr. Tunzala Samadova1, Dr. Aychin Hasanova1, Dr. Elin Mammadov4, Dr. Rashad Hasanov5, Dr. Emin Verdiyev6, Dr. Camal Musayev8, Dr. Namig Isgandarov7

1azerbaijan State Advanced Training Institute For Doctors Named After A.Aliyev, Department Of Therapy, Baku, Azerbaijan, 2national Oncology Center, Department Of Invasive Diagnostics And Treatment, Baku, Azerbaijan, 3modern Hospital, Department Of Gastroenterology And Endoscopy, Baku, Azerbaijan, 4mediland Hospital, Department Of Gastroenterology And Endoscopy, Baku, Azerbaijan, 5german Hospital, Department Of Gastroenterology And Endoscopy, Baku, Azerbaijan, 6central Clinic, Department Of Gastroenterology And Endoscopy, Baku, Azerbaijan, 7memorial Klinik, Department Of Laboratory Diagnostics, Baku, Azerbaijan, 8baku Pathology Center, Baku, Azerbaijan

Inflammatory Bowel Diseases (Ibd) Are A Group Of Immune-Inflammatory Diseases Characterized By A Relapsing Course Of The Disease. The Search For A Potential Role Of Eosinophils In The Formation Of Inflammation And Fibrosis In Patients With Ibd Is Relevant.

Purpose Of The Study: To Identify The Effect Of An Increase In The Level Of Eosinophilic Cationic Protein (Ecp) On The Course Of Inflammatory Bowel Diseases.

Materials And Methods

The Study Was Conducted From January 2016 To April 2022, Among 400 Patients With Ibd (Mc N=12; Uc N=15; Cd N=238). Patients Underwent Endoscopy With Biopsy Sampling For Pathomorphological Examination, As Well As Laboratory Blood Tests (General Blood Count, H/Scr, Homocysteine, Vitamin D, Anca-Test, A-Thf, IL-1β, -2, -4, -6, -8, -10, -18, Total Protein, Albumin, Iron, Ferritin, Ecp, IgE; Urinalysis And Urine Albumin; Stool And Fecal Calprotectin, Lactoferrin.

Results

In 250 Patients (62.5%) With A Poor Response To Basic Therapy, A Study Was Conducted On Ecp And In 69 Cases (27.6%) The Result Was Positive, The Number Of Positive Endoscopic Manifestations Was 190 (76%), The Number Of Patients With A Positive Pathological Conclusion For The Presence Of Eosinophils In The Biopsy Material 95 (38%), The Number Of Patients With Concomitant Allergic Diseases 14 (5.6/20.2%). The Level Of Epc Fluctuated Within 29-228 Ng/Ml (N<24 Ng/Ml).

In The Statistical Processing Of The Results Obtained, The Generally Accepted Methods Of Descriptive Statistics Were Used With The Calculation Of The Arithmetic Mean Values Of The Trait (M), Standard Deviation (Σ), Mean Error (M), Student's Coefficient (T), Error Probability (P).

Conclusion

The Increase In The Level Of Ecp In The Study Group Of Patients Was 27.6%; There Were Higher Rates For Laboratory, Endoscopic And Morphological Activity Of Ibd.

Considering That Eosinophilia Is Considered A Hallmark Of Early Diagnosis Of Ibd And Closely Correlates With Histologic Diagnosis, As Well As The Role Of Eosinophils In The Formation Of Inflammation And Fibrosis, The Study Of An Increase In Ecp Is Of Interest In The Context Of The Marker Of "Non-Response" To Basic Therapy In Ibd And In The Search For New Targets For Treatment.
Adiponectin Levels In Inflammatory Bowel Disease – A Systematic Review And Meta-Analysis

Dr. Abdulrahman Ismaiel1, Dr. Teodora Surdea-Blaga1, Mr. Ayman Jaaouani2, Dr. Daniel-Corneliu Leucuta3, Dr. Abdalla Elsayed4, Dr. Mohamed Ismaiel5, Ms. Inès Ben Ameur2, Dr. Nahlah Al Srouji1, Dr. Stefan-Lucian Popa1, Prof. Dan L. Dumitrascu1
12nd Department Of Internal Medicine, "Iuliu Hatieganu" University Of Medicine And Pharmacy, Cluj-Napoca, Romania,
2faculty Of Medicine, "Iuliu Hatieganu" University Of Medicine And Pharmacy, Cluj-Napoca, Romania,
3department Of Medical Informatics And Biostatistics, "Iuliu Hatieganu" University Of Medicine And Pharmacy, Cluj-Napoca, Romania,
4department Of Internal Medicine, County Emergency Hospital Ilfov, Bucharest, Romania,
5department Of Surgery, St Michael's Hospital, Dublin, Ireland

Background And Purpose
As Adipose Tissue Plays An Essential Role In The Pathophysiology Of Inflammatory Diseases, Several Studies Evaluated Adipokines, Cytokines Secreted By Adipose Tissue, In Inflammatory Bowel Disease (Ibd). However, The Findings Were Inconsistent. Therefore, We Aimed To Investigate Adiponectin Levels In Ibd Patients.

Methods
Using Predetermined Keywords, We Carried Out A Comprehensive Electronic Search On Pubmed, Embase, Scopus, And Cochrane Library. We Included Human Observational Or Interventional Studies That Assessed The Levels Of Serum Or Plasma Adiponectin In Ibd Patients. We Only Included Full-Text Articles That Met Our Inclusion And Exclusion Criteria. The Mean Difference (Md) In Serum Or Plasma Adiponectin Levels Between Ibd Patients And Controls Was The Principal Summary Outcome. Quality Assessment Of Included Studies Was Conducted Using The Nhlibi Quality Assessment Tools According To Each Study Design.

Results
Our Qualitative And Quantitative Synthesis Included Findings From 20 And 14 Studies, Respectively, With A Total Population Sample Of 2085 Participants From North Africa, The Americas, Asia, And Europe. None Of The Comparisons Between Ibd Patients And Controls Showed A Significant Md In Serum Adiponectin Levels (-1.331 [95% Ci -3.135–0.472]), As Well As Subgroup Analyses Of Uc Patients Vs. Controls (-0.257 [95% Ci -1.959–1.445]), And Cd Patients Vs. Controls (-0.851 [95% Ci -2.263–0.561]). Nevertheless, A Significant Md (0.859 [95% Ci 0.097–1.622]) Was Observed Between Uc Patients And Cd Patients. According To The Results Of Our Conducted Quality Assessment Of Included Studies, A Total Of 17 Studies Were Rated As "Fair", 2 Studies As "Poor", And 1 Study As "Good".

Conclusions
Ibd Patients, Including Uc And Cd Could Not Be Distinguished From Controls Based On Serum Adiponectin Levels. However, Uc Patients Had Significantly Higher Serum Adiponectin Levels Than Cd Patients.
Paediatric Crohn’s Patients : Single Center Experience In Tertiary Children’s Hospital In Uae

Background
Crohn’s Disease And Inflammatory Bowel Disease, In General, Have Been Increasing Significantly. For That, Many Modalities Of Treatment Have Shown Promising Results Including Special Diet. In Our Study, We Are Looking At Crohn’s Disease Dietary Management For Induction And Subsequently Maintenance Of Treatment. The Main Question Was How Feasible Was Applying This Approach And What Difficulties The Patient And His Parents Faced.

Methodology
We Have Reviewed The Patients Using The Electronic Medical System. We Had 28 Pediatric Patients Who Were Diagnosed With Crohn's Disease And Used The Diet Plan To Induce Remission Or Maintenance. Then, We Used A Questionnaire That Was Filled Up By Both Parents And The Patient Regarding The Difficulties They Faced While Using The Special Diet. Lastly, Data Was Reviewed And The Main Findings Were Highlighted Using Basic Measures (Mean, Mode And Average).

Results And Discussions
We Have Found That The Cohort Had Used The Special Diet For A Various Duration Ranging From 2 Weeks Up To 2.5 Years. In 39% Of The Cases, A Special Diet Was Initiated Before The Use Of Medications And Biological Agents. All Patients Opted To Start With Crohn's Disease Exclusion Diet Which Provided 50 % Of Calories By Milk. The Response Was Inconsistent Due To Poor Compliance. Only 57 % Of The Patients Were Able To Bear With The Dietary Plan Beyond 12 Weeks. Patients Reported The Following Factors Which Caused Non-Compliance: Lack Of Family Support (71%) Cost (64%), Intolerance (14%), Poor Follow-Up Plan (7%), And Others.

Conclusions
Dietary Management Of Patients With Crohn’s Disease Is An Effective Treatment Modality With A Very Good Safety Profile. Unfortunately, Many Factors Might Contribute To Poor Compliance And Failure Of Treatment. We Must Address These Factors To Improve The Compliance Of This Treatment Modality And Use It More Frequently.

Mrs. Vlasta Orsic Fric1,2, Mr Vladimir Borzan1,2
1 clinical Hospital Center Osijek, Osijek, Croatia, 2 faculty Of Medicine, J.J. Strassmayer University Of Osijek, Osijek, Croatia

Background And Purpose
Studies Showed That Early Introduction Of Biologics Provides Better Results In Achieving And Maintaining Remission. Our Aim Was To Show The Difference Between The Duration Of Remission Regarding The Line Of Biologic Treatment In Our Cohort Of Patients.

Methodology
We Searched Database Of All Patients Treated With Biologics Until Nov 2019 At The Department Of Gastroenterology And Hepatology Of Clinical Hospital Center Osijek. We Gathered Data On Diagnosis, Time From Diagnosis To Start Of The First Biologic, Number And Type Of Biologics Used, Duration Of Treatment With Each Biologic, And The Reason For Discontinuation. Data Was Analyzed By Descriptive Statistics.

Results And Discussions
In Total, 203 Patients Were Treated With Biologics At Our Department, 140 (69%) With Crohn's Disease, 58 With Ulcerative Colitis (28.6%) And 3 With Refractory Pouchitis (1.5%). Most Used First Line Biologic Was Infliximab (122 Patients Or 60.1%) Then Adalimumab (51 Patients Or 25.1%). Biologics Were Started Within 5 Years From Diagnosis In Majority Of Patients (126 Patients, 66%), Of Which 88 Patients Started Biologics Within 2 Years From Diagnosis. Majority Is Still Treated With First Line Biologic (107 Patients, 52.7%) With Median Duration Of Treatment Of 42.5 Months (Min 5, Max 160). Duration Of Treatment Is Progressively Shortening For Second, Third And Fourth Biologic (Median 25 Months, Min 1, Max 120; Median 9 Months, Min 1, Max 41; Median 8 Months, Min 2, Max 17, Respectively). The Most Common Reason For Termination Of Therapy With First And Second Biologic Is Loss Of Response (In 52.4% And 56.8% Of Patients, Respectively), And For Third Biologic Is Primary Non-Response (50% Of Patients).

Conclusions
Our Data Show That First Line Biologic Is Most Efficient With Longest Duration Of Treatment Period. Also, We Have Confirmed That Earlier Introduction Of Biologics Is Essential In Achieving Sustained Remission.
Op39

Validation Of Stricture Length, Duration And Obstructive Symptoms As Predictors For Intervention In Ileal Stricturing Crohn’s Disease

Dr. Sara El Ouali1, Dr. Mark Baker3, Ruishen Lyu4, Dr. Joel Fletcher5, Dr. David Bruining6, Dr. Stefan Holubar7, Dr. Benjamin Click8, Dr. Taha Qazi2, Dr. Benjamin Cohen2, Dr. Florian Rieder2

1digestive Disease Institute, Cleveland Clinic Abu Dhabi, United Arab Emirates; 2department Of Gastroenterology, Hepatology And Nutrition, Digestive Diseases And Surgery Institute, Cleveland, United States; 3imaging Institute, Cleveland Clinic Foundation, Cleveland, United States; 4department Of Quantitative Health Sciences, Cleveland Clinic Foundation, Cleveland, United States; 5department Of Radiology, Mayo Clinic, Rochester, United States; 6department Of Gastroenterology & Hepatology, Mayo Clinic, Rochester, United States; 7department Of Colorectal Surgery, Digestive Diseases And Surgery Institute, Cleveland Clinic Foundation, Cleveland, United States; 8division Of Gastroenterology And Hepatology University Of Colorado School Of Medicine, Denver, United States

Background And Purpose
The Natural History Of Terminal Ileal (Ti) Stricturing Crohn’s Disease (Cd) Is Poorly Defined. Novel And Rigorous Definitions For Ti Strictures Recently Became Available. We Aimed To Describe The Rates And Predictors Of Symptoms, Endoscopic Balloon Dilation (Ebd) And Surgery In A Well-Defined Stricturing Cd Cohort.

Methodology

Results And Discussions
Eighty-Six Patients (48.8% Female, Median Age 36 Years) Met Selection Criteria, 17.4% Had Prior Ebd, 59.3% Previously Received Biologics And 58.1% Of Strictures Were Anastomotic. Median Follow-Up Was 56.3 [95% CI: 50.3 - 59.8] Months. At 12 And 48 Months, 29% And 50% Of Patients Had Intervention, Respectively. Multivariable Analysis Showed Obstructive Symptoms (Hazard Ratio (Hr) 1.444; 95% CI 1.126 - 1.852), Stricture Duration (Hr 0.974; 95% CI, 0.954 – 0.995) And Length (Hr 1.039; 95% CI, 1.011 – 1.069) Predicted Intervention. The Concordance Index For Split-Sample Validation Was 0.74 And 0.67, Respectively. Biologics Were Not Associated With Intervention.

Conclusions
In Patients With Ti Stricturing Cd, 29% And 50% Required Intervention At 1 And 4 Years. Obstructive Symptoms, Stricture Duration And Length Were Independent And Validated Predictors Of The Need For Intervention. These Findings Are Important For Clinical Practice And Aid In The Design Of Future Trials For Cd Strictures.
Tofacitinib In Pediatric Ulcerative Colitis: A Retrospective Multicenter Experience From The Paediatric Ibd Porto Group Of Espghan

Dr. Christos Tzivinikos1, Oren Ledder2, Michael Dolinger3, Marla Dubinsky3, Ayesha Fatima4, David Suskind5, Jarred Scarlett1, Dennis Roser6, Dror Shouval7, Gabrielle Meyer8, Zarella Molle-Rios9, Gemma Pujol-Muncunill9, Anna Lozano-Ruf9, Kaija-Leena Kolho10, Pejman Rohani11, Seamus Hussey12, Tim De Meji13, Travis Ayers14, Victor Navas15, Dan Turner2

1Al Jalila Children’s Specialty Hospital, Dubai, United Arab Emirates, 2Shaare Zedek Medical Center, Juliet Keidan Institute Of Paediatric Gastroenterology, Jerusalem, Israel, 3Icahn School Of Medicine At Mount Sinai, Department Of Pediatric Gastroenterology, Susan And Leonard Feinstein Ibd Clinical Center, New York, USA, 4Beaumont Children’s Hospital, Pediatric Ibd Center, Royal Oak, USA, 5Seattle Children’s Hospital, Division Of Gastroenterology, Inflammatory Bowel Disease Center, Seattle, USA, 6Copenhagen University Hospital, Pediatric Department, Hvidovre, Denmark, 7Schneider Children’s Medical Center Of Israel, Institute Of Gastroenterology Nutrition And Liver Diseases, Petach Tikva, Israel, 8Nemours Children's Hospital Wilmington, Division Of Pediatric Gastroenterology, Wilmington, USA, 9Hospital Sant Joan De Deu, Pediatric Gastroenterology, Hepatology And Nutrition Department, Barcelona, Spain, 10Children’s Hospital Helsinki University, Pediatric Gastroenterology Department, Helsinki, Finland, 11Pediatrics Center Of Excellence, Children Medical Center, Tehran University Of Medical Sciences, Pediatric Gastroenterology And Hepatology Research Center, Tehran, Iran, 12National Children’s Research Centre, Royal College Of Surgeons Of Ireland And University College Dublin, Dublin, Ireland, 13Ag&M Research Institute, Umc, Department Of Pediatric Gastroenterology, Amsterdam, Netherlands, 14Arkansas Children’s Hospital, Uams, Division Of Pediatric Gastroenterology, Little Rock, USA, 15Hospital Regional Universitaria De Málaga, Pediatric Gastroenterology And Nutrition Unit, Malaga, Spain

Background And Purpose
Tofacitinib, A Janus Kinase (Jak) Inhibitor, Has Recently Been Approved For The Treatment Of Moderate To Severe Active Ulcerative Colitis (Uc) In Adults. Data On Efficacy And Safety In Pediatrics Are Limited. In This Multicenter Study From The Paediatric Ibd Porto Group Of Espghan, We Describe The Short-Term Effectiveness And Safety Of Tofacitinib In An International Pediatric Ibd Cohort.

Methodology
Retrospective Review Of Children (2-18 Years) Diagnosed With Uc Treated With Tofacitinib From 15 Pediatric Centers Internationally. The Primary Outcome Was Corticosteroid-Free Clinical Remission (Pucai<10) At Week 8, With Secondary Outcomes Including Clinical Response (≥20 Point Decrease In Pucai), Colectomy Rate, And Safety. The Primary Outcome Was Calculated Utilizing Non-Response Imputation (Nri), Whereby Drug Cessation For Any Reason Was Considered A Treatment Failure.

Results And Discussions
78 Patients (43 (55%) Female, Mean Age At Diagnosis 12.5 (±2.7) Years, Median Disease Duration 20 Months (Iqr10.3-38.8)), All With Previous Biologic Failure, Including 20/78 (26%) With The Previous Failure Of Three Biologic Classes. 15/78 (19%) Patients Achieved Corticosteroid-Free Clinical Remission At Week 8 With A Further 18/78 (23%) Demonstrating Clinical Response. 9/78 (12%) Underwent Colectomy By Week 8, And 21/78 (27%) By Week 24. Twelve Adverse Events Were Reported Including Five Infectives (Three Of Which Deemed Possibly Related To Treatment – Zoster, Hsv-2 Cheilitis, And Septic Arthritis), One Case Of Pancreatitis, And Abnormal Blood Test Results In 5 Children (Anemia, Lymphopenia, Elevated Hepatic Transaminases And Hypercholesterolemia).

Conclusions
In This Largest Real-Life Cohort Of Tofacitinib In Pediatric Uc To Date, Tofacitinib Seemed Effective In At
Least 19% Of Highly Refractory Patients By Week 8. Adverse Reactions And Safety Were Largely Consistent With So Far Published Adult Data.
The Cost Of Illness Analysis Of Inflammatory Bowel Disease

Dr. Sulmaz Ghahramani, Dr. Kamran Bagheri Lankarani, Dr. Majid Pakdin
Shiraz University Of Medical Sciences, Shiraz, Iran

Background
Inflammatory Bowel Disease (Ibd) Is A Chronic Inflammatory Condition Involves Young Adults. Recent Data Suggests The Increase In The Prevalence Of Ibd And The Surge In The Application Of Biologic Drugs In Which Both Change The Cost Of Ibd In Recent Years. Comprehensive Assessment Of Direct And Indirect Cost Profiles Associated With Inflammatory Bowel Disease In Our Area In Scarce. In This Study, We Aimed To Determine The Economic Burden Of Ibd In Iran From Societal Perspective, Using Cost Diaries.

Methods
Patients Available On Clinic Registry And Hospital Information System, Who Had Been Diagnosed With Ibd, Were Invited To Participate In This Study. Demographic And Clinical Data, The Number Of Healthcare Resource Utilization, Absenteeism For Patients And Their Caregivers Were Obtained Face-To-Face Or Through Phone Calls. Item's Costs Were Derived From Local And National Sources. Furthermore, The Data Regarding Premature Mortality In Ibd Patients Was Extracted From Hospital Information System. Then, Cost Date Were Calculated As Mean Annual Costs Per Patient.

Results
The Cost Diaries Were Obtained From 240 Subjects (Ulcerative Colitis: N = 168, Crohn’s Disease, N = 72). The Mean Annual Costs Per Patient Were 1077 Us$ (95% Ci 900-1253), And 1608 (95% Ci 1256, 1960) For Patients With Ulcerative Colitis And Crohn’s Disease, Respectively. Of The Total Costs, 58% And 63% Were Due To Indirect Costs For Patients With Ulcerative Colitis And Crohn’s Disease, Respectively. Highest Nationwide Economic Burden Of Ibd Was Found For Patients Older Than 40 Years Were Estimated To Be 8,198,519 Us$ And 7,120,891 Us$, For Ulcerative Colitis And Crohn’s Disease, Respectively.

Conclusion
In This Study, Medication Was Found To Be The Greatest Contributor Of Direct Medical Costs. Furthermore, Productivity Loss Due To Long-Term Disability And Premature Mortality Were Major Components Of Inflammatory Bowel Disease Burden In Iran.
Prevalence Of Helicobacter Pylori Infection In Organic Bowel Disease Patient At Dr Cipto Mangunkusumo National General Hospital 2010-2021

Prof. Marcellus Simadibrata¹, Dr. Amanda Pitarini¹, Dr Dewi Mustikarani², Dr Daniel Simadibrata²
¹division Of Gastroenterology, Pancreatobiliary, And Digestive Endoscopy Department Of Internal Medicine, Dr. Cipto Mangunkusumo National General Hospital, Jakarta, Indonesia, ²faculty Of Medicine, Universitas Indonesia/Dr. Cipto Mangunkusumo National General Hospital, Jakarta, Indonesia

Background And Purpose
Recent Meta-Analyses Showed Contrasting Associations Between Helicobacter Pylori Infection And Organic Bowel Disorders, Where Positive Associations Were Reported In Colorectal Carcinoma (Crc) And Colorectal Polyp Patients While A Protective (Negative) Association Was Observed In Patients With Inflammatory Bowel Diseases (Ibd). We Aim To Determine The Association Between H Pylori Infection And Crc, Colorectal Polyp, And Ibd In An Indonesian National Referral Hospital.

Methodology
We Retrospectively Collected Data Of Patients Referred To Cipto Mangunkusumo National General Hospital, Jakarta, Indonesia, From 2010 To 2021, With Complete H Pylori Test And Lower Endoscopy From Electronic Medical Record. We Performed A Chi-Square Analysis And Logistic Regression To Determine The Association Between H Pylori Infection And Organic Bowel Disorders With A Significant Two-Tailed P-Value Of <0.05.

Results And Discussions
Three Hundred Consecutive Patients Were Enrolled, With A Mean Age Of 49.5 (Standar Deviation 15.68), And 120 (40%) Of Them Were Males. Overall, The Prevalence Of H Pylori Infection In Organic Bowel Disease Was 15% (N=45) With 8.9% Of Them Has Crc, 17.8% Colorectal Polyp, And 17.8% Ibd. A Negative Association Between H Pylori Infection And Ibd Was Observed [Or 0.39 (0.17-0.87), P=0.02]. However, No Significant Association Was Found Between H Pylori Infection And Crc [Or 0.82 (0.27-2.48), P=0.73], And Colorectal Polyp [Or 0.77 (0.34-1.74), P=0.69].

Conclusions
Our Study Suggested A Protective Association Of H Pylori Infection In Ibd Patients In An Indonesian Tertiary Referral Hospital. However, Insignificant Association Was Observed Between H Pylori Infection And Crc, And Colorectal Polyp.
Op43

Improvement In Health Related Quality Of Life And Patient Satisfaction After Pneumatic Dilatation In Achalasia Patients: Results Of A Prospective Follow Up

Dr. Sofia Hanif1, Professor Shahid Rasool, Dr Umair Shafqat
1madina Teaching Hospital, Faisalabad, Pakistan

Background
Achalasia Is A Benign But Debilitating Primary Esophageal Motility Disorder Which May Have A Detrimental Effect On Quality Of Life. Improvement Of Symptoms Is The Main Goal Of Therapy. Pneumatic Dilatation (Pd), Per Oral Endoscopic Myotomy, Heller’s Myotomy And Botulinum Toxin Injections Are The Treatment Options.

Aims & Objectives
Our Aim Was To Objectively Determine The Changes In Health Related Quality Of Life In The Long Term Clinical Course Of Patients After Pneumatic Dilatation.

Methods
A Hospital Based Quasi Interventional Study Was Conducted From May 2018 To December 2021. We Followed Clinical Status Of Patients Who Had Pd For Achalasia. All Patients Were Followed Up Periodically For A Minimum Of 2yrs. Structured Interviews Were Conducted Regarding Symptoms Severity, Health Related Quality Of Life And Patient Satisfaction Using Sf-8tm Health Survey Questionnaire (Minimum Score 0, Max Score 42) And Achalasia Severity Eckardt Score (No Symptom= 0 , Max Symptom Severity=12). Scores Were Presented As Median With Interquartile Range. Wilcoxon Signed Ranked Test Was Used For Statistical Analysis.

Results
40 Patients (55% Males, 45% Females) Were Treated By Pd. Mean Age Was 37 + 10yrs. On Evaluation, Pd Was Found To Be Very Effective In 37/40 Patients (92.5%). Only 3 Patients Required A 2nd Session Of Pd Over This Time Interval. No Significant Immediate Or Late Complication Was Noted. There Was Post Procedure Significant Improvement (P Value <0.05) In Achalasia Severity Eckardt Scores (10 Vs 2) As Well As Sf8 Tm Health Survey Scores (16 Vs 36) In The Follow Up Period.

Conclusion
Pd Is An Effective And Safe Long Term Therapy For Achalasia Patients. It Improves Health Related Quality Of Life And Patient Satisfaction In Long Term Follow Up.
Op44

Duodenal Laser Ablation For The Treatment Of Type 2 Diabetes: Preliminary Results Of First-In-Human Clinical Study

Dr. Jan Kral¹, Dr. Viktorie Kovarova¹, Ivana Lankova¹, Dr. Simona Kratochvilova¹, Dr. Marek Benes¹, Dr. Milos Mraz², Dr. Michal Kahle¹, Prof. Julius Spicak¹, Prof. Martin Haluzik¹

¹Institute For Clinical And Experimental Medicine, Prague, Czech Republic

Introduction

Type 2 Diabetes (Dm) Is A Severe Condition With The Continuous Incidence Rising, Impacting Individual Health, Quality Of Life, And Healthcare Burden. Bariatric Surgeries That Bypass The Duodenum Have Improved Glycemic Control In Dm Population. Improvement In Glycemic Control Begins Immediately Post-Surgery Before Any Weight Loss Associated Benefits And Remains Durable For Years Post-Procedure.

Methodology

Endoscopic Glycemic Management (Egm) (Digma System, Digma Medical Ltd., Israel) Is A Procedure Performing Serial Laser Ablations Of The Duodenal Submucosa. Procedure Selectively Blocks Neuronal Signals In The Submucosal Plexus, Interrupting Both Direct And Indirect Nutrient Sensing And Signaling.

Patients & Methods

The Main Aim Of Our First-In-Human Clinical Study Was To Assess Efficiency And Safety Of Egm Procedure In Patients With Type 2 Diabetes.

Results

In The Period Of Two Years, We Enrolled Altogether 31 Patients With Dm, Where We Performed Egm Procedure. All Patients Were Treated Only With Peroral Antidiabetics With Type 2 Diabetes Duration Less Than 15 Years And All Subjects Were Maintained On Stable Antidiabetic Medication Throughout Follow-Up. All 31 Subjects Completed The Procedure Successfully And There Were No Device Or Procedure Related Adverse Events Reported In The Study, Demonstrating Initial Safety And Feasibility Of The Egm Procedure. Twenty-One (21) Subjects In The Therapy Cohort Completed 6 Months Follow-Up With Mean Hba1c At Baseline Of 8.9% Reduced To 8.3% (-0.6%, P = 0.014, 95% Ci [-1.1%, -0.1%]). Eighteen Subjects In The Therapy Cohort Completed 12 Months Follow-Up With Mean Hba1c Reduction Of -0.4% (P = 0.062, 95% Ci [-0.8%, -0.0%]). Mean Body Mass Did Not Change Among The Therapy Cohort Subjects Through 6- And 12 Months Follow-Up.

Conclusions

First-In-Human Clinical Study Preliminary Data Show A Promising Future For Egm Therapy As A Modality In Treatment Dm. First Data Show A Strong Safety Profile And Feasibility Of The Egm Procedure.
Op45

Different Protective Effects Of Mucosal Protective Agents For Gastro-Esophageal Reflux In A Human Reconstructed Esophageal Epithelium Model

Dr Laura Ceriotti¹, Dr Paolo Buratti¹, Prof Enrico Stefano Corazziari², Marisa Meloni¹
¹In Vitro Innovation Center, Vitroscreen Srl, Milano, Italy, ²gastroenterology Department, Irccs, Humanitas Research Hospital, Rozzano, Italy

Background
Several Mucosal Protective Agents (Mpas) Are Widely Employed To Counteract Gerd Symptoms.

Aim
To Comparatively Assess The Efficiency And Timing Effect Of Three Different Mpas.

Methods
Caffeine And Lucifer Yellow (Ly) Were Used To Assess Epithelial Permeability And Barrier Integrity, Respectively. In An Acidic Environment (Ph 3.3), Three Mpas, Device A (Gerdoff® Protection), Device B (Esoxx® One), And Device C (Marial® Gel) Were Applied To A Prewetted Previously Validated Esophageal Epithelial Ho2e Model1-2 For 15 Min. A 0.5% Caffeine Solution Was Then Applied, And Its Penetration Kinetics Were Assessed At 1h And 2h In Acidic Environments (Ph= 3.3). Caffeine Permeated Into The Basolateral Compartment (Hplc-Uv) And Ly Paracellular Permeability Were Quantified 15 Min After Application Of The Caffeine. At The 15 Min Time Point, Device A Reduced Caffeine Permeation By 77.2% And Ly Flux By 30.4% Compared To The Untreated Control (P<0.05) And With A Faster Mode Of Action Than That Of The Other Devices. Transepithelial Caffeine Flux Was Reduced, Albeit With Different Timing And Efficiency, By All Three Compounds Up To The End Of The 2 Hour Experiment. At 1h, Device A Reduced The Caffeine Flux By 79.2%; Device B, By 67.2%; And Device C, By 37% (P<0.001 Device A Vs B And C). The Barrier Protective Effect Was Significantly Greater (P< 0.0001) At 1h With Device A (0.19% Caffeine Permeation/Min) Than With Device B And Device C (0.30% And 0.57% Caffeine Permeation/Min, Respectively).

Conclusions
The Tested Medical Devices Interact Differently With The Esophageal Epithelium, Being Device A More Efficacious And Faster Acting Than The Other Two Devices, With A Statistically Significant Reduction In The Caffeine Permeation At 1h And 2h, To Exert An Epithelial Protective Effect To Counteract The Noxious Acid Action.

References

Dr. Miguel Mascarenhas¹, Dr. João Afonso¹, Dr. Tiago Ribeiro¹, Dr. Pedro Cardoso¹, Dr. Patrícia Andrade¹, Dr. Helder Cardoso¹, Professor João Ferreira², Professor Dr. Guilheme Macedo³
¹centro Hospitalar São João, Porto, Portugal, ²faculty Of Engineering Of The University Of Porto, Porto, Portugal

Background And Purpose
Capsule Endoscopy (Ce) Revolutionized The Study Of The Small Intestine, Overcoming The Limitations Of Conventional Endoscopy. Nevertheless, Reviewing Ce Images Is Time And Resource-Consuming. Convolutional Neural Network (Cnn) Is An Artificial Intelligence Architecture With High-Performance Levels For Image Analysis. Protruding Lesions Of The Small Intestine Exhibit Enormous Morphological Diversity In Ce Images. Our Group Aimed To Develop A Cnn-Based Algorithm For Automatically Detecting Pleomorphic Small Bowel Protruding Lesions.

Methodology

Results And Discussions
A Convolutional Neural Network Was Developed Based On A Total Of 21320 Ce Images. Training And Validation Datasets Comprising 80% And 20% Of The Total Pool Of Images, Respectively, Were Constructed For The Development And Testing Of The Network. The Algorithm Automatically Detected Small Bowel Protruding Lesions With An Accuracy Of 97.1%. Our Cnn Had A Sensitivity, Specificity, And Positive And Negative Predictive Values Of 95.9%, 97.1%, 83.0%, And 95.7%, Respectively. The Cnn Operated At A Rate Of Approximately 355 Frames Per Second.

Conclusions
Our Group Developed An Accurate Cnn For Automatically Detecting Protruding Enteric Lesions With A Wide Range Of Morphologies. The Development Of These Tools May Enhance The Diagnostic Yield Of Ce.
Evaluation Of Therapeutic Effect Of Buspirone In Improving Dysphagia In Patients With Ineffective Esophageal Motility: A Double-Blind Randomized Clinical Trial

Dr Forugh Alborzi Avanaki, Dr. Elham Baghereslami, Mr Hesam Aldin Varpaei, Ms Narges Farhadi

Introduction
Ineffective Esophageal Motility (Iem) Is The Most Common Esophageal Motility Disorder Associated With Low To Moderate Amplitude Contractions In The Distal Esophagus In Manometric Testing. There Are Not Good Therapeutic Interventions For Treatment Of This Disorder. The Aim Of This Study Was To Investigate The Effect Of Buspirone On Iem.

Methods And Materials
The Present Study Was A Double Blind Randomized Clinical Trial Conducted In Imam Khomeini Hospital, Tehran. Patients Were Categorized Based On Random Numbers. Based On Random Score, Patients Were Given A Package Containing The Desired Medication/S. Half Of The Packets Contained 10 Mg (For 30 Days) Of Buspirone And 40 Mg (For 30 Days) Of Pantoprazole, And The Other Half Contained Only 40 Mg (For 30 Days) Of Pantoprazole. Patients' Dysphagia Was Scored Based On Mayo As Well As A Table Of Dysphasia Severity. Manometric Pressure Variables Were Also Recorded Before And After Treatment. Statistical Analysis Was Performed By Spss 26 Software.

Results
30 Patients (15 Pantoprazole And 15 Pantoprazole+ Buspirone) Were Randomly Assigned To Treatment (63.3%Female, Mean Age 46.33±11.15). None Of The Patients Had A History Of Opioid Use. Mayo Score, And Resting Les Pressure Significantly Changed After Treatment. The Mayo Score And Swallowing Disorder Questionnaire Significantly Decreased After Treatment In Both Groups Of Patients.

Conclusion
Treatment Of Iem Using Proton Pump Inhibitors (Such As Pantoprazole) Improves Patients' Clinical Condition And Quality Of Life. However, The Addition Of Buspirone To The Treatment Regimen Does Not Seem To Make A Significant Difference In The Treatment Of Patients.
Dupilumab Reduces The Emotional And Dysphagia-Related Impacts Of Eosinophilic Esophagitis To Improve Health-Related Quality Of Life

Jonathan M. Spergel¹, Juby A. Jacob-Nara², Evan S. Dellon³, Zhen Chen⁴, Tiffany Pela⁷, Angela Khodzhayev⁴, Arpita Nag⁵, Danen M. Cunoosamy⁵, Amr Radwan⁴, Siddhesh Kamat⁴, Eilish Mccann⁴
¹children’s Hospital Of Philadelphia, Philadelphia, Usa, ²sanofi, Bridgewater, Usa, ³university Of North Carolina School Of Medicine, Chapel Hill, Usa, ⁴regeneron Pharmaceuticals, Inc., Tarrytown, Usa, ⁵sanofi, Cambridge, Usa

Background And Purpose
Eosinophilic Esophagitis (Eoe) Substantially Impairs Quality Of Life (Qol). In The Phase 3 Liberty-Eoe-Treet Trial (Nct03633617) Conducted In Patients ≥12 Years, Dupilumab 300mg Weekly (Qw) Improved Clinical, Symptomatic, Histologic, And Endoscopic Aspects Of Eoe At Week 24 And Was Generally Well Tolerated. We Report The Effects Of Dupilumab On Qol In Liberty-Eoe-Treet.

Method

Results
At Baseline, The Most Burdensome Effects Of Eoe Were Related To Emotional Impact And Anxiety Around Dysphagia. Dupilumab Showed A Nominally Significant Reduction Vs Placebo In 6 Items In Parts A And B: “Bothered”, “Worried About Swallowing”, “Worried About Choking”, “Worried About Swallowing In Public”, “Social Activities”, “Sleep Disruption” (All Nominal P< 0.05), And 1 Additional Item In Part B (“Embarrassed”, Nominal P < 0.05). The Largest Placebo-Adjusted Change From Baseline To Week 24 Was Observed In Items Relating To Emotional Impact And Anxiety, Including “Worried About Swallowing In Public” (Part A: −0.90; Part B: −0.45), “Bothered” (−0.64; −0.53), “Worried About Swallowing” (−0.73; −0.65), And “Worried About Choking” (−0.61; −0.57).

Conclusions
Dupilumab 300mg Qw Improved Health-Related Qol In Patients With Eoe; Change Was Driven By Improvements In Emotional And Social Well-Being And Sleep.
Is It Possible To Withdrawal Ppi’s Therapy In Gerd Patients?
A Prospective Study On 216 Patients Using Hychsa (Gerd-Off)

Prof. Francesco Di Mario
university Of Parma, Parma, Italia,

Background And Study Aim
Therapy Of Gerd Involves Acid Suppression By Anti-Acid Or Proton Pump Inhibitors; This Schedule Can Fail To Relief Symptoms And Prevent Early Relapse In Nearly 30% Of Cases. We Evaluate The Effect Of A Medical Device, Based On An Oral Combination Of Hyaluronic Acid, Chondroitin Sulfate And Aluminum (Hychsa) In Patients Whit Gerd, In Comparison Whit Ppi Treatment.

Patients And Methods
We Selected 216 Patients (118 F, Mean Age 48 Yrs., Range 22-88), With Los Angeles Grade A Esophagitis, Typical Symptoms And Previous History Of Early Relapse. Patients Were Divided In Group A (112 Pts) Undergoing Ppi Full-Dose And Group B (78 Pts) Treated Whit A Melt-In-Mouth Medical Device (Hychsa, 1100 Mg:Gerd-Off©) Three Times A Day For 3 Months. Clinical Outcome Assessed By Visual Analogical Scale (Vas) And Symptomatic Score (S.S.). Vas And S.S. Collected At Baseline (T0) And After Three Months (T1). In A Second Schedule, 100 Pts From Group A (Group A1) Started A Three Months Therapy Taking Hychsa After Stopping Ppis.

Results
In Group A S.S. Was 2 (T0), And 1 At T1; Vas Was 7 (T0) And 2 At T1. In Group B Treated Whit Hychsa, S.S. Was 3 (T0) And 2 At T1; Vas Was 6 (T0) And 2 At T1. In Group A1 After 3 Months Taking Hychsa, S.S. Was 2 And Vas 2.

Conclusion
Oral Association Of Hychsa May Represent A Real Alternative To Ppi Therapy In Gerd Pts, By Both Improving Symptoms And Prevent Early Relapse.
Dupilumab Treatment Leads To Rapid And Sustained Improvements In Dysphagia

Marc E. Rothenberg⁴, Eilish Mccann², Alain M. Schoepfer³, Xian Sun², Tiffany Pela⁴, Angela Khodzhayev², Arpita Nag⁴, Danen M. Cunoosamy⁵, Siddhesh Kamat², Amr Radwan², Juby A. Jacob-Nara⁴
¹cincinnati Children’s Hospital Medical Center And University Of Cincinnati College Of Medicine, Cincinnati, Usa, ²regeneron Pharmaceuticals, Inc., Tarrytown, Usa, ³lausanne University Hospital, Lausanne, Switzerland, ⁴sanofi, Bridgewater, Usa, ⁵sanofi, Cambridge, Usa

Background And Purpose
Dysphagia is a particularly burdensome symptom of eosinophilic esophagitis (Eoe). In the phase 3 liberty-eoe-treet trial (Nct03633617) in patients ≥12 years, dupilumab 300mg weekly (Qw) improved clinical, symptomatic, histologic, and endoscopic aspects of Eoe at week 24 and was generally well tolerated; results were sustained up to 52 weeks. We present the effect of dupilumab on dysphagia symptom questionnaire (Dsq) scores in liberty-eoe-treet.

Methods
Liberty-eoe-treet was a 3-part trial. In parts A and B, patients were randomized to dupilumab 300mg Qw (42 in part A, 80 in part B) or placebo (39 in part A, 79 in part B) for 24 weeks. From part A, 40 dupilumab-treated and 37 placebo-treated patients entered part C to receive dupilumab 300mg Qw for an additional 28 weeks. Patients completed the Dsq daily; biweekly total scores were calculated, range 0–84 (higher scores indicate greater dysphagia frequency and severity).

Results
Baseline mean (standard deviation [Sd]) Dsq scores in parts A and B ranged from 32.2(12.66) to 38.4(10.70). At week 4, least squares mean change from baseline in Dsq total score (standard error) was –9.15(1.74) for dupilumab vs –3.50(1.88) for placebo in part A (P=0.0166), and –12.32(1.40) vs –6.44(1.43) in part B (P=0.0018). At week 24, results were –21.92(2.53) vs –9.60(2.79) in part A (P=0.0004) and –23.78(1.86) vs –13.86(1.91) in part B (P<0.0001). In patients who entered part C, mean (Sd) change in Dsq score from part A baseline to week 52 was –23.44(16.15) for dupilumab/dupilumab and –21.71(17.14) for placebo/dupilumab patients.

Conclusions
Dupilumab 300mg Qw significantly improved Dsq score vs placebo. Effects were seen as early as week 4 and maintained through 24 weeks in parts A and B and through 52 weeks in part C. Part C placebo/dupilumab patients saw improvement similar to that of dupilumab patients in part A.
Op51

Safety And Efficacy Of Fixed-Dose Combination Of Pantoprazole And Sustained Release Levosulpiride For Shorts-Term Therapy Of Gastroesophageal Reflux Disease In Patients Not Responding To Ppi Monotherapy

Dr. Yogesh Garje1, Dr. M. Murugesh2, Dr. Jitendra Anand3, Dr. Sushil Kumar Mahavar4, Dr. B. Ramesh Kumar5, Dr. Mukesh Mishra6, Dr. P. Shrvan Kumar7, Dr. Manoj Kumar Agrawal8, Dr. Pushparaj Karmarkar9, Dr. Vijay Kamat10, Dr. Narendra D Kulkarni11, Dr. Kalidas Biswas12, Dr. Maulik Doshi13, Dr. Piyush Patel14, Ms Shruti Dharmadhikari15, Dr. Suyog Mehta16, Dr. Sadhna Joglekar17

1sun Pharma Industries Limited, Mumbai, India, 2kovai Diabetes Speciality Centre And Hospital, Coimbatore, India, 3Kankan Hospital And Research Centre, Gandhinagar, India, 4sms Medical College And Attached Hospitals, Jaipur, India, 5osmania General Hospital, Hyderabad, India, 6Shat Ayu Multispeciality Hospital, Maharashtra, India, 7ganghi Hospital, Secunderabad, India, 8belle Vue Clinic, Kolkata, India, 9sanjeevan Hospital, Pune, India, 10Karnataka Institute Of Medical Sciences, Hubli, India, 11Dr Hedgewar Hospital, , Aurangabad, India, 12Medical College And Hospital, Kolkata, India, 13Sun Pharma Laboratories Limited, Mumbai, India, 14Sun Pharma Laboratories Limited, Mumbai, India, 15Sun Pharma Laboratories Limited, Mumbai, India, 16Sun Pharma Laboratories Limited, Mumbai, India, 17Sun Pharma Industries Limited, Mumbai, India

Background And Purpose

Approximately, 30% Of Gastroesophageal Reflux Disease (Gerd) Patients On Standard Doses Of Proton Pump Inhibitors (Ppis) Continue To Manifest Dyspeptic Symptoms. Levosulpiride, A Prokinetic, Regulates Gastric Emptying Time And Relieves Dyspepsia. Pantoprazole, The Long-Lasting Ppi, Inhibits Acid Secretion, Thus Preventing Damage To Gastric And Esophageal Mucosa. The Fixed-Dose Combination (Fdc) Of Levosulpiride Sustained Release (Sr) 75mg With Pantoprazole 40mg Forms A Comprehensive Treatment Option For Gerd.

Methods

This Phase Iv Study Enrolled 509 Indian Patients Of Gerd Not Responding To Ppi Monotherapy. Eligible Patients Were Prescribed Study Medication, To Be Taken Once Daily For 4 Weeks. Primary Endpoint Was Assessment Of Proportion Of Patients With Adverse Events (Aes) Or Serious Aes (Saes). Secondary Endpoints Were Change In Frequency Scale For The Symptoms Of Gerd Scale (Fssg) From Baseline, Change In Severity Of Symptoms Of Gerd By Likert Scale From Baseline, Cgi-I And Cgi-S Scale Score, And Evaluation Of Neurological Side Effects By Modified Simpson Angus Scale.

Results

Overall, 69 Patients Reported 79 Aes Of Mild To Moderate Intensity, Of Which 73 Aes Were Resolved And Outcome Of Remaining Was Unknown. No SaE Was Reported. Hyperprolactinemia Without Any Clinical Manifestations Was Observed In 9.8% Patients. No Neurological Side-Effects Were Reported. Significant Decrease (P<0.0001) In Fssg Score Was Observed At Day-14 (-39.4%) And Day-28 (-69.1%) Compared To Baseline. Statistically Significant (P<0.0001) Reduction In Likert Scale Score Indicating Severity Of Gerd Symptoms Was Observed At Day-14 (-22.8%) And Day-28 (-48.0%). For Approximately 90% Patients, Improvement Of Disease Condition Was Rated As Either ‘Very Much Improved’ Or ‘Much Improved’ On Cgi-I Scale. No Patient Was ‘Markedly Ill’, ‘Severely Ill’ Or ‘Most Extremely Ill’ As Assessed By Clinician On Cgi-S Scale At Week-4.

Conclusion

Fdc Of Pantoprazole 40mg- Levosulpiride Sr 75mg Was Effective And Well-Tolerated In Short Term Therapy Of Gerd.
Long Term Comprehensive Analysis Of Gastroesophageal Reflux After Poem

Background And Purpose
Peroral Endoscopic Myotomy (Poem) Is Nowadays Considered A Standard Method For Treatment Of Esophageal Achalasia. However, Its Benefits Are Tempered By The Risk Of Post-Poem Reflux Complications. Our Aim Was To Evaluate The Long-Term Impact Of Post-Poem Reflux On Patients Undergoing Poem At Our Center.

Methodology
We Retrospectively Analyzed The Prospectively Collected Data Of All Patients Who Underwent Poem Between December 2012 And April 2022. Patients Were Scheduled For Follow Up Visits At 3 And 12 Months After The Procedure And Annually Thereafter. Upper Gi Endoscopy, High-Resolution Manometry And 24-Hour Ph Monitoring Were Performed 3 Months After Poem; Endoscopy Was Repeated At 2-3 Years And At 6 Years Follow-Up.

Results
Poem Was Performed In 449 Patients. Follow-Up Visits At 48, 60, 72 Months Were Completed In 165, 135 And 78 Patients. Abnormal Acid Exposure Was Observed In 158/345 (45.8%) Patients At 3 Months. Reflux Esophagitis Was Diagnosed In 170/407 (41.8%) During Endoscopy Performed At 3 Months, In 80/222 (36%) At 24-36 Months And In 14/64 (21.9%) Patients 6 Years After Procedure. There Was A Significant Decrease Of Esophagitis Occurrence From 3 Months To 6 Years (P=0.002). Ppis Were Taken By 54.7%, 47.7% And 57.3% Of Patients 48, 60 And 72 Months After Poem. Regarding Severe Post-Reflux Complications, Barrett's Esophagus And Esophageal Cancer Weren't Detected In Any Of Our Patients. One Patient Developed Esophageal Peptic Stricture 2 Years After Poem Which Was Treated With 4 Sessions Of Balloon Dilation. Comparison Of Patients With Anterior And Posterior Myotomy Did Not Show Significant Differences.

Conclusion
The Rate Of Post-Poem Reflux Esophagitis Decreases Over Time And Almost No Patients Experience Gerd Symptoms On Daily Basis. However, Approximately 50% Of Patients Require Long-Term Antisecretory Treatment. Severe Post-Reflux Complications Are Rare, But Can Occur. Therefore, Patients After Poem Should Be Under Long-Term Surveillance.
Automatic Detection And Classification Of Pleomorphic Small Bowel Lesions With Different Bleeding Potential Using A Convolutional Neural Network: A Multicentric Study

Dr. Tiago Ribeiro1,2, Dr. Miguel Mascarenhas1,2,3, Dr. João Afonso1,2, Dr. Pedro Cardoso1,2, Prof. João Ferreira4, Dr. Patrícia Andrade1,2,3, Dr. Hélder Cardoso1,2,3, Prof. Miguel Mascarenhas-Saraiva5, Prof. Guilherme Macedo1,2,3

1department Of Gastroenterology, Centro Hospitalar Universitário De São João, Porto, Portugal, 2wgo Training Center, Porto, Portugal, 3faculty Of Medicine Of The University Of Porto, Porto, Portugal, 4faculty Of Engineering Of The University Of Porto, Porto, Portugal, 5manoph Gastroenterology Clinic, Porto, Portugal

Background And Purpose
Capsule Endoscopy (Ce) Enable The Detection Of Enteric Pleomorphic Lesions With Different Bleeding Potentials. However, Reading Ce Exams Is A Time-Consuming And Monotonous Task, Which Is Prone To Errors. Convolutional Neural Networks (Cnns) Are Highly Efficient Artificial Intelligence Tools For Image Analysis. Our Group Developed A Cnn-Based Model For Detecting And Differentiating Pleomorphic Small Bowel Lesions With Distinct Hemorrhagic Potential Using Ce Images.

Methodology
Our Group Developed, Trained, And Validated A Denary Cnn Based On Ce Images. Each Frame Was Labeled According To The Type Of Lesion (Lymphangiectasia, Xanthomas, Ulcers, Erosions, Vascular Lesions, Protruding Lesions, And Blood) By Three Experts In Ce. Saurin’s Classification Was Used To Estimate The Hemorrhagic Potential Of Lesions: P0 – Lesions Without Bleeding Potential; P1 – Lesions With Uncertain Bleeding Potential; P2 – Lesions With High Bleeding Potential; P3 – Luminal Blood. A Total Of 55380 Frames Of The Enteric Mucosa Were Obtained From 2565 Ce Exams From Two Different Centers (1483 From São João University Hospital And 1082 From Manoph Gastroenterology Clinic). Of The Total Image Pool, 90% Of The Frames Were Used To Create The Training Dataset, And 10% Used To Test The Network. The Patients Included In The Training Dataset Were Excluded From The Testing Dataset.

Results
The Model Had An Overall Accuracy Of 98.3%, A Sensitivity Of 89.6 %, And A Specificity Of 98.9%.

Conclusions
The Authors Developed A Cnn For The Automatic Identification And Classification Of Pleomorphic Lesions In Ce Videos And Tested It In Ai Naïve Patients. This Represents An Evolution In The Technology Readiness Level Into A Real-Life Clinical Setting That May Significantly Improve The Diagnostic Yield Of Ce Exams.
Comprehensive Evaluation Of Dysphagia In Down Syndrome

Dr. Lev Dorfman¹, Dr. Vinay Jahagirdar², Ms. Serena Kaul¹, Dr. Khalil El-Chammas¹,³, Prof. Ajay Kaul¹,³
¹cincinnati Children’s Hospital Medical Center, Cincinnati, United States, ²University Of Missouri Kansas City School Of Medicine, Kansas City, United States, ³Departments Of Pediatrics, University Of Cincinnati College Of Medicine, Cincinnati, United States

Background
The Primary Aim Of This Study Was To Describe And Correlate Pharyngeal And Esophageal Manometry Findings With Contrast Studies And Endoscopy In Patients With Down Syndrome And Dysphagia.

Methodology
Data Collected From EMR Included Demographics, Co-Morbidities, Symptoms, Mode Of Feeding, VFSS, Esophagram, Endoscopy With Biopsy Findings And Pharyngeal And Esophageal Manometry Metrics.

Results And Discussion
Twenty-Four Patients With Down Syndrome Underwent HRM For Evaluation Of Dysphagia. The Median Age Was 14.2 Years (IQR 7.6, 20.5), With A Male Predominance (75%).
Most Patients (14, 58.3%) Were Fed Orally, 7 (29.2%) Had Combined Oral And G/J-Tube Feeding, And 3 (12.5%) Patients Were On Exclusive Enteral Feeds.
EGD Was Performed In 23 (95.8%) Patients And Esophagitis Was The Major Finding On Biopsy In 11 (47.8%) Patients; Of These 11 Patients With Esophagitis, 9 (81.8%) Were Classified Endoscopically As Normal Or LA Grade A, And 2 (18.2%) Patients Were Classified As LA Grade B.
VFSS Was Performed In 16 (66.7%) Patients And All, Except One, Were Reported As Abnormal (15, 93.8%). Of These 16 Patients, 10 Had Combined Pharyngeal And Esophageal Manometry Performed And 6 Had Only Esophageal Manometry. Three Of 10 Patients (30%) Showed Abnormal Pharyngeal Metrics And 14 Of 16 (87.5%) Had Abnormal Esophageal Metrics.
Esophagram Suggesting Esophageal Dysmotility Was Reported In 14 Out Of 17 (82.4%) Patients. All 17 Patients (88.3%) Had HRM And 15 Were Diagnosed With A Motility Disorder. Three Patients (17.7%) With A Normal Esophagram Were Diagnosed With Esophageal Aperistalsis.
Overall, HRM Was Performed In All 24 Patients And 19 (79.2%) Were Diagnosed With A Motility Disorder.

Conclusion
In Our Cohort, 83.3% Of DS Patients With Dysphagia Had Pharyngeal And Esophageal Motility Disorder. High Resolution Manometry Provides Complementary Objective Data That May Be Critical In Tailoring Therapeutic Strategies In The Management Of These Patients.
Do Patients With Constipation Have A Methane-Producing Colonic Flora?

Dr. Christian Von Muhlenbrock\textsuperscript{1,2}, Dr. Ana Maria Madrid\textsuperscript{1}

\textsuperscript{1}universidad De Chile, Santiago, Chile, \textsuperscript{2}universidad De Los Andes, Santiago, Chile

Background And Purpose

The Lactulose Breath Test (L-Bt) is a non-invasive test proposed for the study of sugar malabsorption, orocecal transit time (Occt) and intestinal bacterial overgrowth (Sibo). The 2021 European Consensus Suggests the measurement of Methane (Ch4) to improve sensitivity in patients who do not excrete hydrogen (H2). The Methanogenic Flora has been associated with slow transit, its causal or incidental relationship with constipation is unclear. This is the first local experience report. Aims: To correlate patients with constipation, with the presence of Methanogenic Flora and compare with a non-constipated non-diarrheic group (Ncnd). Methodology: Retrospective, observational study of L-Bt between 2011–2020 with a standardized technique. Methanogenic Flora was considered more than 3 measurements > 12 Ppm in 180 min. We evaluated the total Ch4 production; high producers of Ch4 those that have 2 measures over 60 Ppm. We considered Bristol 1-2 for constipation and Bristol 6-7 for diarrhea. Statistical analysis with Mann-Whitney and Kruskal Wallis test. Results: 5,053 L-Bt were included, mean age 49 years (18–86), 81% women; 509 (10%) were exclusive producers of H2, 106 (2%) exclusive producers of Ch4 and 141 (2.7%) non-producers of H2 nor Ch4. The main results are observed in Table 1. Conclusions: Our local population had colonic flora producing both H2 and Ch4. No difference was observed in Occt. Patients with constipation had a higher total production of Ch4 and a higher proportion of flora with exclusive production of Ch4, compared to patients with Bristol 6-7.
Sieving Patients With Non-Celiac Gluten Sensitivity From Patients With Irritable Bowel Syndrome

Dr. Anam Ahmed1, Dr Alka Singh1, Ms Wajiha Mehtab3, Dr Ashish Chauhan1, Dr Mahendra S Rajput1, Dr Abhinav Anand1, Dr Ashish Agarwal1, Dr Prasenjit Das2, Dr Vineet Ahuja1, Dr Govind K Makharia1

1department Of Gastroenterology, All India Institute Of Medical Sciences, New Delhi, India, 2department Of Pathology, All India Institute Of Medical Sciences, New Delhi, India, 3department Of Home Science, University Of Delhi, New Delhi, India

Background And Purpose

Methods

Results
Of 492 Patients With Ibs, Aga Was Positive In 61(12.4%)[Iga-Aga, Igg-Aga And Both Positive In 33(6.7%), 17(3.5%) And 11(2.2%)] And Hence, Suspected To Have Ncgs. Of 61, 32 Agreed To Participate And Followed Gfd For 6-Weeks. Fourteen(43.7%) Didn't Respond To Gfd, Whereas 18(56.2%) Responded With >30% Improvement And 29(90.6%) With >20% Improvement In Top-Three Symptoms. All 18 Responsive Were Given Gluten Re-Challenge For 6-Weeks, Symptoms Recurred In 17 And Hence Were Confirmed To Have Ncgs. Hla Dq2/Dq8 Was Positive In 64.6% Aga Positive Patients. Significant Decrease In Aga Levels Was Observed In Ncgs Patients After Gfd. (P Value = 0.0001).

Conclusions
Approximately 12.4% Of Patients With Ibs Have Biological Evidence Of Gluten Sensitivity. Patients With Ibs Having Aga Positivity, At-Least Half Of Them Have 30% Improvement And 90% Have More Then 20% Improvement In Symptoms.
Weekend Outreach Endoscopy Services By Gastroenterologists As One Alternative Means Of Expanding Access To Service In Resource Limited Countries-An Ethiopian Experience.

Dr. Guda Roro¹

¹Addis Ababa University College Of Health Sciences, Addis Ababa, Ethiopia

Background And Purpose

Methodology
In Collaboration With Jimma Awetu Primary Hospital, Located 350km South West Of Addis Ababa, A New Gi Endoscopy Center Was Established Three Years Back. Four Nurses Were Trained Onsite To Handle The Equipment And Assist During The Procedure. They Also Recruit And Prepare Patient During The Working Days Of The Week.

Results And Discussion
The Service Continued Every Two Weeks. A Total Of 1985 Patients Were Served, 1573 Upper Gi Endoscopy(Egd) And 412 Colonoscopy Evaluations Performed For 800 Female And 1185 Male Patients With Age Raging From 7 To 90 Years. Duodenal Ulcer And Its Complication, Gerd And Malignancies (16.5%) Were The Commonest Egd Diagnosis. Colitis, Malignancies(15.5%) And Polyps(12.6%) Were Among The Commonest Colonoscopic Diagnosis. Benign Obstructive Lesions Constituted 6% Of Egds.

Conclusions
Weekend Out-Reach Endoscopy Services By Gastroenterologists Can Have A Significant Contribution In Improving Access To Endoscopy Services In Resource Limited Countries While Planning To Train And Place Full Time Staff In Peripheral Centers. Major Diseases Like Gastrointestinal Malignancies, Ulcer And Complications Are Common In Southwest Ethiopia.
Artificial Intelligence And Device-Assisted Enteroscopy: Automatic Detection Of Enteric Protruding Lesions Using A Convolutional Neural Network

Dr. Miguel Mascarenhas¹², Dr. João Afonso¹, Dr. Tiago Ribeiro¹, Dr. Pedro Cardoso¹, Dr. Hélder Cardoso¹², Dr. Patricia Andrade¹², Professor João Ferreira³, Professor Dr. Guilheme Macedo¹²

¹centro Hospitalar São João, Porto, Portugal, ²faculty Of Medicine Of The University Of Porto, Porto, Portugal, ³faculty Of Engineering Of The University Of Porto, Porto, Portugal

Background And Purpose
Device-Assisted Enteroscopy (Dae) Plays A Major Role In The Investigation And Endoscopic Treatment Of Small Bowel Diseases. Recently, The Implementation Of Artificial Intelligence (Ai) Algorithms In Gastroenterology Has Been The Focus Of Great Interest. Our Aim Was To Develop An Ai Model For The Automatic Detection Of Protruding Lesions (Pp) In Dae Images.

Methodology

Results And Discussions
A Total Of 17638 Images From 250 Patients Were Included. Our Model Had A Sensitivity And Specificity Of 95.0% And 99.7%, Respectively. The Ppv Was 99.3%, And The Npv Was 97.7%. The Auc Was 1.00. The Ai Model Developed, Introduces A Significant Technical Innovation By Enabling Panendoscopic Ai Analysis Of The All Gi Tract

Conclusions
Our Group Developed A Pioneer Ai Algorithm For The Automatic Detection Of Pleomorphic Protruding Lesions In The Gi Tract During Dae. The Development Of These Tools May Enhance The Diagnostic Yield Of Device-Assisted Enteroscopy.
Suggesting A Mechanism For "Irritable Bowel Syndrome" And Fibromyalgia-Like Syndromes As A Global Chronic Compartment-Like Syndrome: The Body And The Mind Are One Being

Dr. Shiloh Plaut

1 University of Nicosia, Cyprus

Background And Purpose


Methods

Systematically Searched Multiple Phrases In Medline, Embase, Cochrane, Pedro, And Medrxiv, Majority With No Time Limit. Inclusion/Exclusion Based On Title And Abstract, Then Full-Text Inspection. Additional Literature Added On Relevant Side Topics.

Results


Conclusions

"Fibromyalgia-Like Entities" Such As Ibs, When Severe, Resemble A Chronic-Compartment-Like-Syndrome-Of-The-Whole-Body And Can Lead To Pain And Visceral Organ Malfunction Due To A Network Of Contractile Fascial Myofibroblasts, At Least In Part. Treatment Should Focus On Lifestyle And Non-Pharmacological Modalities. The Body And Mind Are One Being.

Reference:

Application Of Artificial Intelligence For Identification Of Delayed Balloon Expulsion Test Using High-Resolution Anorectal Manometry Data And Integrated Pressurized Volume

**Prof. Myeongsook Seo**¹, Prof. Segyeong Joo²

¹department Of Internal Medicine, Gangneung Asan Hospital, University Of Ulsan College Of Medicine, Gangneung, South Korea, ²department Of Biomedical Engineering, Asan Medical Center, University Of Ulsan College Of Medicine, Seoul, South Korea

**Background**

Anorectal Manometry With The Push Maneuver Has A Limitation In Predicting Balloon Expulsion (Be) Test Results. We Developed A Frontier Model With Machine Learning To Identify Delayed Be Test Using Hram And Ipv.

**Methodology**

Three Hundred Constipated Patients (130 Male And 170 Female) Were Enrolled And Underwent Both Hram And Be Test From September 2020 To May Of 2021. Delayed Be Was Defined As A Requirement Of More Than 1 Min. Hram Profiles During Push Maneuver Were Converted Into Ascii Files And Analyzed Using A Matlab Program To Calculate Ipv By Multiplying The Amplitude, Distance, And Time. The Pressure Data And Ipv From Catheter Were Divided Into 40 Time Series Datasets During Push Maneuver. Convolutional Neural Networks (Cnns) And Long Short-Term Memory (Lstm) Network Were Applied For Prediction Of Be Test Results By Using Each Manometric Pressure Data And Ipv Parameters. The Cnns Extract Features Of Each Dataset And Lstm Learns Chronological Changes Of The Feature During Push Maneuver.

Results:

Of 130 Male, 61 (46.9%) Showed Early Be And The Remaining 69 (53.1%) Showed Delayed Be. Among 170 Female, 121 (71.2%) Showed Early Be And The Remaining 49 (28.8%) Showed Delayed Be. After The Receiver Operating Characteristic (Roc) Curve Analysis, Ipv Ratios Between The Upper 1 Cm And The Lower 4 Cm (Ipv14 Ratio) Were A Best Parameter At Predicting Be Test Results. Roc Yielded An Area Under The Curve (Auc) Of 0.88 For Male And 0.98 For Female In Identification Of Delayed Be Test Results.

**Conclusions**

We Applied Artificial Intelligence (Ai) To Classify Delayed Be Test Results Using Both Manometry Data And Ipv. Furthermore, The Developed Model Also Utilizes Temporal Changes Of Hram Data During Push Maneuver. This Study Demonstrates The Role That Ai Will Serve In The Interpretation And Classification Of Hram Studies.
Op61

Single-Strain Probiotics For The Management Of Acute Diarrhea In Children: A Randomized Comparative Study

Prof. Dhanasekhar Kesavelu1, Dr Nithya Franklyn, Dr Arya Kurup, Dr Shyamala J
1apollo Childrens Hospital, India

Background And Purpose
To Assess The Efficacy Of Probiotics In Managing Acute Gastroenteritis In Children, Including Reducing The Need For Inpatient Care And Antibiotics, Repeat Visits To Emergency Or Private Clinics, And Incidence Of Adverse Events.

Acute Gastroenteritis Is Characterized By Diarrhea, Vomiting, And Occasionally, Abdominal Pain And Fever. Treatments Include Oral Rehydration Solutions To Prevent Dehydration And Nutritional Damage And Zinc Supplementation To Reduce The Severity Of Diarrhea And Reoccurrence. Probiotics Are Effective In Reducing The Intensity And Duration Of Acute Gastroenteritis; However, Their Efficacy In The Indian Population Needs Further Investigation.

Methodology
In This Single-Center Open-Label Randomized Study, The Efficacy Of 3 Single-Strain Probiotics, Bacillus Clausii, Saccharomyces Boulardii, And Lactobacillus Rhamnosus Gg, As Adjuvant Therapy Along With Oral Rehydration Solution And Zinc Supplements In The Management Of Acute Gastroenteritis, Were Compared In 150 Children Aged 6 Months To 16 Years.

Results And Discussion
B. Clausii Was The Most Effective Single-Strain Probiotic In Our Study For The Management Of Acute Diarrhea In Children Across Various Parameters, Including Time To First Formed Stool, Reduction In The Duration Of Diarrhea, Reduced Hospital Admissions, And Earlier Recovery.

Conclusions
All 3 Probiotics Demonstrated No Adverse Effects. Readmission And Revisit Rates After Treatment With These Probiotics Were Extremely Low. B. Clausii Is Strongly Recommended As Adjuvant Therapy In Children With Acute Gastroenteritis.
Comparison Of Rose Vs Mose For Eus Guided Lymph Node Sampling Using Newer Generation Biopsy Needle

Dr. Kiran Mane, Dr Sridhar Sundaram, Dr Prachi Patil, Dr Shaesta Mehta, Dr Utkarsh Chhanchure

Background
Whether Rapid On-Site Examination (Rose) Increases Yield In Patients Who Undergo Endoscopic Ultrasound Guided Biopsy Has Been A Matter Of Debate. We Aimed To Compare Yield Of Eus Guided Biopsy With Smear Cytology With Adequacy Confirmed By Rose, Acquired Using The Same Needle While Sampling Lymph Nodes.

Methods
Consecutive Patients Who Had Undergone Eus-Guided Tissue Acquisition Of Lymph Nodes From January 2021 To May 2022 Were Included. Sampling Was Done Using 22g Acquiretm Needle (Boston Scientific Co.) In All Cases Using Slow Stylet Pull-Through Method. The First Pass Was Given For Rose To Assess Adequacy And Sent For Cytology Subsequently. The Endoscopist Then Collected Sample For Histopathology, Adequacy Of Which Was Confirmed By Macroscopic On-Site Evaluation (Mose- Presence Of At Least 4 Mm Length Of Core). Number Of Passes (Overall And For Rose Adequacy) Were Noted. Final Cytology And Histopathology Reports Were Compared For Diagnostic Accuracy.

Results: 42 Patients Were Included In The Study (Mean Age 50.2 Years; 61.3% Male). Median Largest Dimension Of Lesions Was 22 Mm (Iqr 16-32 Mm). In 13 (30.9%) Patients, Mediastinal Lymph Nodes Were Sampled And In 29 (69%), Abdominal Were Sampled. Diagnosis Of Malignancy Was Made In 9 (21.4%) Patients And Granulomatous Inflammation (Tuberculosis Vs Sarcoidosis) In 10 (23.8%) Patients. Median Number Of Passes Made Were 2 (Range 2-5). Only One Pass Was Taken For Rose In All Patients. Sensitivity And Specificity Of Mose With Histopathology For Lymph Node Sampling Is 97.6% And 100% Respectively. Sensitivity And Specificity Of Rose With Cytology Is 95.2% And 100% Respectively. On Mcnemar Test For Paired Data, There Was No Significant Difference Between Mose With Hpr And Rose With Cytology In Achieving An Optimal Diagnosis (P=1.00).

Conclusion
Rose Does Not Add Additional Value To Sampling Of Lymph Nodes Using Newer Generation Eus Biopsy Needles.
Real-Life Experience With The Use Of Tofacitinib In Colombian Patients With Moderate To Severe Ulcerative Colitis (Tofarecol).

Viviana Parra Izquierdo Viviana Parra-Izquierdo1, Juan Ricardo Márquez Juan  Márquez9, Fabián Juliao Baños Fabián Juliao Baños4, Pablo Galindo Pablo Galindo6, Juan Sebastián Frías-Ordoñez Juan Frías-Ordoñez6, Carlos Cuadros Carlos Cuadros5, Carlos Rojas Carlos Rojas6, Nelson Rojas Nelson Rojas6, Oscar Ardila Oscar Ardila10, German Tovar Fierro German Tovar-Fierro11, Rafael García Duperly Rafael García-Duperly12, Cristian Flórez-Sarmiento Cristian Flórez-Sarmiento3

Background And Purpose
Ulcerative-Colitis Is The Most Frequent Form Of Ibd In Colombia. New Therapeutic Options Such As Tofacitinib Are Recently Available. There Are No Real-Life Studies In Latin-America. The Objective Of This Study Is To Describe The Real-Life Experience In Colombian Patients With Uc Moderate-Severe, Treated With Tofacitinib.

Methods
Multicenter Descriptive Observational Study, Patients With Uc Moderate-Severe Treated With Tofacitinib, Who Received Induction-Phase Treatment (10mg Every 12hours) And Then Maintenance Therapy (5mg Every 12hours), Between June 2019 And June 2022. Continuous Variables Were Presented As Means With Standard Deviations (Sd). Categorical Variables Were Presented As Percentages.

Results: Thirty-Five Patients Were Included, 51.4%Were Women, The Average Age Was 37.46(Sd12.26) Years (Range 16-72). All Patients Had Moderate To Severe Uc; 74.3%Had Pancolitis, And 22.9%Left-Colitis. The Mean Age Of Diagnosis Was 32.14(Sd10.78) Years (Range 12.77-57.21). And The Mean Time Between Disease-Onset And Tofacitinib Initiation Was 5.19(Sd4.96) Years (Range 0.02-23.78). 28/35(80%) Patients Had Previously Failed Tumor-Necrosis-Factor-Inhibitors (17adalimumab, 19infliximab, And 1golimumab) And Twelve Patients Alpha4-Beta7-Integrin-Inhibitor (Vedolizumab). Five Patients Were Naïve To Any Biologic Drug. Eight Patients Had Extraintestinal-Manifestations. During Induction-Phase, 60%Achieved Clinical And Biochemical Remission. According To The ACG-Activity-Score, 62.9%Remained Achieved Mild Activity Or Remission. Endoscopically, 51.4%Of Patients Presented Mayo-Score1 And 11.4%Mayo-Score0. During The Maintenance-Phases, 13patients Achieved 6-Month Follow-Up, 84.6%Reported Clinical And Biochemical Remission. Information Was Obtained From 6patients At 12-Months, 83.33%Showed Clinical And Biochemical Remission.

Three Patients Reported Adverse Events (Severe Headache, Alopecia-Areata And Herpes-Zoster). Non-Severe Infections Were Reported In Only Three Cases. 42.9%Were Steroid-Dependent, And 22.9%Required Steroids As Rescue-Therapy. A Total Of 37.14%Of Cases Required Increase To 10mg Every 12hours During Maintenance And 17.1%Of Cases Required Withdrawal Of Tofacitinib, Due To Lack Of Efficacy.
Conclusions
This Is The Only Latin-American Study On Safety And Efficacy Of Tofacitinib, Being An Effective And Safe Therapeutic Alternative In The Management Of Moderate-Severe Uc In Our Population.
Comparing Per-Pass Performance Of Two Types Of Needles For Endoscopic Ultrasound-Guided Fine Needle Biopsy Of Pancreatobiliary Masses In A Randomized Trial

Dr. Mehdi Mohamadnejad¹, Dr. Masoud Sotoudeh¹, Dr. Vahid Mirzaie², Dr. Arash Nikmanesh¹
¹digestive Diseases Research Institute, Tehran University Of Medical Sciences, Tehran, Iran, ²rafsanjan University Of Medical Sciences, Rafsanjan, Iran

Eus-Guided Fine-Needle Biopsy (Eus-Fnb) Has Largely Replaced Fine-Needle Aspiration For Tissue Diagnosis Of Pancreatobiliary Mass Lesions. However, The Optimal Number Of Passes Required For The Diagnosis Of Malignancy Is Not Clear. We Aimed To Compare Per-Pass Performance Of Two Types Of Fnb Needles For The Detection Of Malignancy.

Methods
Patients With Solid Pancreatobiliary Mass Lesions (N=114) Underwent Randomization Between Biopsy With A Franseen Needle (Boston Scientific, Usa), And A Multi-Blade Three-Prong Tip Needle (Microtech, China). Four Passes Of Fnb Were Taken From Each Mass. Final Diagnosis Of Malignancy Was Made Based On Fnb Pathology, Surgery, Or A Follow-Up Of At Least 6 Months After Fnb. Cumulative Sensitivity Of Detection Of Malignancy By Eus-Fnb Was Calculated After Each Pass And Compared In Two Groups.

Results
Ninety Eight Patients (86%) Had A Final Diagnosis Of Malignancy, And 16 Patients (14%) Had Benign Disease. Eus-Fnb With The Franseen Needle Detected Malignancy In 44 Of 47 Patients (Sensitivity Of 94%; 95% Confidence Interval [Ci]:83%-98%), And With The Three-Prong Tip Needle In 50 Of 51 Patients (Sensitivity Of 98%; 95% Ci:90%-100%) (P: 0.36). Two Passes Of Fnb Detected Malignancy With 91% Sensitivity (95% Confidence Interval [Ci]:80%-97%) With The Franseen Needle, And 90% (95% Ci:79%-96%) With The Three-Prong Tip Needle. The Cumulative Sensitivities At Pass 3 Were 94% (95% Ci:83%-98%), And 96% (95% Ci:87%-99%), Respectively. Samples Collected With The Franseen Needle Had Significantly Higher Cellularity Than Samples Collected With The Three-Prong Tip Needle (P<0.01). However, There Was No Difference Between The Two Types Of Needles In Term Of Specimen Bloodiness.

Conclusion
There Was No Significant Difference In The Performance Of The Two Needle Types. However, The Franseen Needle Yielded Higher Cellularity Of The Specimen. Two Passes Of Fnb Are Required To Detect Malignancy With At Least 90% Sensitivity With Either Type Of Needle. Clinicaltrials.Gov No:Nct04975620
Op65

Interim Results In Evaluating The Efficacy Of A New Method Of Preventing Postmanipulative Pancreatitis

Prof. Alexey Korotkevich¹, Pavel Frolov³
¹hospital Nr.29, Novokuznetsk, Russian Federation, ²novokuznetsk Institute For Postgraduate Medical Education, Novokuznetsk, Russian Federation, ³emergency Hospital, Kemerovo, Russian Federation

Introduction And Objective

Methods

Results
The Overall Pattern And The Overall Incidence Of Known Complications (Pancreatitis, Pancreonecrosis, Bleeding, Perforation) Did Not Differ Significantly Between The Groups (Friedman Anova And Kendall Coeff. Of Concordance (Spreadsheet1) Anova Chi Sqr. (N = 5, Df = 2) = 2.375000 P =0.30498 Coeff. Of Concordance =0.23750 Aver. Rank R = 0.04687). The Frequency Of Pep And Pancreonecrosis Also Had No Significant Differences (X²=0.00-1.34, P=0.9835-0.2510). Group 3 Significantly More Often Used General Anesthesia (X²=15.87, P=0.0001). Group 1 Patients Had Significantly Shorter Hospital Stay Compared To Groups 2 And 3 (P=0.0000).

Conclusion
One Stage Ercp Plus Laparoscopic Cholecystectomy (Intra-Operative Ercp) Procedure Versus Two Stage Approach (Pre-Operative Ercp Followed By Laparoscopic Cholecystectomy) For The Management Of Symptomatic Cholelithiasis With Suspected Cbd Stones.

Dr. Sohail Hussain
ziauddin University Hospital Karachi, , Pakistan

Background
Choledocholithiasis Is A Prevalent Clinical Disease, With Symptomatic Cholelithiasis Occurring In 10%–20% Of People, 7–14% Of Cholecystectomy Patients, And 18–33% Of Patients With Acute Biliary Pancreatitis. Endoscopic Retrograde Cholangiopancreatography (Ercp) And Laparoscopic Cholecystectomy (Lc) Are The Best Options For Concurrent Gallstones And Common Bile Duct Stones.

Aim
This Study Aimed To Evaluate The Safety And Effectiveness Of Managing Choledocholithiasis In One Stage (Ercp + Laparoscopic Cholecystectomy) Compared To Two-Stage Procedures (Ercp Followed By Laparoscopic Cholecystectomy In Two Different Anesthesia).

Method
The Sample Size Of 179 Patients With Symptomatic Gallstones Underwent Ercp And Laparoscopic Cholecystectomy In A Tertiary Care Hospital In Karachi From December 2012 To December 2014, Out Of Which 41 Patients Went Through Single-Stage Management Under General Anesthesia, While 138 Patients Were Treated With Sequential Ercp And Laparoscopic Cholecystectomy.

Results
179 Patients Underwent Ercp And Laparoscopic Cholecystectomy, And The Results Were Compared; The Success Rate Was Found High In A One-Stage Group (95%) As Compared To A Two-Stage, With Fewer Complications When Gone Through One-Stage Management. The Success Rate Was Significantly High In The Stage One Group Than In The Stage Two Group (P= 0.03). The Mean Operative Time In The Stage Two Group (3.38 Hours) Was Longer Than The Stage One Group (2.24 Hours), And It Was Found To Be Highly Significant (P= 0.000). The Mean Length Of Hospital Stay Was Also Found Significant In Our Study As Stage One Had A Mean Length Of Hospital Stay Of 1.71 Days While Stage Two Had 3.46 Days (P= 0.000).

Conclusion
This Study Proved That This Modified Technique, I.E., One-Stage Ercp Combining Laparoscopic Cholecystectomy, Can Effectively Reduce The Number Of Complications, Increasing The Success Rate And Reducing Operative Time And Hospital Stay, Reducing Hospital Expenses.
Op67
The Intrahepatic Presence Of The Specific Bacterial Species Is Associated With The Alleviation Of Hepatic Steatosis In A Human Microbiota-Associated Murine Model

Dr. Saisai Zhang1, Dr. Hein Min Tun2, Mr. Hau-Tak Chau1, Dr. Fung-Yu Huang1, Dr. Tan-To Cheung3,4, Dr. Danny Ka-Ho Wong1, Dr. Lung-Yi Mak1,3, Prof. Man-Fung Yuen1,3, Prof. Wai-Kay Seto1,3
1department Of Medicine, School Of Clinical Medicine, The University Of Hong Kong, Hong Kong, China, 2hku-Pasteur Research Pole, School Of Public Health, The University Of Hong Kong, Hong Kong, China, 3state Key Laboratory Of Liver Research, The University Of Hong Kong, Hong Kong , China, 4department Of Surgery, School Of Clinical Medicine, The University Of Hong Kong, Hong Kong, China

Background
The Occurrence Of Metabolic Dysfunction-Associated Fatty Liver Disease (Mafld), Highly Associated With Obesity, Is Not Rare In Lean People. To Date, It Has Been Discovered That Bacterial Dna Is Present In The Liver Of Mafld Patients. Whether There Are Differential Intrahepatic Bacterial Profiles In Lean And Obese Mafld, And Their Functional Roles Are Yet Uncertain.

Methods
A Human Microbiota-Associated (Hma) Murine Model Was Established By Transplanting Fecal Microbiota Into C57bl/6j Mice Individually Using Fecal Slurry From Lean And Obese Mafld Donors (N=8 In Each Group). 16s Rrna Sequencing On V3-V4 Regions Was Used To Target The Bacterial Dna Extracted From The Liver Of Hma Mice. Microbiome Analysis On Bacterial Composition At Different Taxonomic Levels And The Microbial Functional Prediction Was Performed.

Results
Lean Recipient Mice Had Significantly Lower Intrahepatic Triglyceride Content (46.89±3.86 Mg/G Vs. 68.51±4.18 Mg/G, P=0.002) And Microbial Diversity (Chao 1 Richness: 207.00±15.21 Vs. 282.20±16.03, P=0.002) Than Obese Recipient Mice. Biomarker Discovery Analysis Showed That Streptococcus Oralis (Log₁₀ Lda Score 4.80, P=0.002) And Bacteroides Acidifaciens (Log₁₀ Lda Score 4.80, P=0.002) And Bacteroides Acidifaciens (Log₁₀ Lda Score 4.75, P=0.001) Were Significantly Enriched In The Liver Of Lean Recipient Mice When Compared To Obese Recipient Mice At The Species Level, Which All Correlated Negatively With Intrahepatic Triglyceride Levels (R=-0.755, P=0.001 And R=-0.801, P<0.001). The Predicted Flavin Biosynthesis I Pathway Was Significantly Enriched In Lean Recipient Mice When Compared To Obese Recipient Mice With The Highest Log₁₀ Lda Score Of 4.83 (P=0.046); And Was Correlated Positively With Bacteroides Acidifaciens (R=0.557, P=0.025).

Conclusion
Predictive Factors And Long-Term Outcomes In Patients With Bleeding Gastric Cancer: A Large Population-Based Study

Dr. Varocha Mahachai, Dr. Anya Kiattiweerasak, Dr. Bubpha Pornthisarn, Dr. Soonthorn Chonprasertsuk, Dr. Sith Siramolpiwat, Dr. Patommata Bhanthumkomol, Dr. Pongjarat Nunanan, Dr. Navapan Issariyakulkarn, Dr. Ratha-Korn Vilaichone

1International Center Of Excellence In Digestive Diseases And Gastroenterology Unit, Department Of Medicine, Thammasat University, Pathumthani, Thailand, 2Department Of Medicine, Chulabhorn International College Of Medicine (Cicm) At Thammasat University, Pathumthani, Thailand

Background
Gastric Cancer Is A Major Leading Cause Of Cancer-Related Death. Bleeding Gastric Cancer Is A Fatal Condition Associated With Poor Prognosis. The Aim Of This Study Was To Evaluate Long-Term Outcome And Predictive Factors Of Gastric Cancer Patients With Bleeding.

Methods
This Retrospective Cohort Study Was Conducted At Thammasat University Hospital, Thailand Between 2010-2018. Patients' Demographic Data, Histologic Features, Laboratory Results, Endoscopic Findings And Treatment Outcome Were Collected From Electronic Medical Database. Patients With Gastric Adenocarcinoma Were Enrolled And Followed Up For At Least 5 Years.

Results
A Total Of 161 Patients With Mean Age Of 60.4 Years Were Included. There Were 80 (50.3%) Men And 81 (49.7%) Women. Of All 161 Patients With Gastric Cancer, 53 (32.9%) Experienced Upper Gi Bleeding (Ugib). Patients With Bleeding Gastric Cancer Significantly Had Comorbidities Such As Hypertension And Chronic Kidney Disease Than Non-Gi Bleed Group (39.6% Vs 21.3%, P=0.023 And 13.2% Vs 2.8%, P=0.015; Respectively). There Was No Difference In Baseline Characteristics And Initial Presentations. The Prevalence Of Smoking And Alcohol Drinking In Ugib Groups Were Significantly More Common Than Non-Bleeding Groups (30.2% Vs 10.2%, P=0.003 And 35.8% Vs 15.7%, P=0.008). In Multivariated Analysis, Abdominal Pain Was An Independent Risk Factor For Acquiring Ugib In Gastric Cancer Patients (Or=3.01,95%CI=1.40-6.46, P=0.005). 1-Year And 5-Year Survival Rates In Gastric Cancer With Ugib Were 47.2% And 5.7%. Successful Endoscopic Treatment Was Achieved In 64.7% Of Patient With Bleeding Gastric Cancer. Combination Of Endoscopic Techniques Provided Higher Rate Of Successful Hemostasis Compare With Single Modality (85.7% Vs 50%).

Conclusions
Ugib Was A Fatal Condition In Gastric Cancer Patients Lead To Poor Outcome And Grave Prognosis Especially Patents With Rebleeding. The Clinical Presentation With Abdominal Pain In Gastric Cancer Patient Might Be A Good Predictor For Acquiring Bleeding Condition. Combination Of Endoscopic Modalities Provided Superior Rate Of Achieving Hemostasis Control.

Keywords: Gastric Cancer, Upper Gastrointestinal Bleeding, Long-Term Outcomes
Assessment Of Burden Of Partial Response To Standard Doses Of Proton Pump Inhibitors In Patients With Gastroesophageal Reflux Disease: A Real-World Evidence Study

Dr. Neeraj Markandeywar1, Dr. Yogesh Garje2, Dr. Chintan Khandhedia3, Ms. Shruti Dharmadhikari4, Dr. Suyog Mehta5, Dr. Sadhna Joglekar6

1sun Pharma Laboratories Limited, Mumbai, India, 2sun Pharma Industries Limited, Mumbai, India, 3sun Pharma Laboratories Limited, Mumbai, India, 4sun Pharma Laboratories Limited, Mumbai, India, 5sun Pharma Laboratories Limited, Mumbai, India, 6sun Pharma Industries Limited, Mumbai, India

Background And Purpose
Mainstay Of Gastroesophageal Reflux Disease (Gerd) Treatment Includes Proton Pump Inhibitors (Ppis). However, Several Studies Showed That Up To 40% Patients Have Either Partial Or No Response To Standard Dose Of Ppis. Though There Have Been Clinical Studies To Assess Burden Of Partial Responders To Ppis, Only Few Are Conducted In Real-World Settings.

Methods
This Electronic Medical Record (Emr)-Based Study Was Planned To Understand The Burden And Clinical Profile Of Partial Responders To Standard Dose Of Ppis. Additionally, Prescription Pattern Of Ppis Across Various Medical Specialties, Physician’s Approach For Treating Partial Responders, And Effectiveness Of Pantoprazole Dual Delayed Release (Ddr) 80mg Formulation Was Assessed.

Results
Emrs Of 5205 Patients Were Included In The Analysis, 38.02% Patients Were On Rabeprazole And 36.62% Patients Were On Pantoprazole. Mean Age Of Patients Was 53.33 Years And Most Were Males (55%). Heartburn Was The Chief Complaint As Reported By Patients (76.02%). Half Of The Patients Had Cardiovascular Comorbidity, With Dyslipidemia Being Most Common. Type-2 Diabetes And Diabetic Neuropathy Were Among Other Common Comorbidities. Pantoprazole And Rabeprazole Were The Most Preferred Ppis Across Specialties. Overall, Burden Of Partial Responders To Ppis Was 41.7% (2173/5205). Among Partial Responders, Maximum Patients Were Managed With Addition Of Other Drugs (N=1456). Followed By Switch-Over To Other Ppi (N=542) And Change In Dose Or Frequency (N=317). Both Pantoprazole Ddr 80 Mg And Pantoprazole 40 Mg Twice-Daily Showed Significant Reduction In Gerd Symptoms (Heartburn, Regurgitation, Abdominal Pain, Pain On Food Intake, Nausea, Vomiting, Belching, Bloating, And Day And Night Symptoms) From Baseline To Week 4 And Week 8.

Conclusion
As Evident From This Study, Burden Of Partial Responders Is As High As 41.7%. Additionally, Both Pantoprazole Ddr 80mg Once-Daily And Pantoprazole 40mg Twice-Daily Regimens Demonstrated Significant Reduction In Gerd Symptoms From Baseline To Week-8 In Partial Responders.
Op70

Percutaneous Spyglass Through Biliodigestive Derivation For Intra-Hepatic Stricture On A Late Liver Transplant Case

Dr. Luis Savio1, Dr. Danny Gerald1, Dr. Mariana Hackel1, Dr. Gabriela Mendia1, Dr. Ricardo Calado1, D Jorge Padilla1
1bp, Sao Paulo, Brazil

Background And Purpose

Methods

Results

Conclusions
Percutaneous Spyglass Provides A Less Invasive Approach To Establish Biliary Drainage Across Recurrent Episodes Of Cholangitis And Intra-Hepatic Calculi.
The Role Of Serum Glypican-3 As A Novel Biomarker In The Diagnosis Of Hepatocellular Carcinoma In Lagos, Nigeria.

Dr. Chinenyew Nwok1, Dr Emuobor Odeghe1, Dr Ganiyat Oyeleke1, Dr Ufuoma Salami1, Dr Obioma Anomneze1

1Lagos University Teaching Hospital, Ile-Araba, Nigeria

Background And Purpose
Glypican-3, A Heparan Sulphate Proteoglycan That Is Highly Expressed In Hepatocellular Carcinoma Tissue, Has Been Evaluated As A Diagnostic Biomarker, With Conflicting Results. The Aim Of Our Study Was To Determine The Serum Levels Of Glypican-3 In Cases With Liver Cancer As Well As In Two Categories Of Controls: Subjects With Chronic Liver Disease And Apparently Healthy Subjects. We Compared The Sensitivity And Specificity Of Glypican-3 With Alpha-Foetoprotein And Determined The Usefulness Of Combining Glypican-3 And Alpha-Foetoprotein In The Diagnosis Of Hepatocellular Carcinoma.

Methods
One Hundred And Eighty-Nine Subjects Were Evaluated, 63 With Hepatocellular Carcinoma, 63 With Benign Chronic Liver Disease And 63 Apparently Healthy Subjects. Serum Glypican-3 And Alpha-Foetoprotein Levels Were Measured Using Commercially Available Enzyme-Linked Immunosorbent Assays (Elisa). Diagnostic Accuracy Was Analysed Using The Receiver Operating Characteristics (Roc) Curve.

Results
The Median (Ng/ML) Serum Levels Of Glypican-3 Were Similar Among The Three Study Groups At 28.7 (15.4-45.4) In Hepatocellular Carcinoma Group, 31.6(8.6-59.4) In The Chronic Liver Disease Group And 35.3(20.0-60.2) In The Healthy Control Group (P Value=0.176). The Sensitivity And Specificity Of Glypican-3 Was 73% And 30% Respectively Based On A Receiver Operating Characteristic (Roc) Curve –Derived Optimum Cut-Off Level ≥17.8 Ng/ML. The Sensitivity And Specificity Of Alpha-Foetoprotein Were 19.0% And 98.4% At ≥400ng/ML. The Area Under The Receiver Operating Characteristic Curve (Auroc) For Alpha-Foetoprotein Was 0.784 And Was Significantly Larger Than That Of Glypican-3 Which Was 0.444(P <0.001). When Glypican-3 And Alpha-Foetoprotein Were Combined, The Sensitivity, Specificity And Auroc Were 17.6%, 96.8%, And 0.708 Respectively.

Conclusion
Glypican-3 Was Not Useful In The Diagnosis Of Hepatocellular Carcinoma. However, Its Accuracy Increased When Combined With Alpha-Foetoprotein, Though This Was Less Than That Of Alpha-Foetoprotein Alone.
High Efficacy Of Standard Triple Therapy By Adding Probiotic Supplement For H. Pylori Treatment In Area Of High Clarithromycin Resistance: A Randomized, Placebo-Controlled, Double-Blind Study

Dr. Anya Kiattiweerasak¹, Dr. Bubpha Pornthisarn¹, Dr. Soonthorn Chonprasertsuk¹, Dr. Sith Siramolpiwat¹,², Dr. Patommata Khanthumkomol¹, Dr. Pongjarat Nunanan¹, Dr. Navapan Issariyakulkarn¹, Dr. Varocha Mahachai², Dr. Ratha-Korn Vilaichone¹,²

¹Thammasat University, Khlong Luang, Thailand, ²Chulabhorn International College Of Medicine (Cicm) At Thammasat University, Khlong Luang, Thailand

Background
H. Pylori Infection Is Major Risk Factor For Gastric Cancer. Standard Triple Therapy Has Limited Efficacy In Thailand (27.1% Of Clarithromycin Resistance). Adding Probiotic Could Increase H. Pylori Eradication Rate And Reduce Adverse Events. This Study Aimed To Evaluate Efficacy Of Standard Triple Therapy With Probiotic Supplement For H. Pylori Eradication In Area Of High Clarithromycin Resistance.

Methods: This Preliminary Report Of Double-Blind Randomized Placebo-Controlled Study Was Performed During July 2020 To January 2022. Patients With H. Pylori Gastritis Were Randomized 1:1 To Receive 14-Day Standard Triple Therapy With Probiotic Or Placebo. Treatment Regimen Consisted Of 30 Mg Lansoprazole Twice Daily, 1g Amoxicillin Twice Daily, And 1g Clarithromycin Mr Once Daily. Probiotic Capsule (Lacidofil®) Composed Of L.Helveticus And L.Rhamnosus Was Given Twice Daily. Successful H. Pylori Eradication Was Defined As Negative 13c-Urea Breath Test At Least 4 Weeks After Completion Of Treatment.

Results
50 Patients Were Randomized Into 14-Day Regimens With Or Without Probiotic. Mean Age Of Patients Was 54.3±10.6 Years (51% Males And 49% Females). Baseline Demographic Data Were Not Different Between Groups. Eradication Rates In Those Received 14-Day Regimen Plus Probiotic Supplement Were 92% And 83.3% With The 14-Day Regimens With Placebo. However, There Was No Statistical Significance In The Eradication Rated Between Two Groups (P=0.417). Antibiotic Susceptibility Tests Performed By E-Test And Genotype® Helicodr Demonstrated Metronidazole And Clarithromycin Resistance Rates Of 38.9% And 33.3%, Respectively. Common Side Effects Which Were Diarrhea, Vomiting, Bloating, And Bitter Taste Were Significant Lower In Probiotic Supplement Than Placebo Group With Or 5.24 (95%CI 1.22-22.4, P=0.026), Or 17.1 (95%CI 1.98-148.45, P=0.01), Or 9.82 (95%CI 1.11-87.9, P=0.04) And Or 12 (95%CI 1.36-105.41, P=0.025, Respectively.

Conclusions
14-Day Standard Triple Therapy With Probiotic Provided Excellent Eradication Rate Of H. Pylori Infection In Area Of High Clarithromycin Resistance. Adding Probiotic Can Also Reduce Adverse Events.
Op73

Zinc Carnosine-Based Modified Bismuth Quadruple Therapy Versus Standard Triple Therapy For Helicobacter Pylori Eradication: A Prospective Open-Label Randomized Study

Dr. Ali Choukair

cmc Dubai, Dubai, United Arab Emirates


Methods

Ninety-Two Patients With Dyspepsia Symptoms And Positive 13c-Urea Breath Test Were Randomly Assigned In To Two Groups. The First Group (Control Group) Was Treated For 14 Days Using Standard Triple Therapy (Tt) Protocol: Esomeprazole (40 Mg Twice Daily), Amoxicillin (1 G Twice Daily) And Clarithromycin (500 Mg Twice Daily). On The Other Hand, The Second Group Were Prescribed A 10-Day Course Of Modified Bismuth Quadruple Therapy (Mbqt) Fortified With Zinc Carnosine: Tt In Addition To Bismuth Subcitrate (240 Mg Twice Daily) And Zinc Carnosine (75 Mg Twice Daily). A Repeated 13c-Urea Breath Test Was Done 4 Weeks After The Completion Of The Eradication Therapy.

Results

There Were No Demographic Differences Between The Two Groups. The Eradication Rate Was 93.5% (43/46) In The Mbqt Group Compared To 69.6% (32/46) In The Tt Group (P = 0.003). Besides Dizziness, Which Was Recorded In Mbqt Group, There Were No Significant Differences In Side Effects Between The Two Groups.

Conclusion

10 Days Of Modified Bismuth Quadruple Therapy Fortified With Zinc Carnosine Is Superior To 14 Days Of Conventional Triple Therapy In Eradicating Helicobacter Pylori Infection, With No Additional Significant Adverse Events.
Op74

Usefulness Of Meld And Meld-Na For Predicting Mortality In Cirrhotic Patients With Spontaneous Bacterial Peritonitis

Prof. Laith Al-Rubaiyi, Dr Ali Al-Adhami, Dr Catherine Coxeter-Smith
1st Mark’s Hospital, London, United Kingdom

Background
Spontaneous Bacterial Peritonitis (Sbp) is a common infection in cirrhotic patients with ascites. Currently, the accuracy of the model for end-stage liver disease (Meld) and Meld-sodium (Meld-Na) as prognostic scores in this cohort is unclear. This study aimed to evaluate and compare the accuracy of Meld and Meld-Na for predicting 90-day mortality and determine whether the mortality risk estimates they provide accurately reflect the poor prognosis of Sbp patients.

Methods
Cirrhotic patients with Sbp were retrospectively identified from ascitic fluid samples sent for microscopy, culture and sensitivity analysis (1/1/18-31/12/20) and a previous audit. Meld and Meld-Na scores at diagnosis were calculated and associations with 90-day mortality were assessed using univariate analysis. Receiver operator characteristic curves were compared, and standardised mortality ratios (Smrs) were calculated by comparing the number of deaths observed to the number predicted by Meld and Meld-Na.

Results
Of the 567 patients identified, 15 cirrhotic patients with Sbp were included. 90-day mortality was 66.7% (10/15). Only concurrent hyponatremia (<135mmol/L) was associated with mortality (6/10 non-survivors vs 0/5 survivors, P=0.04). The difference in Meld and Meld-Na’s C-statistic was not significant: 0.66 (95% CI: 0.35-0.98) vs 0.74 (95% CI: 0.47-1.0) respectively (P=0.72). Patients with a Meld-Na >18.5 had significantly higher 90-day mortality than patients with Meld-Na ≤18.5 (88.9% (8/9) vs. 33.3% (2/6), P=0.05). The Smr (95% CI) for each Meld decile evaluated was 33.3 (0-79.5), 11.1 (0.2-22.0) and 3.4 (0-7.0) for scores ≤9, 10-19 and 20-29 respectively. For each Meld-Na tertile these were: 25 (0-59.6), 5.2 (0.1-10.3) and 2.7 (0.1-8.1) for scores <17, 17-26, ≥27 respectively.

Conclusion
In a small cohort of cirrhotic patients with Sbp, the Meld’s accuracy in predicting 90-day mortality was limited. Meld-Na’s accuracy was higher but not significantly. Both scores consistently underestimated participants’ mortality, therefore future studies could evaluate the accuracy of alternative prognostic scores in this patient group.
Op75

The Evaluation Of Patients With Uninvestigated Dyspepsia With Robotically Maneuvered Magnetically Controlled Capsule Endoscopy (Rmce) Combined With Real-Time Artificial Intelligence-Based Lesion Detection: A Prospective Study

Dr. László Madácsy², Dr. Ádám Finta², Dr. Krisztina Helle¹, Dr. Milán Szalai², Dr. László Oczella², Dr. Georgina Ollé¹, Dr. Andras Rosztoczy¹

¹University Of Szeged, Szeged, Magyarország, ²Endo-Kapszula Health Center And Endoscopy Unit, Szekesfehérvár, Magyarország

Background
Capsule Endoscopy Is The Gold Standard, Non-Invasive Method For Examining The Small Bowel. The New, Robotically Maneuvered And Magnetically Controlled Capsule Endoscopy (Rmce) System (Ankon, Anx Robotics) Has Been Developed To Investigate Esophageal, Gastric And Duodenal Disorders.

Aim
To Analyze The Feasibility And Efficacy Of The Ankon Rmce System In Patients With Uninvestigated Dyspepsia In Whom Routine Upper Gi Endoscopy Was Not Indicated.

Patients And Methods: Two Hundred And Seventy Patients With Uninvestigated Dyspepsia Were Prospectively Enrolled. All Subjects Were Under The Age Of 50 Years And Were Free Of Any Alarm Symptoms And Were Submitted To A H.Pylori 13c Urea Breath Test Before The Rmce. The Stomach Was Examined By Manual Control And All Three Standardized, Pre-Programmed Algorithms.

Results
A Total Of 270 Patients Were Examined (Mean Age: 38 Years, F/M:108/162). A Real-Time, Artificial Intelligence-Based Focal Lesion Detection Was Applied During Rmce. H.Pylori Positivity Was Detected In 28.6% Of All Patients. Rmce Of The Stomach Was Negative In 40(14.8%) Or Depicted Minimal Gastritis In 102(37.8%) Patients. Gastritis With Or Without Erosions Were Detected In 76(28.1%) Patients, 45(16.7%) Had Signs Of Duodenal-Gastric Bile Reflux, 25(9.2%) Had Foveolar Hyperplasia, 9(3.3%) Solitary Gastric Polypoid Lesions, 6(2.2%) Proximal Corpus Gastritis, 5(1.9%) Gastric Ulcer, 4(1.5%) Suspected Intestinal Metaplasia, 3 (1.1%) Vascular Abnormalities , And 1 (0.3%) Had A Focal Flat Gastric Lesion Suggestive For Early Malignancy. Based On The Results Of Rmce Gastrscopy With Biopsy Was Indicated And Performed On The Same Day In 31 Cases (11.5%), While 97 (35.9%) Received Medical Therapy With Follow-Up.

Conclusions
Rmce Is A Feasible And Effective Non-Invasive Method For The Visualization Of The Entire Mucosal Surface Of The Stomach In Patients With Uninvestigated Dyspepsia. This Method May Open New Horizons For Upper Gastrointestinal Screening Programs Without Patient Discomfort And Need For Sedation.
Comparison Of Who Guidelines For Chronic Hepatitis B Treatment Eligibility With Easl And Local Guidelines

Dr Zeinab Imam\(^1\), Dr. Hajar Mohammad\(^1\), Dr. Omer Kheir\(^1\), Dr Fatima Abbas\(^1\), Dr Hala Abdalla\(^1\)

\(^1\)national Centre For Gastrointestinal And Liver Diseases (NcglD), Wgo, Khartoum, Sudan

Background And Purpose
The World Health Organization (Who) Established A Criterion To Evaluate The Need For Treatment For Individuals With Chronic Hepatitis B Infection In Low Health Settings. The European Association For The Study Of The Liver (Easl) Treatment Criteria, Based On (Hbv Dna, Liver Enzymes, Histology, Or Fibroscan) As Standard Reference To Provide General Recommendations For The Management Of Chronic Hepatitis B. Therefore, The Aim Was To Assess The Accuracy Of The Who And Local Guidelines In Assessing The Eligibility For Treatment Among Hbv Patients Using The Gold Standard Easl Criteria As A Reference.

Methods
This Is A Cross-Sectional Hospital-Based Study That Included 167 Participants. The Study Population Was All Treatment Naïve Hepatitis B Patients Attending Liver Clinics, Excluding Those With Hiv Or Hcv Co-Infection, Pregnant Ladies, Or The Presence Of Hcc. Data Were Collected Using A Questionnaire Documenting The Socio-Demographic Characteristics And Investigation Including Hbeag, Hbv Dna Level, Platelet Count, Alt, Ast, Abdominal Ultrasound And Fibroscan.

Results
The Mean Age Of The Participants Were 40±15 Years. Hbeag Was Found To Be Positive In 32(19%) Patients. Fifty Percent Participants Were Fulfilling The Easl Guidelines, (45.5%) Were Eligible For Local Guidelines, (26.3%) Met The Criteria For Who Guidelines With Dna, And (21%) Fulfilled The Who Guidelines Without Dna (P<0.001). The Area Under The Receiver Operating Characteristic [Auroc] For Who Criteria With Dna Was 0.606 (0.520 – 0.700) With Sensitivity Of 63% And A Specificity Of 84.3% (P=0.015), While The Local Guidelines Had An Auroc 0.833 (0.767 – 0.898) With Sensitivity Of 87.6% And A Specificity Of 88.0% (P<0.001) And The Who Criteria Without Dna Showed An Auorc 0.517 (0.429 – 0.604) Sensitivity (26.6%) And Specificity (80.7%) (P=0.709).

Conclusion
The Who Guidelines With And Without Dna Have Limited Sensitivity And Specificity In Detecting Hbv Patients Eligible For Treatment.
Op77

The Pattern And Long Term Follow Up Of Covid-19 Related Abnormal Liver Blood Tests

Prof. Laith Al-Rubaity
1st Mark’s Hospital, United Kingdom

Objective
Acute Covid-19 Is Well-Known To Cause Abnormalities In Liver Blood Tests (Lbts). This Study Aims To Identify What Are The Long-Term Implications Of Covid-19 On Lbts.

Methods
A Retrospective Cohort Study That Examined The Lbts Of Patients Admitted With Covid-19 Both During Acute Infection And For Up To One Year. R Factor Was Used To Identify Type Of Liver Injury. Χ² Test And Fisher Exact Was Used For Statistical Analysis With P<0.05 Being Considered Significant.

Results
Data Was Collected On 373 Patients. During Acute Infection, 57.5% Of Patients Showed At Least One Raised Lbt (Alt, Alp And/Or Bilirubin). Male Patients Were More Likely To Develop Lbt Abnormalities Than Females (74.5% Versus 25.5%; P<0.001). Increased Lbt Abnormalities Seen In Patients Requiring Itu Admission Compared To Those With Ward Based Care (87% Versus 51% Respectively; P<0.001). During Short Term (1-5 Months Post Discharge) And Long-Term (>5 Months Post Discharge) Follow-Up, Lbt Abnormalities Were Seen In 31.3% And 24% Of Patients Respectively. In Both The Acute Setting And Long-Term Follow-Up, Cholestatic Or Mixed Injury Types Were Most Commonly Seen (Acute; 41.1%, 41.6% Respectively, Long-Term; 50.0%, 44.4% Respectively).

Discussion
Our Data Suggests That Up To One In Four Patients Have Persistent Lbt Abnormalities Up To One Year Following Covid-19. Future Research Is Needed To Investigate The Clinical Significance Of This Lbt Abnormalities And Whether There Are Interventions, Pharmacological Or Otherwise, That Could Reduce Covid-19 Related Liver Injury, Both In The Acute Setting, And Longer-Term.
<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anand, Jitendra</td>
<td>128</td>
</tr>
<tr>
<td>Bijesh, Savitha</td>
<td>315</td>
</tr>
<tr>
<td>Farhadi, Narges</td>
<td>499</td>
</tr>
<tr>
<td>Koshy, Anita</td>
<td>315</td>
</tr>
<tr>
<td>Kumar, B. Ramesh</td>
<td>128</td>
</tr>
<tr>
<td>Mahavar, Sushil Kumar</td>
<td>128</td>
</tr>
<tr>
<td>Nasserí-Moghaddam, Siavosh</td>
<td>430</td>
</tr>
<tr>
<td>Siramolpiwat, Sith</td>
<td>222</td>
</tr>
<tr>
<td>Abassi, Zaid</td>
<td>368</td>
</tr>
<tr>
<td>Abbas, Fatima</td>
<td>134</td>
</tr>
<tr>
<td>Abdalla, Hala</td>
<td>134</td>
</tr>
<tr>
<td>Abdelmoety, Amr</td>
<td>123</td>
</tr>
<tr>
<td>Abdelmoety, Hoda</td>
<td>123</td>
</tr>
<tr>
<td>Abdulzada, Cavad</td>
<td>250</td>
</tr>
<tr>
<td>Addajou, Tarik</td>
<td>708</td>
</tr>
<tr>
<td>Afonso, João</td>
<td>360, 381, 323, 420, 358</td>
</tr>
<tr>
<td>Agarwal, Ashish</td>
<td>345</td>
</tr>
<tr>
<td>Agrawal, Manoj</td>
<td>128</td>
</tr>
<tr>
<td>Ahuja, Vineet</td>
<td>345</td>
</tr>
<tr>
<td>Ahmed, Anam</td>
<td>345</td>
</tr>
<tr>
<td>Ahuja, Vineet</td>
<td>345</td>
</tr>
<tr>
<td>Anand, Abhinav</td>
<td>345</td>
</tr>
<tr>
<td>Andrade, Patricia</td>
<td>358</td>
</tr>
<tr>
<td>Andrade, Patrícia</td>
<td>360, 323, 420</td>
</tr>
<tr>
<td>Anomneze, Obioma</td>
<td>538</td>
</tr>
<tr>
<td>Ajaka, Natacha</td>
<td>315</td>
</tr>
<tr>
<td>Akmal, Mehreen</td>
<td>75</td>
</tr>
<tr>
<td>Akshija, Ilir</td>
<td>388, 356</td>
</tr>
<tr>
<td>Al Srouji, Nahlah</td>
<td>590</td>
</tr>
<tr>
<td>Al-Adhami, Ali</td>
<td>51</td>
</tr>
<tr>
<td>Alborzi Avanaki</td>
<td>499</td>
</tr>
<tr>
<td>Albuquerque, Cristina</td>
<td>141</td>
</tr>
<tr>
<td>Ali, Faisal</td>
<td>195</td>
</tr>
<tr>
<td>Al-Jasmi, Masooma</td>
<td>315</td>
</tr>
<tr>
<td>Al-Jasmi, Rehab</td>
<td>315</td>
</tr>
<tr>
<td>Al-Nahdi, Noor</td>
<td>315</td>
</tr>
<tr>
<td>Al-Rubaiy, Laith</td>
<td>51, 53</td>
</tr>
<tr>
<td>Alsarhan, Ali</td>
<td>315</td>
</tr>
<tr>
<td>Al-Srouji, Nahlah</td>
<td>590</td>
</tr>
<tr>
<td>Anand, Abhinav</td>
<td>345</td>
</tr>
<tr>
<td>Andrade, Patricia</td>
<td>358</td>
</tr>
<tr>
<td>Andrade, Patrícia</td>
<td>360, 323, 420</td>
</tr>
<tr>
<td>Anomneze, Obioma</td>
<td>538</td>
</tr>
<tr>
<td>Ardila, Oscar</td>
<td>335</td>
</tr>
<tr>
<td>Asadova, Gunay</td>
<td>250</td>
</tr>
<tr>
<td>Aslam, Mujjahid</td>
<td>198</td>
</tr>
<tr>
<td>Aslam, Mujjahid</td>
<td>207</td>
</tr>
<tr>
<td>Ayers, Travis</td>
<td>172</td>
</tr>
<tr>
<td>Babar, Ahmad</td>
<td>198</td>
</tr>
<tr>
<td>Babar, Ahmad</td>
<td>207</td>
</tr>
<tr>
<td>Babayeva, Gulustan</td>
<td>250</td>
</tr>
<tr>
<td>Babre, Wafaa</td>
<td>99</td>
</tr>
<tr>
<td>Babayeva, Gulustan</td>
<td>250</td>
</tr>
<tr>
<td>Babre, Wafaa</td>
<td>99</td>
</tr>
<tr>
<td>Babar, Ahmad</td>
<td>198</td>
</tr>
<tr>
<td>Babar, Ahmad</td>
<td>207</td>
</tr>
<tr>
<td>Babayeva, Gulustan</td>
<td>250</td>
</tr>
<tr>
<td>Babre, Wafaa</td>
<td>99</td>
</tr>
<tr>
<td>Babar, Ahmad</td>
<td>198</td>
</tr>
<tr>
<td>Babar, Ahmad</td>
<td>207</td>
</tr>
<tr>
<td>Babayeva, Gulustan</td>
<td>250</td>
</tr>
<tr>
<td>Babre, Wafaa</td>
<td>99</td>
</tr>
</tbody>
</table>

**A**

<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abassi, Zaid</td>
<td>368</td>
</tr>
<tr>
<td>Abbas, Fatima</td>
<td>134</td>
</tr>
<tr>
<td>Abdalla, Hala</td>
<td>134</td>
</tr>
<tr>
<td>Abdelmoety, Amr</td>
<td>123</td>
</tr>
<tr>
<td>Abdelmoety, Hoda</td>
<td>123</td>
</tr>
<tr>
<td>Abdulzada, Cavad</td>
<td>250</td>
</tr>
<tr>
<td>Addajou, Tarik</td>
<td>708</td>
</tr>
<tr>
<td>Afonso, João</td>
<td>360, 381, 323, 420, 358</td>
</tr>
<tr>
<td>Agarwal, Ashish</td>
<td>345</td>
</tr>
<tr>
<td>Agrawal, Manoj</td>
<td>128</td>
</tr>
<tr>
<td>Ahuja, Vineet</td>
<td>345</td>
</tr>
<tr>
<td>Ahmed, Anam</td>
<td>345</td>
</tr>
<tr>
<td>Ahuja, Vineet</td>
<td>345</td>
</tr>
<tr>
<td>Anand, Abhinav</td>
<td>345</td>
</tr>
<tr>
<td>Andrade, Patricia</td>
<td>358</td>
</tr>
<tr>
<td>Andrade, Patrícia</td>
<td>360, 323, 420</td>
</tr>
<tr>
<td>Anomneze, Obioma</td>
<td>538</td>
</tr>
<tr>
<td>Ajaka, Natacha</td>
<td>315</td>
</tr>
<tr>
<td>Akmal, Mehreen</td>
<td>75</td>
</tr>
<tr>
<td>Akshija, Ilir</td>
<td>388, 356</td>
</tr>
<tr>
<td>Al Srouji, Nahlah</td>
<td>590</td>
</tr>
<tr>
<td>Al-Adhami, Ali</td>
<td>51</td>
</tr>
<tr>
<td>Alborzi Avanaki</td>
<td>499</td>
</tr>
<tr>
<td>Albuquerque, Cristina</td>
<td>141</td>
</tr>
<tr>
<td>Ali, Faisal</td>
<td>195</td>
</tr>
<tr>
<td>Al-Jasmi, Masooma</td>
<td>315</td>
</tr>
<tr>
<td>Al-Jasmi, Rehab</td>
<td>315</td>
</tr>
<tr>
<td>Al-Nahdi, Noor</td>
<td>315</td>
</tr>
<tr>
<td>Al-Rubaiy, Laith</td>
<td>51, 53</td>
</tr>
<tr>
<td>Alsarhan, Ali</td>
<td>315</td>
</tr>
<tr>
<td>Anand, Abhinav</td>
<td>345</td>
</tr>
<tr>
<td>Andrade, Patricia</td>
<td>358</td>
</tr>
<tr>
<td>Andrade, Patrícia</td>
<td>360, 323, 420</td>
</tr>
<tr>
<td>Anomneze, Obioma</td>
<td>538</td>
</tr>
<tr>
<td>Ardila, Oscar</td>
<td>335</td>
</tr>
<tr>
<td>Asadova, Gunay</td>
<td>250</td>
</tr>
<tr>
<td>Aslam, Mujjahid</td>
<td>198</td>
</tr>
<tr>
<td>Aslam, Mujjahid</td>
<td>207</td>
</tr>
<tr>
<td>Ayers, Travis</td>
<td>172</td>
</tr>
</tbody>
</table>

**Á**

Ábrahám, Szabolcs 500

**B**

<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Babar, Ahmad</td>
<td>198</td>
</tr>
<tr>
<td>Babar, Ahmad</td>
<td>207</td>
</tr>
<tr>
<td>Babayeva, Gulustan</td>
<td>250</td>
</tr>
<tr>
<td>Babre, Wafaa</td>
<td>99</td>
</tr>
<tr>
<td>Benes, Marek</td>
<td>506</td>
</tr>
<tr>
<td>Benhamdane, Ahlame</td>
<td>708</td>
</tr>
<tr>
<td>Benkő, Ria</td>
<td>500</td>
</tr>
<tr>
<td>Bhanthumkomol, Patommatat</td>
<td>457</td>
</tr>
</tbody>
</table>
Baghereslami, Elham 499  Bhanthumkomol, Patommatat 222
Bagheri Lankarani, Kamran 726  Bišcanin, Alen 167
Baker, Mark 170  Biswas, Kalidas 128
Bando, Masahiro 608  Blažević, Nina 167
Baraka, Azza 123  Borzan, Vladimir 317
Barkun, Alan 109  Brady, Damien 139
Bellabah, Ahmed 99  Brož, Jan 231
Belousova, Elena 313  Bruining, David 170
Ben Ameur, Inès 590  Budimir, Ivan 167
Ben Hemo, Dalit 368  Buratti, Paolo 282

B
Benkirane, Ahmed 708  Benzzoubeir, Nadia 400

C
Calado, Ricardo 547  Claro, Isabel 594, 141
Cardoso, Hélder 420, 358  Click, Benjamin 170
Cardoso, Helder 360, 323  Cohen, Benjamin 170
Cardoso, Pedro 360, 323, 420, 358  Conceição, Daniel 594
Ceriotti, Laura 282  Corazziari, Enrico Stefano 282
Cha, Jae Myung 82  Correia Gomes, Luís 594
Chau, Hau-Tak 186  Cortez Pinto, João 594
Chauhan, Ashish 345  Cortez-Pinto, Joao 141
Chen, Zhen 674  Coxeter-Smith, Catherine 51
Cheung, Tan-To 186  Cuadros, Carlos 335
Chhanchure, Utkarsh 357  Cunoosamy, Danen M. 675
Chonprasertsuk, Soonthorn 457  Cunoosamy, Danen M. 674
Chonprasertsuk, Soonthorn 222  Czákó, Bálint 500
Choukair, Ali 563  Czákó, László 500
Chu, Tian-Huei 584

D
Das, Prasenjit 345  Domit, Amanda 143
De Mejj, Tim 172  Dorfman, Lev 653, 157
Dellon, Evan S. 674  Doshi, Maulik 128
Dharmadhikari, Shruti 248  Dubinsky, Marla 172
Dharmadhikari, Shruti 128  Dumitrascu, Dan L. 590
<table>
<thead>
<tr>
<th>Name</th>
<th>Page 1</th>
<th>Name</th>
<th>Page 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Di Mario, Francesco</td>
<td>217</td>
<td>Duong, Tung Anh</td>
<td>231</td>
</tr>
<tr>
<td>Dolinger, Michael</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Ouali, Sara</td>
<td>170</td>
<td>El-Chammas, Khalil</td>
<td>653</td>
</tr>
<tr>
<td>El Rhaoussi, Fatima</td>
<td>99</td>
<td>Elsayed, Abdalla</td>
<td>590</td>
</tr>
<tr>
<td>Zahra</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elbacha, Hicham</td>
<td>400</td>
<td>Epstein, Marina</td>
<td>33, 143</td>
</tr>
<tr>
<td>El-Chammas, Khalil</td>
<td>157</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elkoti, Ilhame</td>
<td>708</td>
<td>Errabih, Ikram</td>
<td>400</td>
</tr>
<tr>
<td>Fatima, Ayesha</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fernandes, Marilia</td>
<td>143</td>
<td>Flórez-Sarmiento, Cristian</td>
<td>335</td>
</tr>
<tr>
<td>Ferreira, João</td>
<td>360, 381, 323, 358</td>
<td>Fonseca, Ricardo, 141</td>
<td></td>
</tr>
<tr>
<td>Ferreira, João</td>
<td>420</td>
<td>Franklyn, Nithya</td>
<td>628</td>
</tr>
<tr>
<td>Ferreira, Sara</td>
<td>141</td>
<td>Frías-Ordoñez, Juan</td>
<td>335</td>
</tr>
<tr>
<td>Finta, Ádám</td>
<td>220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fitzpatrick, Daniel</td>
<td>139</td>
<td>Frolov, Pavel</td>
<td>90</td>
</tr>
<tr>
<td>Fletcher, Joel</td>
<td>170</td>
<td>Fujimoto, Shota</td>
<td>608</td>
</tr>
<tr>
<td>Galindo, Pablo</td>
<td>335</td>
<td>Fukra, Ahmad</td>
<td>368</td>
</tr>
<tr>
<td>García-Duperly, Rafael</td>
<td>335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garje, Yogesh</td>
<td>128, 248</td>
<td>Gilja, Odd Helge</td>
<td>470</td>
</tr>
<tr>
<td>Gately, Noel</td>
<td>139</td>
<td>Glavčič, Goran</td>
<td>167</td>
</tr>
<tr>
<td>Gerald, Danny</td>
<td>547</td>
<td>Graham, Kahleb</td>
<td>653</td>
</tr>
<tr>
<td>Hackel, Mariana</td>
<td>547</td>
<td>Holubar, Stefan</td>
<td>170</td>
</tr>
<tr>
<td>Hadad, Saleem</td>
<td>368</td>
<td>Hrabar, Davor</td>
<td>167</td>
</tr>
<tr>
<td>Haddad, Fouad</td>
<td>99</td>
<td>Hsu, Ping-I</td>
<td>584</td>
</tr>
<tr>
<td>Haluzik, Martin</td>
<td>506</td>
<td>Huang, Fung-Yu</td>
<td>186</td>
</tr>
<tr>
<td>Hanif, Sofia</td>
<td>162</td>
<td>Hucl, Tomáš</td>
<td>545</td>
</tr>
<tr>
<td>Hasanov, Rashad</td>
<td>250</td>
<td>Hussain, Sohail</td>
<td>511</td>
</tr>
<tr>
<td>Hasanova, Aychin</td>
<td>250</td>
<td>Hussey, Seamus</td>
<td>172</td>
</tr>
<tr>
<td>Hassan, Aychin</td>
<td>207</td>
<td>Hustáček, Rastislav</td>
<td>545</td>
</tr>
<tr>
<td>Hassan, Muhammad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kamran</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Page(s)</td>
<td>Name</td>
<td>Page(s)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------</td>
<td>---------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Helle, Krisztina</td>
<td>220</td>
<td>Hysa, Altin</td>
<td>388, 356</td>
</tr>
<tr>
<td>Hliwa, Wafaa</td>
<td>99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hliwa, Wafaa</td>
<td>99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ibrahimli, Hikmat</td>
<td>250</td>
<td>Ismaiel, Mohamed</td>
<td>590</td>
</tr>
<tr>
<td>Illés, Dóra</td>
<td>500</td>
<td>Ismayilova, Khalida</td>
<td>250</td>
</tr>
<tr>
<td>Imam, Zeinab</td>
<td>134</td>
<td>Issariyakulkarn, Navapan</td>
<td>457</td>
</tr>
<tr>
<td>Isgandarov, Namig</td>
<td>250</td>
<td>Issariyakulkarn, Navapan</td>
<td>222</td>
</tr>
<tr>
<td>Ismaiel, Abdulrahman</td>
<td>590</td>
<td>Ivány, Emese</td>
<td>500</td>
</tr>
<tr>
<td>J, Shyamala</td>
<td>628</td>
<td>Joglekar, Sadhna</td>
<td>128, 248</td>
</tr>
<tr>
<td>Jaouani, Ayman</td>
<td>590</td>
<td>Joo, Segyeong</td>
<td>456</td>
</tr>
<tr>
<td>Jacob-Nara, Juby A.</td>
<td>674, 675</td>
<td>Juliao-Baños, Fabián</td>
<td>335</td>
</tr>
<tr>
<td>Jahagirdar, Vinay</td>
<td>157</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kabala, Aviva</td>
<td>368</td>
<td>Khandhedia, Chintan</td>
<td>248</td>
</tr>
<tr>
<td>Kahle, Michal</td>
<td>506</td>
<td>Kheir, Omer</td>
<td>134</td>
</tr>
<tr>
<td>Kamalova, Valeriia</td>
<td>205</td>
<td>Khodzhayev, Angela</td>
<td>675</td>
</tr>
<tr>
<td>Kamani, Lubna</td>
<td>75</td>
<td>Khodzhayev, Angela</td>
<td>674</td>
</tr>
<tr>
<td>Kamar, Siddhesh</td>
<td>675</td>
<td>Kiattiweerasak, Anya</td>
<td>457, 222</td>
</tr>
<tr>
<td>Kamat, Siddhesh</td>
<td>674</td>
<td>Kida, Yoshifumi</td>
<td>608</td>
</tr>
<tr>
<td>Kamat, Vijay</td>
<td>128</td>
<td>Kireev, Shamil</td>
<td>205</td>
</tr>
<tr>
<td>Karamaya, Zain</td>
<td>500</td>
<td>Koçollari, Adea</td>
<td>356</td>
</tr>
<tr>
<td>Karmarkar, Pushparaj</td>
<td>128</td>
<td>Kolho, Kaija-Leena</td>
<td>172</td>
</tr>
<tr>
<td>Kaul, Ajay</td>
<td>653, 157</td>
<td>Korotkevich, Alexey</td>
<td>65, 64, 90</td>
</tr>
<tr>
<td>Kaul, Serena</td>
<td>157</td>
<td>Kovarova, Viktorie</td>
<td>506</td>
</tr>
<tr>
<td>Kawaguchi, Tomoyuki</td>
<td>608</td>
<td>Kral, Jan</td>
<td>506</td>
</tr>
<tr>
<td>Kealey, Carmel</td>
<td>139</td>
<td>Kratochvilova, Simona</td>
<td>506</td>
</tr>
<tr>
<td>Kesavelu, Dhanasekhar</td>
<td>628</td>
<td>Kulkarni, Narendra D</td>
<td>128</td>
</tr>
<tr>
<td>Khamaysi, Iyad</td>
<td>368</td>
<td>Kumar, P. Shravan</td>
<td>128</td>
</tr>
<tr>
<td>Name</td>
<td>Page(s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Khan, Dilaram</td>
<td>207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Khan, Hashmat</td>
<td>207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kurup, Arya</td>
<td>628</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kwak, Min Seob</td>
<td>82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lage, Pedro</td>
<td>141</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lankova, Ivana</td>
<td>506</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lázár, György</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ledder, Oren</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lee, Ming-Yih</td>
<td>584</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lemos Garcia, Joana</td>
<td>594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leontiev, Anton</td>
<td>65, 64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucuta, Daniel-Corneliu</td>
<td>590</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limbert, Manuel</td>
<td>594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lin, Chun-Yu</td>
<td>584</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lomakina, Ekaterina</td>
<td>313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lopes, Susana</td>
<td>381</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lozano-Ruf, Anna</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lustigová, Michala</td>
<td>231</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lytvyak, Ellina</td>
<td>737</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lyu, Ruishen</td>
<td>170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maccapani, Gabriel</td>
<td>33, 143</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macedo, Guilheme</td>
<td>360, 323, 358</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macedo, Guilherme</td>
<td>420</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Macedo, Guilherme</td>
<td>381</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maciel, João</td>
<td>594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madácsy, László</td>
<td>220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madrid, Ana Maria</td>
<td>158</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mahachai, Varoche</td>
<td>457, 222</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mahammadaliyeva,</td>
<td>250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mukhasta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mak, Lung-Yi</td>
<td>186</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Makharia, Govind K</td>
<td>345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Makhmudov, Umud</td>
<td>250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malekzadeh, Reza</td>
<td>430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mammadosov, Emin</td>
<td>250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mane, Kiran</td>
<td>357</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mansi, Sherief</td>
<td>653</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mareš, Jan</td>
<td>545</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marinich, Yana</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Markandeywar, Neeraj</td>
<td>248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marques, Inês</td>
<td>594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Márquez, Juan</td>
<td>335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martínek, Jan</td>
<td>545</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May, Semyon</td>
<td>65, 64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mccann, Eilish</td>
<td>675</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mccann, Eilish</td>
<td>674</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mehta, Shaesta</td>
<td>357</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mehta, Suyog</td>
<td>128, 248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mehtab, Waija</td>
<td>345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meloni, Marisa</td>
<td>282</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mendia, Gabriela</td>
<td>547</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merat, Shahin</td>
<td>430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meyer , Gabrielle</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirzaie, Vahid</td>
<td>184</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirzazada, Orkhan</td>
<td>250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mishra, Mukesh</td>
<td>128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miyamoto, Hiroshi</td>
<td>608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mohamadnejad, Mehdi</td>
<td>184</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mohammad, Hajar</td>
<td>134</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moleiro, Joana</td>
<td>594</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molle-Rios, Zarella</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mostafa, Hesham</td>
<td>315</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mousavian, Amirhossein</td>
<td>430</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moutinho-Ribeiro, Pedro</td>
<td>381</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mrabti, Samir</td>
<td>708</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Pages</td>
<td>Name</td>
<td>Pages</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td>--------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Mascarenhas, Miguel</td>
<td>360, 323, 420, 358</td>
<td>Mraz, Milos</td>
<td>506</td>
</tr>
<tr>
<td>Mascarenhas-Saraiva,</td>
<td>381, 420</td>
<td>Murugesh, M.</td>
<td>128</td>
</tr>
<tr>
<td>Miguel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mata, Sara</td>
<td>141</td>
<td>Musayev, Camal</td>
<td>250</td>
</tr>
<tr>
<td>Matúz, Mária</td>
<td>500</td>
<td>Mustikarani, Dewi</td>
<td>658</td>
</tr>
<tr>
<td>Nacer, Sara</td>
<td>99</td>
<td>Nayab, Dure</td>
<td>198</td>
</tr>
<tr>
<td>Nadal, Luis Roberto</td>
<td>143</td>
<td>Négyessí, András</td>
<td>500</td>
</tr>
<tr>
<td>Nag, Arpita</td>
<td>675</td>
<td>Nikmanesh, Arash</td>
<td>184</td>
</tr>
<tr>
<td>Nag, Arpita</td>
<td>674</td>
<td>Nunanan,</td>
<td>457</td>
</tr>
<tr>
<td>Nagy, András</td>
<td>500</td>
<td>Pongjarat</td>
<td></td>
</tr>
<tr>
<td>Nakamura, Fumika</td>
<td>608</td>
<td>Nunanan,</td>
<td>222</td>
</tr>
<tr>
<td>Navas, Víctor</td>
<td>172</td>
<td>Pongjarat</td>
<td></td>
</tr>
<tr>
<td>Oczella, László</td>
<td>220</td>
<td>Nyoko, Chinenyje</td>
<td>538</td>
</tr>
<tr>
<td>Odeghe, Emuobor</td>
<td>538</td>
<td>Nylund, Kom</td>
<td>470</td>
</tr>
<tr>
<td>Okahisa, Toshiya</td>
<td>608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Okamoto, Koichi</td>
<td>608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ollé, Georgina</td>
<td>220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Padilla, Jorge</td>
<td>547</td>
<td>Orsic Fric, Vlasta</td>
<td>317</td>
</tr>
<tr>
<td>Pakdin, Majid</td>
<td>726</td>
<td>Osman, Ensaf</td>
<td>315</td>
</tr>
<tr>
<td>Park, Su Bee</td>
<td>82</td>
<td>Osmanaj, Dorina</td>
<td>388, 356</td>
</tr>
<tr>
<td>Parra-Izquierdo,</td>
<td>335</td>
<td>Oeyeleke, Ganiyat</td>
<td>538</td>
</tr>
<tr>
<td>Viviana</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patel, Piyush</td>
<td>128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patil, Prachi</td>
<td>357</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavić, Tajana</td>
<td>167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pela, Tiffany</td>
<td>675</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pula, Tiffany</td>
<td>674</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qazi, Taha</td>
<td>170</td>
<td>Quliyev, Farid</td>
<td>250</td>
</tr>
<tr>
<td>Radwan, Amr</td>
<td>675</td>
<td>Rohani, Pejman</td>
<td>172</td>
</tr>
</tbody>
</table>
Radwan, Amr 674
Rahat, Adeel 75
Rajput, Mahendra S 345
Rangarajan, Archana 315
Rasool, Shahid 162
Ratkajec, Valentina 167
Rayatpisheh, Maryam 430
Ribeiro, Tiago 360, 381, 323, 420, 358
Rieder, Florian 170
Rogić, Dunja 167

Rojas, Carlos 335
Rojas, Nelson 335
Rokhsi, Soukaina 708
Romanová, Alexandra 231
Roro, Guda 263, 560
Rosa, Isadora 141
Roser, Dennis 172
Rosztoczy, Andras 220
Rothenberg, Marc E. 675

Rouibaa, Fedoua 708

Sadeghi, Ahmad 430
Sadeghi, Anahita 430
Sadri, Hamid 109
Sævik, Fredrik 470
Salami, Ufuoma 538
Samadova, Tunzala 250
Santucci, Neha 653
Sapuppo, Franco 33
Sato, Yasushi 608
Savio, Luis 547
Savostyanov, Ilya 65, 64
Scarlett, Jarred 172
Schoepfer, Alain M. 675
Schraibman, Vladimir 33, 143
Seo, Myeongsook 456
Seto, Wai-Kay 186
Shafqat, Umair 162
Shestak, Inna 65, 64
Shouval, Dror 172

Simadibrata, Daniel 658
Simadibrata, Marcellus 658
Simões, Carolina 594
Sina, Marsela 388, 356
Singh, Alka 345
Singh, Azadvir 653
Siramolpiwat, Sith 457
Sogabe, Masahiro 608
Soliman, Aly 123
Solonitsyn, Evgeniy 205
Sotoudeh, Masoud 184
Spergel, Jonathan M. 674
Spicak, Julius 506

Sun, Xian 675
Sundaram, Sridhar 357
Surdeas-Bлага, Teodora 590
Suskind, David 172
Szalai, Milán 220

Seddik, Hassan 708
Š
Šimková, Dagmar 545
Špičák, Julius 545
Štirand, Petr 545

T
Tahiri Joutei 99
Hassani, Mohamed
Tai, Ming-Hong 584
Tajti, Máté 500
Takayama, Tetsuji 608
Tóth, Illés 500
Tovar-Fierro, German
Tsuneyama, Koichi 608
Tun, Hein Min 186
Turner, Dan 172
Tzivinikos, Christos 172
Tzivinikos, Christos 315

U
Urbanová, Jana 231

V
Vacková, Zuzana 545
Váčzi, Dániel 500
Varpaei, Hesam Aldin
Varšátko, Martin 545
Verdiyev, Emin 250
Verma, Ankita 231
Vilaichone, Ratha-Korn
Vilaichone, Ratha-Korn
Vilas-Boas, Filipe 381
Von Muhlenbrock, Christian

V
Von Volkmann, Hilde 470

W
Wong, Danny Ka-Ho 186
Wu, Deng-Chyang 584

Y
Yang, Kuang-Tsu 584
Yeh, Yao-Tsung 584
Yen, Chiá-Chi 584
Youssef, Ahmed 123
Yuen, Man-Fung 186

Z
<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zakaria,</td>
<td>123</td>
<td>Zhang, Saisai</td>
<td>186</td>
</tr>
<tr>
<td>Abdelrahman</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zaki, Soad</td>
<td>123</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>