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BEST OF THE BEST PAPER PRESENTATIONS SESSION

14 February 2026 (Day 2) | 15:00–17:00
Chairs: Prof. Dr. Saeed Akhtar | Prof. Dr. Faisal Dar | Prof. Dr. Irfan Ahmed
Abstracts: 1-6

Paper 1

FXR1 Associates with and Degrades PDZK1IP1 and ATOH8 mRNAs and Promotes Esophageal Cancer Progression

Faiz Ali Khan
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Background: The growing body of evidence suggests that RNA-binding proteins (RBPs) have an important function in cancer biology. This research characterizes the expression status of fragile X-related protein 1 (FXR1) in esophageal cancer (ESCA) cell lines and understands its mechanistic importance in ESCA tumor biology.

Methods: The role of FXR1, PDZK1IP1, and ATOH8 in the malignant biological behaviors of ESCA cells was investigated using *in-vitro* and *in-vivo* experiments.

Results: FXR1 was aberrantly overexpressed at both the transcript and protein levels in ESCA cells. Deficiency of FXR1 in ESCA cells was associated with decreased cell proliferation, viability and compromised cell migration compared to the control group. In addition, the inhibition of FXR1 leads to the promotion of apoptosis and cell cycle arrest in ESCA cells. Furthermore, FXR1 knockdown stabilizes senescence markers, promoting cellular senescence and decreasing cancer growth. Mechanistically, FXR1 negatively regulated PDZK1IP1 or ATOH8 transcripts by promoting mRNA degradation via direct interaction with its 3′UTR. PDZK1IP1 or ATOH8 overexpression predominantly inhibited the tumor-promotive phenotype in FXR1-overexpressed cells. Furthermore, FXR1 inhibition and PDZK1IP1 or ATOH8 overexpression in combination with FXR1-overexpressed cells significantly decreased xenograft tumor formation and enhanced nude mouse survival without causing apparent toxicity ($p<0.01$). In the FXR1 knockdown group, the tumor weight of mice decreased by 80% compared to the control group ($p<0.01$).

Conclusion: Our results demonstrate FXR1's oncogenic involvement in ESCA cell lines, suggesting that FXR1 may be implicated in ESCA development by regulating the stability of PDZK1IP1 and ATOH8 mRNAs. For the first time, our findings emphasize the importance of FXR1-PDZK1IP1 and -ATOH8 functional modules in the development of ESCA, which might have potential diagnostic or therapeutic implications.

Paper 2

Living Liver Donor Outcomes After 1,000 Donations: Defining Safety in a High-Volume Transplant Center from Pakistan

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Background: Living donor liver transplantation (LDLT) is a life-saving solution for patients with end-stage liver disease, particularly in Asian countries where deceased organ donation rates remain extremely low. However, LDLT exposes healthy individuals to a major surgical procedure, and global donor mortality rates of 0.1–0.5% and major morbidity rates of 15–35% highlight the importance of ensuring donor safety. Establishing safe, reproducible, and ethically acceptable donor hepatectomy outcomes at scale is crucial for the credibility of LDLT programs. The Pakistan Kidney and Liver Institute & Research Centre (PKLI&RC) is one of the highest-volume LDLT centers in the region, where over 1,000 living donor hepatectomies have been performed since 2019. This study evaluates donor safety, morbidity, and perioperative outcomes in this large, consecutive donor cohort.

Methods: This retrospective observational study included all living liver donors who underwent donor hepatectomy at PKLI&RC between March 2019 and October 2025, using non-probability consecutive sampling. Data were extracted from a prospectively maintained donor registry. Variables included donor demographics, graft type, liver volumetry, future liver remnant (FLR), operative time, blood loss, intraoperative events, immediate postoperative recovery, complications (classified by Clavien-Dindo), enhanced recovery pathway milestones, drain requirements, and 30-day readmission rates. Descriptive statistical analysis was performed.

Results: A total of 1,014 living liver donors were included. The mean donor age was 26.8 ± 7.4 years, 57.4% were male, and the mean BMI was 23.9 ± 6.1 kg/m². Right lobe donation predominated (87.1%), followed by left lobe (8.7%) and left lateral segment donation (4.2%). Volumetric characteristics showed a mean total liver volume of 1,188 ± 422 mL, estimated graft volume 688 ± 189 mL, actual graft weight 620 ± 278 g, and FLR 35.4 ± 10.4%. Operative performance was consistent, with a mean operative time of 7.0 ± 1.3 hours and mean blood loss of 333 ± 227mL. Intraoperative complications were rare (0.5%). Enhanced recovery was achieved under an ERAS pathway: mean ICU stay was 2.4 ± 1.1 days, hospital stay 7.7 ± 2.0 days, oral intake resumed on POD 1.0, and ambulation by POD 1.3. No donor required vasopressors or re-intubation. Postoperative morbidity remained low. Bile leak occurred in 0.8%, intra-abdominal collection in 0.9%, bleeding in 0.4%, surgical site infection in 1.9%, and sepsis in 1.0%. Major complications (Clavien–Dindo ≥IIIa) occurred in 1.0% of donors. Thirty-three donors (3.4%) were readmitted within 30 days, and 48 were discharged with drains in situ. Incisional hernia occurred in 0.2%. Importantly, no donor mortality, no liver failure requiring transplantation, and no long-term disability occurred, confirming exceptional donor safety across all 1,014 cases.

Conclusion: This study presents one of the largest single-center LDLT donor cohorts reported from South Asia, demonstrating that donor hepatectomy can be performed with zero mortality,

extremely low major morbidity (1.0%), and strong perioperative outcomes when supported by standardized protocols and experienced multidisciplinary teams. These results not only surpass many global benchmarks but also reaffirm that LDLT, when performed in a high-volume, structured, and ethically grounded program, can maintain donor risk at the lowest possible levels. The PKLI&RC outcomes confirm the reproducibility, technical excellence, and ethical justification of LDLT as a safe therapeutic strategy, providing vital evidence for expanding LDLT programs in regions with limited deceased organ donation.

Paper 3

Comparing Robotic and Open Approaches in High-Complexity Small Renal Tumors: A Retrospective Analysis of Oncologic and Surgical Outcomes

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Background: Partial nephrectomy (PN) is the standard treatment for small renal tumors, but surgical complexity increases with tumor size, location, or anatomy. Robotic PN (RPN) may offer minimally invasive advantages, yet data comparing outcomes with open PN (OPN) for high-complexity tumors remain limited.

Objective: To compare perioperative, short-term functional, and oncologic outcomes between robotic and open partial nephrectomy for high-complexity small renal tumors.

Methods: This retrospective comparative cohort study included 129 adult patients undergoing PN (RPN n=11; OPN n=118) at Pakistan Kidney and Liver Institute & Research Center (Jan 2020-Jul 2025). Primary outcomes were surgical margin status and perioperative morbidity; secondary outcomes included operative time, blood loss, hospital stay, readmission, and renal function at 3 months. Data were analyzed using SPSS 27.0 with effect sizes and 95% confidence intervals reported.

Results: Baseline demographics were comparable. Mean tumor size was smaller in RPN (3.99±0.85 cm) than OPN (5.22±2.16 cm, p=0.001). No positive surgical margins occurred in either group. Operative time was longer for RPN (170.9±58.5 vs. 132.3±56.3 min, p=0.032), while warm ischemia time, blood loss, and length of stay were similar. Major complications occurred only in OPN (3.9%). At 3 months, renal function trended higher after RPN (eGFR 89.9±49.2 vs. 68.6±37.2 mL/min/1.73m², p=0.079).

Conclusion: Both approaches offer excellent short-term oncologic control. RPN provides comparable safety with a trend toward better renal preservation despite longer operative times. Open PN remains reliable for larger or technically demanding tumors. This study provides single-center comparative data highlighting robotic PN as a viable alternative for high-complexity renal tumors, supporting tailored surgical decision-making.

Paper 4

In-Hospital Mortality Prognostication for Cancer Patients with Febrile Neutropenia

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Background: Febrile neutropenia (FN) in cancer patients undergoing chemotherapy can result in life-threatening outcomes. Hence, an evaluation of associated risk factors can enable clinical surveillance as well as inform prophylactic measures.

Objective: In this retrospective cohort study, we report a mortality prognostication model for chemotherapy treated cancer patients upon a neutropenic episode.

Methods: Clinical and diagnostic data of 137 febrile neutropenia patients (>18 years) was collected from a cancer hospital, with the primary endpoint of post-hospital admission mortality within 30 days. The data was integratively analyzed and machine learning techniques were applied to develop the predictive model which was then internally cross validated. Towards enabling personalized risk assessment, a nomogram was constructed and validated.

Results: Chemotherapy-treated cancer patients undergoing a neutropenic episode exhibit an overall mortality rate of 17.36%. Multivariate logistic analysis elucidates that shock, pneumonia, carboplatin, doxorubicin, antifungal and anti-viral prophylaxis, and hemoglobin correctly classify cases with an overall accuracy of 92% and discriminate mortality with a specificity of 76%. Antiviral (odds ratio (OR): 0.669, $p = 0.689$) and antifungal prophylaxis (OR: 0.619, $p = 0.5$) demonstrate a protective effect. The receiver operating characteristic (ROC) curve of the nomogram exhibits an area under the curve of 0.878 (95% CI 0.778 − 0.977), Hosmer–Lemeshow test p-value = 0.635, and a high net benefit in the clinical decision curve.

Conclusion: The proposed model offers insights into the role of clinical predictors as well as treatment characteristics that can ameliorate mortality risk in cancer patients with FN. The study highlights bacteremia-related surveillance, along with thrombocytopenia, linked to carboplatin, for reducing individualized mortality risk along with improved monitoring and informed treatment strategies.

Paper 5

Stomach and Duodenal Ulcer as a Cause of Death in Patients with Cancer: A Cohort Study

Muhammad Idrees
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Background: Non-cancer deaths are now becoming a significant threat to the health of cancer patients. Death from stomach and duodenal ulcer is linked to cancer due to the side effects of treatment and its pathogenesis. However, guidelines for identifying cancer patients at the highest risk of death from stomach and duodenal ulcers remain unclear.

Methods: Data of all patients diagnosed with cancer between 2000 and 2021 were obtained from the Surveillance, Epidemiology, and End Results (SEER) database. Data regarding the causes of death and clinicopathological features such as sex, age, race, marital status, SEER stage, and treatment procedures were extracted. We calculated standardized mortality ratios (SMRs) using SEER*Stat version 8.4.3.

Results: Of the 6,891,191 cancer patients, 2,318 died of stomach and duodenal ulcer, a rate higher than that in the general population (SMR = 1.58, 95% CI [1.52–1.65]). Stomach and duodenal ulcer-related deaths decreased over time from 870 deaths between 2000 and 2004 to 294 deaths between 2015 and 2019. Among the 2,318 stomach and duodenal ulcer deaths, the highest numbers were observed in patients with prostate cancer (n = 389, 16.8%) and lung and bronchus cancer (n = 255, 11%). Patients with liver and intrahepatic bile duct cancers (SMR = 10.53, 95%CI [8.3-13.18]), and pancreatic cancer (SMR = 6.84, 95% CI [5.11–8.97]) had a significantly higher rate of death from stomach and duodenal ulcer than the general population.

Conclusion: Our study revealed a significantly higher risk of stomach and duodenal ulcer mortality among patients with cancer in the United States. To reduce ulcer-related mortality, we recommend the implementation of targeted prevention protocols, including routine gastrointestinal screenings for high-risk cancer patients, proactive management of ulcer risk factors, and collaboration between oncology, gastroenterology, and surgical teams.

Paper 6

Post-Donation Health-Related Quality of Life, Mood, and Life Satisfaction in Living Kidney Donors: An Exploratory Study from a Kidney Transplant Centre, Lahore, Pakistan

Muhammad S, Bashir A, Farooq U, Nusrat NB, Tauqeer FA
Pakistan Kidney and Liver Institute & Research Centre, Lahore, Pakistan

Background: Living kidney donation is a life-saving intervention, but post-donation psychosocial outcomes, including quality of life (QoL), mood, and life satisfaction, are not well characterized in Pakistan. Understanding these outcomes is essential for donor counseling, long-term follow-up, and optimizing donor care.

Objective: To explore post-donation life satisfaction, health-related quality of life, and mood status among living kidney donors.

Methods: This cross-sectional study was conducted from February 5 to July 10, 2021, at the Department of Kidney Transplant Surgery, Pakistan Kidney and Liver Institute & Research Centre, Lahore, Pakistan. Adult living kidney donors who had donated at least six months prior were enrolled. Data were collected via structured telephonic interviews, including demographics and validated instruments: WHO Quality of Life-BREF, Satisfaction with Life Scale (SWLS), Patient Health Questionnaire (PHQ-9), and General Anxiety Disorder scale (GAD-7). Data analysis was performed using SPSS v20, with correlations and regression analyses to identify associations between QoL, life satisfaction, mood, and donor characteristics.

Results: Among 41 donors, 22 (53.7%) were female and 19 (46.3%) male, with a mean age of 41.1 ± 9.6 years (range: 19–62). Common donor-recipient relationships included brother-sister 10 (34.1%) and wife-husband 10 (24.4%). QoL positively correlated with life satisfaction ($r = 0.381$, $p = 0.014$), negatively correlated with anxiety ($r = -0.429$, $p = 0.005$), and showed a non-significant negative trend with depression ($r = -0.283$, $p = 0.073$). Anxiety and depression were strongly positively correlated ($r = 0.681$, $p < 0.001$). Regression analysis revealed that age negatively predicted QoL (Beta = -0.588, $p = 0.029$) and positively influenced life satisfaction (Beta = 0.147).

Conclusion: Higher life satisfaction is associated with improved post-donation QoL, whereas elevated anxiety predicts reduced QoL. Older donors reported lower QoL, highlighting age as a critical factor. This study provides regional evidence on psychosocial outcomes in living kidney donors and underscores the importance of age-tailored donor counseling and psychological support.

FREE PAPER SESSION-1

13 February 2026 (Day 1) | 09:00–10:30
Chairs: Dr. Asad Bashir | Dr. Iftikhar Khan
Abstracts: 1-8

Paper 1

Outcomes of 1000 Live Donor Kidney Transplants: A Single Center Experience

Asad Bashir, Nasrum Minallah, Fiaz Ahmad Touqeer
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Background: Renal transplantation is the best available form of treatment for ESRD, conferring superior survival and quality of life as compared with dialysis. In areas of low supply for deceased donor transplant, living donation is the predominant means of renal graft procurement and institution-specific outcome data is necessary in order to benchmark surgical and clinical performance.

Objective: To compare perioperative outcomes, graft function, complication rates and patient and graft survival in a large series of consecutive living donor kidney transplants at a single tertiary transplant center.

Methods: This was a retrospective observational study conducted at the Department of Kidney Transplant Surgery, Pakistan Kidney and Liver Institute & Research Centre, Lahore from May 2018 up to October 2025. Recipients of living donor kidney transplants were included; those receiving deceased donor or simultaneous multiorgan transplantation were excluded. Data were obtained from electronic medical records through a standardized form, which comprised demographic data, immunologic parameters, graft and recipient anatomy, immunosuppressive induction protocol, perioperative complications, episodes of rejection as well as patient and graft survivals. SPSS version 27 was used for descriptive statistics.

Results: A total of 1,113 kidney transplant recipients were included in the analysis. Among them, 62 cases were pediatric transplants, and 36 were kidney paired exchange procedures. In 267 grafts, there were multiple renal arteries. The early surgical complications comprised hemorrhage /hematoma in 21 cases (1. 9%), graft thrombosis in 2 (0. 2%), arterial thrombosis in 2 (0. 2%), urinary leak in 4 (0. 36%), surgical site infection in 23 (2. 1%), and external iliac artery dissection in 1 (0. 1%). Late complications were ureteric stricture in 10 patients (0. 89%), intestinal obstruction in 3 (0. 3%), renal artery stenosis in 1 (0. 1%), and renal artery pseudoaneurysm in 1 (0. 1%). The total rejection rate was 3. 3%, whereas the rejection rate at one year was 1. 6%. The death, censored graft survival rates were 99. 5% at one year and 91. 46% at five years, and patient survival rates were 99. 38% and 97. 23% at one and five years, respectively.

Conclusion: This extensive experience from a single large center exhibits outstanding patient and graft survival both in the short and mid, term with low rates of complications and rejection, thereby attesting to the safety and efficacy of living donor kidney transplantation in a high, volume tertiary care setting.

Paper 2

Kidney Transplantation in Patients with a Previous History of Femoral Lines: Surgical Challenges and Outcomes

Muhammad Izhar
Institute of Kidney Diseases, Peshawar

Background: Kidney transplantation is the preferred treatment for end-stage renal disease (ESRD), offering better survival and quality of life than dialysis. However, recipients with prior femoral vascular access often present surgical challenges due to venous scarring, thrombosis, or anatomical distortion, which may complicate graft anastomosis and early outcomes.

Objective: To assess surgical complexity, early complications, and short-term graft outcomes in kidney transplant recipients with a history of femoral lines.

Methods: This retrospective cohort study included 47 adult renal transplant recipients with prior femoral catheterization who underwent living donor transplantation at institute of kidney diseases peshawar, Pakistan. Data on demographics, intraoperative events, and postoperative outcomes were analyzed using SPSS ($p < 0.05$). Complications were classified by the Clavien-Dindo system.

Results: Recipients had a mean age of 39.8 ± 10.7 years, and 80.9% were male. Hypertension (76.6%) and diabetes (25.5%) were common. All transplants were performed in the right iliac fossa, using the external iliac vessels in most cases. Difficult venous exposure occurred in 19.1% and venous injury in 6.4%. Delayed graft function developed in 19.1%, while 6-month graft and patient survival were 91.5% and 97.9%, respectively. Patients with venous abnormalities had longer operative times and greater blood loss ($p < 0.05$) but similar graft survival.

Conclusion: Kidney transplantation in patients with prior femoral lines is feasible and yields favorable early outcomes. Preoperative vascular imaging, meticulous surgical technique, and multidisciplinary coordination are essential to mitigate intraoperative risks and optimize graft success.

Paper 3

Clinical Outcomes of 1000 Hand-Assisted Minimal Invasive Living Donor Nephrectomies

Asad Bashir, Nasrum Minallah, Fiaz Ahmad Touqeer
Department of Kidney Transplant, Pakistan Kidney and Liver Institute & Research Centre, Lahore, Pakistan

Background: Living donor nephrectomy is an essential part of a successful kidney transplantation. Donor safety and minimal perioperative morbidity are two major goals of this procedure. The use of minimally invasive methods, especially hand, assisted laparoscopic donor nephrectomy (HADN), improved the post, operative recovery of the patient by reducing the pain, the amount of blood lost, and the length of hospital stay, yet surgical control is maintained through tactile feedback.

Objective: To review the clinical outcomes, perioperative parameters, and complication profile of 1000 hand, assisted minimally invasive living donor nephrectomies performed at a single high, volume tertiary care transplant center.

Methods: This retrospective observational study was carried out at the Department of Kidney Transplant Surgery, Pakistan Kidney and Liver Institute & Research Centre, Lahore, Pakistan, from May 2018 to October 2025. The study included living kidney donors who underwent hand, assisted minimally invasive nephrectomy. Cases of open donor nephrectomy were not considered. Data was obtained from the electronic medical records through a standardized proforma. Variables collected included donor demographics (age, sex, body mass index), renal function pre, donation, perioperative parameters (operative complications, hospital stay, and 30, day mortality), and post, donation outcomes, including serum creatinine at one year. SPSS version 27 was used for statistical analysis. Continuous variables were presented

as means and standard deviations, while categorical variables were presented as frequencies and percentages.

Results: Donors had a mean age of 36. 4 (8. 2) years and a mean BMI of 24. 7 (3. 5) kg/m2. Serum creatinine level before donation averaged 0. 85 (0. 19) mg/dL. Operative time averaged 148 (26) minutes, warm ischemia time averaged 3. 1 (0. 9) minutes, and hospital stay averaged 3. 2 (0. 8) days. Only 1. 8% of cases (n=18) experienced major complications, and there was no 30, day mortality. One year after surgery, serum creatinine levels of donors averaged 1. 12 (0. 28) mg/dL, and grafts in recipients showed excellent immediate postoperative function.

Conclusion: Hand assisted minimally invasive donor nephrectomy is a safe and effective method that results in low complication rates, unchanged renal function after operation, and good recovery. The data support the use of this technique as a standard procedure for living donor kidney transplantation.

Paper 4

Comparison of Double Versus Single Renal Artery Anastomosis in Kidney Transplant and their impact on Graft Survival, Surgical Out come and Post-operative Complications

Fazle Manan
Institute of Kidney Diseases Hyatabad Medical Complex, Peshawar

Background: Kidney transplantation remains the preferred treatment for end-stage renal disease (ESRD), offering better survival and quality of life than dialysis. Anatomical variations such as double renal arteries, however, may increase the technical complexity of vascular anastomosis. Data comparing outcomes between single and double renal artery grafts are limited in our region. The purpose of this study was to compare the graft function, surgical outcomes, and postoperative complications of kidney transplant recipients who had a single renal artery anastomosis with those who had a double renal artery anastomosis.

Methods: This prospective comparative observational study was conducted at the Institute of Kidney Diseases (IKD), Peshawar, from April 2023 to April 2025. A total of 80 adult renal transplant recipients were included: 50 with single renal artery grafts and 30 with double renal artery grafts. Donor and recipient demographics, ischemia times, perioperative complications, graft function (serum creatinine, estimated glomerular filtration rate (eGFR), urine output, and delayed graft function (DGF)), and one-year graft survival were analysed. Statistical analysis was performed using SPSS version 26.0 (IBM Corp., Armonk, NY, USA), with significance set at $p < 0.05$.

Results: Baseline donor and recipient characteristics were comparable between groups. Warm ischemia time was significantly longer in the double artery group (38.1 ± 9.2 vs. 32.8 ± 8.5 minutes, p = 0.01), while cold ischemia time showed a non-significant trend toward prolongation (47.5 ± 12.8 vs. 42.3 ± 11.2 minutes, p = 0.07). Graft function outcomes were similar, with no significant differences in serum creatinine at 12 months (1.48 ± 0.39 vs. 1.36 ± 0.35 mg/dL, p = 0.18), eGFR (56.1 ± 10.9 vs. 58.4 ± 11.6 mL/min/1.73 m², p =0.39), urine

output (3.0 ± 0.8 vs. 3.2 ± 0.9 L, p = 0.42), or DGF (16.7% vs. 12%, p = 0.58). Postoperative complications, including vascular thrombosis, urological issues, re-exploration for bleeding, and acute rejection, showed no significant differences. One-year graft survival was excellent in both groups.

Conclusion: Double renal artery anastomosis in kidney transplantation is safe and effective, with comparable graft function, complication rates, and survival to single renal artery anastomosis. Despite a modestly longer warm ischemia time, outcomes remained equivalent, supporting the use of kidneys with multiple renal arteries to expand the donor pool in resource-limited settings.

Paper 5

Initial Experience of Kidney Paired Donation in Living Donor Kidney Transplants: A Retrospective Study

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Background: Kidney Paired Donation (KPD) enables living donor kidney transplantation among immunologically incompatible donor-recipient pairs through donor exchange. This approach addresses the challenge of ABO incompatibility and positive crossmatch while expanding transplant opportunities. Published outcome data from Pakistan remains limited.

Objective: To evaluate the short-term clinical outcomes of KPD in living donor kidney transplants, including patient and graft survival, perioperative complications, and graft function.

Methods: A retrospective observational study was conducted at the Department of Kidney Transplantation Surgery, Pakistan Kidney and Liver Institute & Research Centre, Lahore, from August 2022 to June 2025. Data from 36 KPD transplants were reviewed. Inclusion criteria comprised adult and pediatric recipients with a follow-up period of at least three months. Data were extracted from electronic medical records and analyzed using SPSS version 27.

Results: The mean age of kidney recipients was 36.8 ± 11.2 years, while the mean age of donors was 41.5 ± 10.6 years. The mean body mass index (BMI) was 24.1 ± 3.6 kg/m² for recipients and 26.2 ± 4.1 kg/m² for donors. The primary indications for KPD included ABO incompatibility (67.8% of cases) and positive crossmatch (32.2%). Perioperative outcomes showed a median warm ischemia time of 99.15 ± 10.27 seconds, a median cold ischemia time of 52.08 ± 11.86 minutes, a median vascular anastomosis time of 27.85 ± 6.84 minutes, and a median total operation time of 193.69 ± 41.26 minutes. Delayed graft function occurred in one patient (3.6%). 1.2 mg/dL at 3 months, 1.3 mg/dL at 6 and 9 months, and 1.4 mg/dL at 12 months post-transplant. At one year post-transplant, patient survival was 100%. Graft survival was 96.4%, with one graft loss due to early vascular thrombosis. Serum creatinine levels remained stable across follow-up. Perioperative complications included lymphocele requiring intervention in two patients (7.1%) and wound infection in one patient (3.6%). The median cold ischemia time was 60 minutes, while the median warm ischemia time was 3.5 minutes.

Conclusion: Kidney Paired Donation in living donor kidney transplantation demonstrated excellent short-term clinical outcomes in this cohort, with high patient and graft survival rates, stable graft function, and low complication rates.

Paper 6

High Morbidity and Graft Loss in Recipients of Black-Market Kidney Transplants

Ruqia Tariq, Maham Farooq, Mishal Imran, Muhammad Nawaz, Arshad Mehmood
BARMT, Safari Hospital Rawalpindi

Background: Kidney transplantation remains the gold-standard treatment for end-stage renal disease (ESRD). In Pakistan, a persistent shortage of legally available organs has driven the emergence of unregulated black-market kidney transplantation. These procedures are frequently performed under substandard conditions, without appropriate donor or recipient evaluation, perioperative safeguards, or structured follow-up, predisposing recipients to severe postoperative complications and poor graft outcomes.

Objective: To evaluate postoperative morbidity, surgical complications, and graft survival in patients who underwent undocumented, illegal kidney transplantation.

Methods: A retrospective review was conducted of patients presenting to a tertiary care center following black-market kidney transplantation. Data were collected on demographic characteristics, postoperative complications, surgical interventions, duration of hospitalization, and graft outcomes. Primary endpoints included morbidity patterns, need for reoperation, and graft loss.

Results: A high burden of postoperative complications was observed. Two patients developed graft rupture requiring emergency re-exploration, while two underwent graft nephrectomy due to non-viability. Urological complications were common, including three ureteric leaks managed with Foley catheterization (n=1) and Boari flap reconstruction (n=2). Four patients developed urinary tract infections associated with double-J stents, necessitating stent removal. These complications resulted in prolonged hospital stays and significantly compromised graft survival.

Conclusion: Black-market kidney transplantation is associated with unacceptably high morbidity and graft loss. The lack of sterile surgical environments, proper perioperative care, and systematic follow-up contributes to preventable complications and poor outcomes. Strengthening regulatory frameworks, expanding ethical transplant programs, and ensuring structured post-transplant care are essential to reduce reliance on illegal transplantation and improve patient and graft survival.

Paper 7

Transplantation of Renal Grafts with Multiple Arteries: Surgical Techniques and Outcome Analysis

Asad Bashir, Nasrum Minallah, Dr. Fiaz Ahmad Touqeer
Department of Kidney Transplant, Pakistan Kidney and Liver Institute & Research Centre, Lahore, Pakistan

Background: Multiple renal arteries (MRAs) are seen in about 20 to 30 percent of kidney donors. Possible complications resulting from MRAs include a higher risk of bleeding, vascular thrombosis, delayed graft function, and ureteral ischemia. Progress in microsurgical vascular techniques, and preoperative imaging have greatly contributed to the improvement in the outcome of these grafts.

Objective: To evaluate the surgical techniques, perioperative factors, postoperative outcomes and graft survival of living donor kidney transplants using grafts with MRAs.

Methods: This retrospective observational study was carried out at the Department of Kidney Transplant Surgery, Pakistan Kidney and Liver Institute & Research Centre, Lahore, Pakistan, from May 2018 to July 2025. Patients who underwent renal transplantation with grafts having MRAs were included in the study. Two simultaneous liver, kidney transplant cases were not considered in the study. The final analysis comprised 267 recipients. The data were obtained from the electronic medical records using standard form and covered demographics, comorbidities, immunologic risk assessment, immunosuppressive induction, graft vascular and ureteric anatomy, perioperative variables, acute rejection episodes, complications, serum creatinine at 12 months, and one, year patient and graft survival. Descriptive statistical analysis was conducted using SPSS version 27.

Results: Patients were predominantly male (223, 82.9%), the mean age was 32.5 ±10.5 years, and the BMI was 22.0 +/-4.0 kg/m^2. Most had 2 arteries (256, 95.2%); anastomoses were separate (177, 66.3%) or pantaloon (77, 28.8%). Mean cold ischemia 75.7 +/-16.7 min, serum creatinine after 12 months 1. 32 +/-0.5 mg/dL. The rate of complications was low: delayed graft function 5 (1.9%), graft thrombosis 2 (0.75%), acute rejection 2 (0.75%). The 1-year graft/patient survival was 99%, 3-year graft and patient survival were 93% and 97% respectively.

Conclusion: Kidney transplant from living donors using renal grafts with MRAs is safe and effective as long as it is carried out in a close surgical and perioperative setting.

Paper 8

Incidence and Outcome of Recurrent IgA Nephropathy in Post Renal Transplant Patients in South Asian Population: A Single Center Study

A. Manzoor[1], Z. Fatima[2], R. Shahid[2]

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Purpose: The purpose of the study is to calculate the incidence of Recurrent IgA Nephropathy in Post-Renal Transplant patients and their management with respect to an emerging nation with resource limitations. There is a gap of local data with respect to the incidence of disease recurrence after live related renal transplant.

Methods: This is a retrospective study where we followed the post-transplant course of all Renal Transplant patients with Biopsy proven IgA Nephropathy as primary etiology of End-stage renal disease. The study was done in a single transplant center in an emerging South Asian country with scarce healthcare resources. The cohort consisted of 27 patients out of 960 who had biopsy proven IgA Nephropathy as the cause of Renal failure. Data was analyzed using Microsoft Excel and presented in the form of percentage of recurrence.

Results: The study cohort consisted of 27 patients with biopsy proven IgA Nephropathy pre-transplant, which makes up for 2.8% of patients that underwent live-related renal transplant in this center. Only one patient was female, all others were male. Recurrence was seen in 6 out of these 27 patients. (22.22%) One female and five male patients had disease recurrence. Average age was found to be 27.8 years. Incidence of Recurrence occurred 37.8 months (3 years 1 month) after renal transplant on average. 4 pairs consisted of sibling donation, while one had mother as the donor and posed a higher immunological risk. Paternal uncle was the donor in one pair. All patients are on treatment and baseline creatinine on average is 1.8mg/ dL. There is no graft loss yet due to disease recurrence.

Conclusion: Renal transplantation outcomes have improved by leaps and bounds over the course of time due to increased knowledge of disease process and immunology. Live related renal transplants in a resource limited setting have its own set of limitations. Most patients present in the setting with advanced renal failure and their primary etiology remains unknown due to lack of timely tissue histopathology. According to our study, the incidence of disease recurrence is 22% in IgA Nephropathy which is comparable to global data. No significant factors can be identified to predict which patients will have recurrent disease as the presentation is sporadic.

FREE PAPER SESSION-2

13 February 2026 (Day 1) | 14:00–15:30
Chairs: Prof. Dr. Simi Ali | Dr. Wafa Kammoun
Abstracts: 1-8

Paper 1

Utility of Using Modified Leipzig Score for Diagnosis of Wilson's Disease in a Resource-Limited Setting

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Background: Wilson's disease is an autosomal recessive disorder diagnosed with a Leipzig score of 4 or more. This scoring system uses complex criteria which are not entirely available in many resource-limited countries. A modified Leipzig has been proposed by Nagral et al. with more weightage to serum ceruloplasmin less than 5, family history and presence of neurobehavioral symptoms irrespective of severity. We aimed to evaluate the utility of the modified Leipzig scoring system in our cohort to improve the diagnostic accuracy of the disease.

Methods: This is a retrospective study of 120 patients who presented to our centre from 2017 to 2025 with high clinical suspicion of Wilson's disease and were treated based on suggestive clinical and laboratory parameters. We assessed the modified Leipzig score's ability to establish the diagnosis of Wilson disease in patients who remained indetermined on Leipzig score due to unavailability of advanced tests like genetic testing, relative exchangeable copper and hepatic copper quantification.

Results: Out of 120 patients, 87 (72.5%) were male. The median age of patients was 15.5 (IQR 10.96–21.80). Pediatric population was 52 (43.3%). Hepatic manifestations were n=92 (76.6%), neurological n=29 (46%), psychiatric n=12 (31.6 %). Seventy-seven (64.16%) were cirrhotic at the time of presentation and n=42 (54.5%) had model for end-stage liver disease score of $\geq$15. Fourteen out of 42 eligible patients underwent liver transplantation. Hundred out of 120 patients had a Leipzig score of 4 or more confirming definitive diagnosis. A modified Leipzig score was applied, and among 20 indeterminate cases, 5 were classified as definitive Wilson's disease. Thus, the modified Leipzig score identified 25% additional cases as definitive Wilson's disease.

Conclusion: Given the challenges of diagnosing Wilson's disease, a modified Leipzig score offers an improved diagnostic criteria in a resource-limited setting; however, there still is a need for a simplified diagnostic algorithm.

Paper 2

Comparative Effectiveness of Cognitive Behavioral Therapy and Antidepressants in Managing Depression among End-Stage Renal Disease Patients in Islamabad

Abrar Hussain Azad, Usman Ghani
Mohi-ud-Din Teaching Hospital Mirpur, AJK

Background: Depression is common among patients with end-stage renal disease (ESRD) and adversely affects quality of life, adherence to treatment, and clinical outcomes. Cognitive Behavioral Therapy (CBT) and antidepressants are widely used, but comparative evidence in ESRD patients in Islamabad is limited.

Objective: To compare the effectiveness of CBT versus antidepressant therapy in reducing depressive symptoms among ESRD patients undergoing hemodialysis.

Methods: In a randomized controlled trial, 220 ESRD patients with moderate to severe depression were assigned to either an 8-week CBT program (n=110) or standard antidepressant therapy (n=110). Depression severity was measured at baseline and post-intervention using the Beck Depression Inventory-II (BDI-II). Paired and independent t-tests were used for within-group and between group comparisons.

Results: Both interventions significantly reduced depressive symptoms. The CBT group had a mean BDI II reduction of 14.8 ± 4.3, while the antidepressant group had a reduction of 12.5 ± 3.9 ($p < 0.05$). CBT also improved coping strategies, dialysis adherence, and patient engagement. No serious adverse effects were reported.

Conclusion: CBT is at least as effective as antidepressant therapy in ESRD patients and provides additional psychosocial benefits. Integrating CBT into routine care is recommended to enhance mental health and treatment adherence.

Paper 3

Adapting Health Systems to Climate Extremes: Building Resilience Amid Temperature Shifts in Sindh, Pakistan (2013–2022)

Ahsana Nazish[1], Shiza Khalid[2], Wafa Zehra Jamal [2], Zafar Fatmi[2]
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Background: Climate change is altering temperature and weather patterns globally, with disproportionate impacts on vulnerable regions. Sindh province in Pakistan is highly exposed to climate variability due to its diverse geography and socio-economic vulnerabilities. Generating localized climate evidence is essential to inform health system adaptation and resilience planning.

Objective: To quantify trends in key climate variables across selected districts of Sindh between 2013 and 2022 and assess implications for climate-resilient health system planning.

Methods: Daily climate data for six variables—precipitation, relative humidity, mean temperature, maximum temperature, minimum temperature, and wind speed—were analyzed for four districts (Karachi, Nawabshah, Thatta, and Mithi) over a ten-year period (2013–2022). Data were extracted via the Visual Crossing API and analyzed using Python-based scripts to assess annual averages, extremes, and directional trends across coastal, urban, and arid settings.

Results: All four districts experienced increasing precipitation and humidity over the decade. Thatta showed the steepest rise in precipitation, increasing by an average of 64.2 mm per year, with annual totals rising from 102 mm (2013) to 464 mm (2022). Karachi and Nawabshah recorded more modest increases in precipitation (~2.4–2.8 mm per year) alongside declining wind speeds (−0.54 mph/year and −0.16 mph/year, respectively). Mean temperatures increased in Karachi (+0.02°C/year), Nawabshah (+0.05°C/year), and Thatta (+0.04°C/year), while Mithi showed a decline in average temperature (−0.01°C/year) despite sharp increases in rainfall (+33.6 mm/year). Relative humidity rose across all districts, with increases ranging from 0.15% to 0.64% per year.

Conclusion: The findings reveal heterogeneous and intensifying climate trends across Sindh, characterized by rising precipitation, humidity, and localized warming alongside declining wind speeds. These shifts heighten risks of floods, heat stress, and service disruption, underscoring the need for district-specific, data-driven health system adaptation strategies to build resilience against escalating climate extremes.

Paper 4

Treatment of Advanced HCC Using Regorafenib: The Largest Cohort of Use as a Later Line of Therapy in a LMIC

Amjad Zafar
Hameed Latif Hospital, Lahore

Background: Second-line systemic therapy and beyond outcomes for hepatocellular carcinoma (HCC) are under-reported from low- and middle-income countries (LMICs). Real-world evidence is particularly important where disease etiology, delayed presentation, and supportive care limitations may influence treatment tolerability and outcomes. We report the largest LMIC cohort describing clinical outcomes in HCC patients treated with regorafenib in later lines.

Methods: A retrospective observational cohort was analyzed including 46 HCC patients treated with regorafenib after failure/progression on initial therapy. Baseline variables included age, sex, ECOG performance status, etiology, Child–Pugh class, prior treatments, baseline and evaluation CT status, AFP at evaluation, and treatment continuation/discontinuation. Tumor response was assessed on evaluation CT (stable disease, partial response, progressive disease), and reasons for stopping regorafenib were documented.

Results: The cohort included 46 patients, with a mean age 59.15 ± 8.42 years (range 40–76); 73.9% were male (34/46). Performance status was favorable with ECOG 0: 10.9%, ECOG 1: 84.8%, ECOG 2: 4.3%. Etiology was predominantly viral: HCV 80.4% (37/46), HBV 2.2%

(1/46), HBV+HCV 2.2% (1/46), and unknown 15.2% (7/46). Baseline liver function at initiation showed Child–Pugh A: 87.0% (40/46) and Child–Pugh B: 13.0% (6/46). All patients had progressed prior to regorafenib initiation (97.8% disease progression on initial CT scan). Pre-regorafenib treatment exposures were: lenvatinib alone 39.1%, TACE + lenvatinib 26.1%, TACE + multiple systemic therapies 19.6%, and multiple systemic therapies 15.2%. On evaluation CT (n=45), outcomes were: stable disease 24.4% (11/45), partial response 6.7% (3/45), and progressive disease 37.8% (17/45); 17.8% (8/45) were deceased and 13.3% (6/45) were lost to follow-up. Among patients with available data (n=32), 28.3% remained on regorafenib, while 41.3% had stopped therapy. The leading cause of discontinuation was disease progression (51.6%), with intolerance accounting for 9.7% of discontinuations (remaining classified as not applicable due to ongoing treatment / missingness). AFP at evaluation was available in 31 patients: ≤100 in 41.9%, 100–400 in 16.1%, and >400 in 41.9%.

Conclusion: In this largest LMIC real-world second-line cohort, regorafenib was predominantly used after progression on lenvatinib-based therapy in largely Child–Pugh A, ECOG 0–1 patients. Disease control (stable disease or partial response) was observed in approximately one-third of evaluable cases, while progression remained the most common outcome and reason for discontinuation. Although time-to-event OS could not be computed due to missing survival dates, based on cohort characteristics and observed disease control rates, projected median OS would be expected to approximate published second-line regorafenib outcomes (~7–11 months), with potentially lower survival due to substantial early progression and LMIC constraints. This data provides important evidence supporting feasibility and real-world outcomes of second-line regorafenib in LMIC settings.

Paper 5

Early Molecular Detection of Emerging Fungal Pathogens: Improved Identification of Aspergillus and Mucorales Using PCR-RFLP

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Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan

Background: Recent global surges in mucormycosis and mixed mold infections, particularly among immunocompromised and post-COVID patients, have exposed critical diagnostic blind spots in routine culture-based mycology. These emerging fungal pathogens often present with low fungal burden, rapid tissue invasion, and high mortality, necessitating rapid, affordable molecular diagnostics suitable for routine clinical laboratories. This study evaluated the diagnostic effectiveness of conventional culture methods against ITS-based PCR-RFLP for identifying clinically significant molds.

Methods: A total of sixty-seven clinical specimens were processed using both fungal culture and PCR-RFLP targeting the ITS region with MwoI enzyme digestion. Atypical patterns were further analyzed in silico and confirmed using specific primers for Mucorales. Statistical analysis using Chi-square and Cohen's Kappa tests was employed to assess concordance between methods.
Results: Fungal growth was recovered by culture in seven samples, whereas ITS-based PCR-

RFLP detected fungal DNA in twelve samples (17.9%). Molecular analysis identified *Aspergillus flavus*, *Aspergillus fumigatus*, *Aspergillus ochraceus*, *Aspergillus nidulans*, *Aspergillus amstelodami*, *Rhizopus arrhizus*, and *Aspergillus terreus*, including mixed infections that culture failed to detect. Interestingly, Rhizopus arrhizus was accidentally detected using unique MwoI digestion patterns and then verified using ZM-specific primers, indicating the wider applicability of this method. Two cases showed co-infection with *R. arrhizus* and *Aspergillus terreus*, confirmed by Mucorales-specific primers. Although statistical testing revealed a significant association ($p < 0.05$) between methods, Cohen's Kappa indicated low concordance ($\kappa = 0.058$).

Conclusion: The findings highlight those molecular diagnostics-specifically ITS PCR-RFLP offer higher sensitivity for detecting *Aspergillus* and *Mucorales* compared to conventional culture. The method successfully uncovered co-infections and species-level identifications otherwise missed. Integrating molecular tools into routine workflows can significantly improve diagnostic accuracy and support more timely and appropriate antifungal treatment.

Paper 6

Educational Leadership in Healthcare: Translating Research Culture into Improved Patient Care

Sana Zaheer Qureshi
Department of Diagnostic Radiology and Medical Imaging, King Edward Medical University, Lahore

Background: Healthcare systems increasingly emphasize research-informed practices to improve patient outcomes. However, there is a persistent gap between scientific discovery and routine clinical care. Educational leadership within healthcare institutions plays an important role in cultivating a research-oriented culture that supports evidence-based decision-making. Moreover, it contributes towards interdisciplinary collaboration and continuous improvement and quality enhancement.

Objective: This study delves into the ways educational leadership practices in healthcare settings contribute towards turning research evidence into clinical practice. This study particularly focuses on teaching hospitals and allied health disciplines especially medical imaging technology.

Methods: A qualitative exploratory research method was employed using semi-structured interviews with healthcare educators and clinical leaders working in tertiary care institutions. Thematic analysis was conducted to identify various leadership strategies, institutional enablers, and barriers that influence the integration of research into clinical teaching and patient care processes.

Results: Findings of the study unraveled that transformational leadership, mentorship-driven research engagement and alignment of educational policies with clinical practices play a significant role in research utilization in patient care. Participants highlighted that supportive leadership increases clinician confidence among students. Moreover, interprofessional learning

improves adherence to evidence-based protocols. Conversely, limited research training and organizational barriers were identified as key challenges.

Conclusion: Educational leadership plays a critical role in discovery and patient care by embedding research culture into healthcare education and clinical practice. Strengthening leadership capacity and research values among healthcare educators translates into improved patient outcomes and clinical excellence.

Paper 7

Vitamin D Deficiency in Liver Cirrhosis: The Silent Epidemic

Hafsa Sareen Rai
Pakistan Kidney and Liver Institute and Research Center, Lahore, Pakistan

Background: Vitamin D deficiency is a silent epidemic in liver cirrhosis, often overlooked amidst overt complications. Beyond skeletal health, it plays a critical role in immune regulation, infection control, and metabolic stability, directly influencing rehabilitation, pre-transplant readiness, and survival.

Objective: To determine the frequency of vitamin D deficiency in cirrhotic patients and its association with disease severity, highlighting the importance of routine correction, particularly in the pre-transplant period.

Methods: This cross-sectional study included 150 adult patients (18–60 years) with cirrhosis of any etiology at the Pakistan Kidney and Liver Institute & Research Center (PKLI & RC), Lahore. Patients with chronic renal failure, malabsorption syndromes, or medications affecting vitamin D metabolism were excluded. Disease severity was assessed using the Child–Turcotte–Pugh (CTP) classification. Serum vitamin D levels were measured in all participants.

Results: The study cohort had a mean age of 50.29 ± 8.02 years, with males comprising 63.33% (n = 95) and females 36.67% (n = 55), yielding a male-to-female ratio of 1.7:1. Overall, vitamin D deficiency was identified in 92 patients (61.33%). When stratified by disease severity, deficiency prevalence increased sharply with advancing cirrhosis: Child–Pugh class A: 13 patients (21.31%), class B: 37 patients (80.43%), and class C: 42 patients (97.67%) ($p = 0.0001$), demonstrating a strong, statistically significant correlation between disease severity and vitamin D deficiency

Conclusion: Vitamin D deficiency is highly prevalent in cirrhosis and increases with disease severity, confirming its role as a silent epidemic. Routine screening and correction should be mandatory in all cirrhotic patients, particularly during pre-transplant evaluation, to enhance rehabilitation and improve peri-transplant survival.

Clinical Implication: Vitamin D assessment and supplementation should be integrated into standard cirrhosis care and transplant work-up protocols as a simple, low-cost, high-yield intervention.

Paper 8

Hepatocellular Carcinoma an a Hepatitis C Predominant LMIC Cohort: Clinical Presentation, Hepatitis Treatment Outcomes, and Gaps in Surveillance Despite Virological Response

Amjad Zafar
Hameed Latif Hospital, Lahore

Background: In low- and middle-income countries (LMICs), hepatitis C virus (HCV) remains a dominant driver of hepatocellular carcinoma (HCC). While direct-acting antivirals (DAAs) and sustained virological response (SVR) reduce long-term HCC risk, patients with established cirrhosis and/or treated HCC remain at risk of recurrence and progression. Real-world evidence on patient profiles, hepatitis treatment history, virological outcomes, and surveillance practices is essential to guide post-treatment monitoring strategies in LMIC settings.

Methods: This descriptive cross-sectional study included 181 HCC patients. Variables evaluated were demographics (age, age category, sex), liver disease risk factors, comorbidity burden, hepatitis treatment exposure (received treatment; treatment type), virological parameters (HBV/HCV viral load; follow-up PCR status), SVR achievement, interval between hepatitis treatment and HCC diagnosis, baseline liver imaging (USG contour), presentation symptoms, decompensated chronic liver disease (DCLD) at diagnosis and associated clinical signs, portal hypertension assessment (varices by EGD), functional status (ECOG), baseline liver function (Child-Pugh class), and follow-up imaging (number of follow-up USGs and CT scans). Descriptive statistics were computed using proportions and central tendency with ranges. Missingness was reported where applicable.

Results: Mean age was 59.82 ± 7.59 years (median 60, range 28–80); 69.6% (n=126) were male. Most patients were aged 40–60 years (53.6%) or 61–80 years (45.9%). Comorbidities were absent in 47.0%, while hypertension (19.3%), diabetes (13.3%), obesity (5.0%), and ≥2 comorbidities (15.5%) were recorded. Underlying etiologies were predominantly viral: HCV 80.7%, HBV 2.8%, and HBV/HCV coinfection 2.2%; alcohol-related etiology was uncommon (alone 1.1%, with HCV 1.7%). No recorded risk factor was documented in 11.0%. Hepatitis treatment data were available for 158 patients, of whom 69.6% (110/158) had received treatment. Among patients with treatment type documented (n=108), antivirals were most frequent (72.2%), followed by interferon-based therapy (16.7%) and traditional medication (3.7%). SVR data were available for 129 patients: 57.4% achieved SVR (74/129), while 40.3% did not (52/129). Viral load was documented in only 3.9% (7/181), limiting virological stratification. The median interval between hepatitis treatment and HCC diagnosis (n=157) was 5 years, with 22.3% diagnosed in the same year (0-year interval), suggesting delayed treatment, delayed diagnosis, or diagnosis during treatment workup. Baseline ultrasonography (n=180) showed nodular contour in 35.0% and smooth contour in 17.8%, with nearly half labelled as N/A (47.2%). DCLD features at diagnosis were present in 26.9% (46/171); among recorded manifestations, ascites (70.0%) predominated. Varices assessment was notably limited: among available records (n=142), EGD was not performed in 76.1%, while varices were documented

in 17.6%. Clinical presentation was predominantly symptomatic after decompensation, most commonly abdominal pain (47.5%), followed by ascites (13.3%), hematemesis (8.3%), weight loss (8.3%), and jaundice (7.7%); only 11.6% had no symptoms. ECOG performance status (n=137) was mainly preserved (ECOG 0–1 in 96.4%). Child-Pugh classification recorded before treatment was A in 66.3% and B in 9.4%, with 24.3% falling into an unlabelled dataset category. Follow-up imaging revealed gaps in monitoring: 40.4% underwent no follow-up USG or AFP level monitoring.

Conclusion: In this LMIC cohort, HCC was overwhelmingly driven by HCV, with most patients presenting symptomatically rather than through structured surveillance. Despite a substantial proportion achieving SVR and having preserved performance status and Child-Pugh A liver function, key monitoring processes remained inconsistent, particularly AFP and ultrasound-based follow-up, which are bare minimum for surveillance, in a resource limited setting. These findings reinforce the need for strict, long-term monitoring and standardized surveillance pathways even after hepatitis viral eradication (SVR) and after HCC-directed treatment, as post-treatment patients remain vulnerable to recurrence, progression, and complications of chronic liver disease in real-world LMIC settings.

FREE PAPER SESSION-3

13 February 2026 (Day 1) | 16:00–17:30
Chairs: Prof. Dr. Muhammad Atique | Prof. Dr. Mushtaq Haroon
Abstracts: 1-8

Paper 1

Histopathological Spectrum of Post–Liver Transplant Biopsies: Emphasizing Banff-Based Reporting, T Cell–Mediated Rejection, and Concomitant pathologies

Iram Khan
Pakistan Kidney and Liver Institute and Research Center, Lahore, Pakistan

Background: Graft dysfunction following liver transplantation is multifactorial, frequently involving immune-mediated injury and biliary complications. Liver biopsy, when reported using standardized criteria such as the Banff classification, remains central to diagnosis and management. This study evaluates the histopathological spectrum of post–liver transplant biopsies with particular emphasis on T cell–mediated rejection (TCMR) and its coexistence with other pathologies like obstruction and steatosis.

Methods: Study Area: Histopathology Department of PKLI hospital and Research Centre Study Subjects: All post-transplant patient who underwent liver allograft biopsies from November 2022 to September 2025. Study Design: Retrospective Observational study Sample Size: Number =65 biopsies, (49 patients including 13 patients having multiple biopsies) Sampling Technique: Non-Probability Consecutive Sampling Study Primary Outcome: There is a wide range of histopathological injury patterns in Post transplant liver allograft biopsies in patients with deranged liver enzymes. There can be more than one reason for graft

dysfunctions. Percutaneous liver biopsies play an important role in management of liver allograft recipients. Data Collection Method, Data instruments and Measurements: All liver allograft biopsies including inhouse and outside hospital transplanted patients irrespective of age; gender were retrieved from the archives and slides were reviewed by two pathologists. Data Management and Analysis Plan: Multiple Clinical variables (indication of transplant, post-transplant period, liver enzymes, and bilirubin levels), radiological findings (anastomotic site stricture), Histopathological parameters (T cell mediated rejection graded according to Banff criteria, Antibody mediated rejection, cholestasis, cholangitis, fibrosis, steatosis, ductopenia, drug induced injury, nodular regenerative hyperplasia) were recorded. Statistical software SPSS was used for data analysis.

Results: The cohort comprised predominantly male patients (81.8%) with a median age of 45 years (IQR 39.5–52). Median time from transplant to biopsy was 578 days (IQR 284.75–1041.75). Hepatitis C virus was the most common underlying etiology at presentation (51.5%). At the patient level, TCMR was identified in 27/49 patients (55.1%), including mild in 12.2%, moderate in 32.7%, and severe in 14.3%. Cholestasis was the most frequent histological finding (71.2%), followed by cholangitis (39.4%). Radiological evidence of biliary stricture was present in 59.1% of cases. Steatosis was observed in 12.1% of biopsies, while antibody-mediated rejection and ductopenia were identified in 7.6% and 10.6% of patients, respectively. Concomitant etiologies were present in 27.3% of cases, highlighting overlapping mechanisms of graft injury.

Conclusion: Post–liver transplant graft dysfunction commonly reflects a combination of immune-mediated rejection and biliary/obstructive injury. The high prevalence of moderate-to-severe TCMR underscores the importance of Banff-based standardized reporting for accurate diagnosis, reproducibility, and therapeutic decision-making. Recognition of concurrent TCMR and biliary pathology is essential for optimal multidisciplinary management of transplant recipients.

Paper 2

Trends and Disparities in Peptic Ulcer Disease Related Mortality in The United States From 1999 To 2020 A Cross-Sectional Study

*Muhammad Babar[a], Mohsin Raza[b], Muhammad Asfandyar Nadir[b], Ariba Fida[b], Izzah Fayyaz[b], Eeman Ahmad[C], Armaghan Ur Rehman[b], Zain Ali Nadeem[b], Muhammad Bilal Sardar[b], Arsalan Nadeem[b], Akash Gupta[d], Raheel Ahmed**

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Peptic ulcer disease (PUD) is associated with severe complications such as hemorrhage and perforation, leading to high morbidity and mortality rates despite advancements in treatment. This study aims to evaluate the temporal and regional mortality trends of adults with PUD in

the United States from 1999 to 2020, stratified by sex, race/ethnicity, age group, and geographic region. Utilizing death certificate data from the Centers for Disease Control and Prevention Wide-ranging Online Data for Epidemiologic Research database, age-adjusted mortality rates (AAMRs) per 100,000 individuals were derived from crude mortality rates (CMRs). Trends in AAMRs were analyzed through annual percent change (APC) and average APC (AAPC) using Joinpoint regression (Joinpoint Regression Program, V5.0.2). From 1999 to 2020, a total of 37,471 deaths due to PUD were reported in the United States. The AAMR remained stable from 1999 to 2001 (APC: 0.59), followed by a sharp decline from 2001 to 2012 (APC: −11.79). After a period of stability from 2012 to 2018 (APC: 1.53), the trend reversed with an increase from 2018 to 2020 (APC: 8.45). Males had higher AAMR (0.84) than females (0.71). Non-Hispanic Whites had the highest AAMR (0.82), and Hispanics or Latinos the lowest (0.49), with an overall decrease in mortality rates across all racial groups, particularly among Non-Hispanic Black or African Americans. The West had the highest AAMR (0.87), and the Northeast the lowest (0.71), with all regions showing a downward trend. Rural areas exhibited a higher AAMR (0.86) compared to urban areas (0.76). Mortality was most concentrated among adults aged 85 years and older (CMR: 7.63), and the lowest CMR was recorded in the 25 to 54 years age group (0.16). Most deaths occurred in medical facilities (81.89%), followed by decedents' homes (8.36%) and nursing homes/long-term care (3.85%). The District of Columbia (AAMR: 1.47) reported the highest AAMR, while New Jersey (0.59) had the lowest. Despite the overall decline, regional and demographic disparities remain, highlighting the need for continued efforts to address PUD-related mortality.

Abbreviations: AAMR = age-adjusted mortality rate, AAPC = average annual percent change, APC = annual percent change, BMI = body mass index, CagA = cytotoxin associated gene A, CDC WONDER = Centers for Disease Control and Prevention Wide-Ranging Online Data for Epidemiologic Research, CDC = Centers for Disease Control and Prevention, CI = confidence interval, CMR = crude mortality rate, ICD = International Classification of Diseases, NH = non-Hispanic, NIS = National Inpatient Sample, NSAIDs = non-steroidal anti-inflammatory drugs, PUD = peptic ulcer disease, STROBE = Strengthening the Reporting of Observational Studies in Epidemiology, US = United States, VacA = vacuolating cytotoxin A.

Paper 3

The Impact of Antibiotic Stewardship Programs in Reducing Antimicrobial Resistance in Healthcare Settings: A Systematic Review and Meta-Analysis

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Background: Antimicrobial resistance (AMR) presents a critical global health challenge, causing significant morbidity, mortality, and economic burden, particularly in low- and middle-income countries (LMICs). Antimicrobial stewardship programs (ASPs) are vital strategies designed to optimize antibiotic prescribing practices, reducing inappropriate usage and curbing AMR.

Methods: We systematically searched PubMed, Embase, and Google Scholar, identifying randomized controlled trials, quasi-experimental, and observational studies assessing ASP interventions. Data were analyzed using RevMan 5.4 and R software, employing a random-effects model. Outcomes included antibiotic consumption metrics such as Days of Therapy (DOT) and Defined Daily Doses (DDD) per 1000 patient-days, alongside changes in resistance rates. Risk of bias was assessed using ROBINS-I and RoB 2 tools, and evidence quality was evaluated via the GRADE approach.

Results: Eighteen studies met the inclusion criteria, representing interventions across intensive care units (ICUs), general medical wards, neonatal care units, and long-term care facilities (LTCFs). ASPs significantly reduced antibiotic use, showing an average reduction of 24.71% (95% CI: -29.50% to -19.92%, $p<0.00001$). Notable reductions included a 50% decrease in colistin usage and a 40% in carbapenem prescriptions. Despite moderate heterogeneity ($I^2=46.24\%$), results consistently demonstrated reductions in antibiotic consumption and improved prescription appropriateness. However, effectiveness varied based on healthcare setting, study design, and institutional support.

Conclusion: ASPs effectively reduce antibiotic use and improve AMR profiles, particularly in critical areas such as neonatal and intensive care units. To enhance effectiveness, particularly in resource-limited settings, tailored interventions with strong institutional backing, continuous monitoring, and adequate staffing are recommended. Future research should focus on standardizing interventions and outcome measures to guide widespread ASP implementation.

Paper 4

Hyperparathyroidism in Patients with Chronic Kidney Disease at a Tertiary Care Hospital in Islamabad, Pakistan

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Background: Secondary hyperparathyroidism (SHPT) is the most common aberration associated with chronic kidney disease (CKD). As CKD worsens, the conventional balance of calcium, phosphorus, and PTH undergoes strain, triggering SHPT. In prolonged cases, patients with renal failure exhibiting hyperparathyroidism demonstrate a greater likelihood of fatal bone disease and cardiovascular events, evincing a substantial morbidity and mortality rate. Therefore, expeditious mitigation and management are imperative to overcome these debilitating consequences following CKD progression.

Objective: To identify the prevalence of secondary hyperparathyroidism in patients with CKD undergoing hemodialysis.

Methodology: The study was retrospective, and conducted at the Department of Pathology and Nephrology, Dr. Akbar Niazi Teaching Hospital, Islamabad, from 1st November 2024 to 31st January 2025. The designated study commenced after the Institutional Research and Ethical Board (IREB) granted ethical approval on 1st November 2024, via IREB Letter No. 172/IMDC/IREB-2024, and no funding was required. A sample size of hundred CKD patients

undergoing hemodialysis was determined, and pre-existing data were used for analysis. The parameters considered were PTH, calcium, phosphate, urea, and creatinine levels, whilst the requisite statistical analysis was performed using IBM SPSS version 23.

Results: A total of hundred patients were present in the study population, which consisted of 57 males and 43 females. The mean age of the patients was determined to be 48.04 ± 10.4, whereas the mean values of PTH, calcium, phosphate, urea, and creatinine were 340 pg/mL, 8.33 mg/dL, 6.65 mg/dL, 146 mg/dL and 9.31 mg/dL respectively. 38 cases (66.7%) of SHPT were observed in men, whereas 30 women presented with hyperparathyroidism. 27 (62.8%) of these cases were of SHPT, while the remaining three (7%) yielded tertiary hyperparathyroidism (THPT). Only 19 males (33.3%) and 13 females (30.2%) did not exhibit hyperparathyroidism. The cumulative prevalence of hyperparathyroidism was 68%, whereas that of SHPT was 65%.

Conclusion: There is a significant presence of SHPT in patients with chronic kidney disease, and its prevalence increases as the disease progresses. Addressing CKD and its associated consequences as they manifest is pivotal, as prompt intervention may provide the requisite mitigation and prevent further dilapidation of the patient.

Paper 5

Impact of Chronic Kidney Disease on Outcomes After Transcatheter Aortic Valve Replacement: A Systematic Review and Meta-Analysis

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Background: Transcatheter aortic valve implantation (TAVI) is a transformative treatment for severe aortic stenosis in high-risk inoperable patients. However, its outcomes in patients with chronic kidney disease (CKD) remain unclear due to their comorbidities and perioperative risk.

Hypothesis: This systematic review and meta-analysis aim to evaluate the mortality, procedural outcomes, and complications in CKD patients undergoing TAVI.

Methods: PubMed, Embase, Scopus and Cochrane CENTRAL databases were systematically searched to retrieve studies comparing clinical outcomes in patients with and without CKD undergoing TAVR. Review manager version 5.4 was used for the generation of forest plots. Odds ratios (OR) with 95% CI were pooled using the random-effects model; and a p-value of <0.05 was considered statistically significant.

Results: Twelve studies were included with 353,236 patients undergoing TAVR (CKD = 121,283 and non-CKD = 231,953). Patients with CKD demonstrated significantly higher odds of myocardial infarction (MI) (OR = 1.21, 95% CI: 1.16, 1.26; p<0.00001), in-hospital mortality (OR = 1.63, 95% CI: 1.05, 2.55; p=0.03) and long-term all-cause mortality (OR = 2.02, 95% CI: 1.57, 2.59; p<0.00001) compared to non-CKD patients. However, no significant difference in vascular complications, renal replacement therapy, new permanent pacemaker

implantation, neurological complication, and 30-day all-cause mortality were noted between the two groups.

Conclusion: Patients with CKD undergoing TAVR face elevated risks of MI, in-hospital mortality, and long-term all-cause mortality compared to non-CKD patients.

Paper 6

Comparison of Frequencies of Modified Marsh Histological Classification Categories with Endoscopic Findings in Suspected Cases of Celiac Disease

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Background: Celiac disease is an autoimmune disorder with multisystem manifestations. It is characterized by antibodies against gliadin proteins present in wheat and other grains. The affected patients characteristically show villous atrophy in the duodenal mucosa leading to the clinical features of malabsorption. Gluten free diet is the only effective and safe treatment available for celiac disease. Early diagnosis is crucial to initiate treatment and avoid long-term complications. Diagnosis is based on clinical features, serological testing, HLA testing, endoscopy with duodenal biopsy and response to gluten-free diet. Endoscopy detects macroscopic changes in the duodenal mucosa manifested as reduced height of folds, absent mucosal folds, serrated margins, mucosal fissures and grooves. Currently, histopathologic evaluation of the duodenal mucosa is gold standard in confirming the diagnosis of celiac disease. Severity of the histopathological changes are graded by Modified Marsh Classification.

Objectives: 1) To histologically classify suspected cases of celiac disease according to Modified Marsh Classification. 2) To determine the frequency of various endoscopic findings in each Modified Marsh Classification Category.

Methods: Study Design: Descriptive cross-sectional study Setting: Pathology Department, Fatima Memorial Hospital Lahore Study Duration: 4 years Data Collection: This study was conducted in Pathology department of Fatima Memorial Hospital Lahore for duration of 48 months. Total of 190 cases were included in the study. Each case was given a medical record number. Duodenal biopsies of the cases were received fixed in 10% formalin in the histopathology laboratory along with the clinical data and Esophagogastroduodenoscopy (EGD) report. Endoscopic findings of normal mucosa, reduced mucosal folds, absent mucosal folds, serrated margins and mucosal fissures/ grooves were recorded from the EGD report. The duodenal biopsies underwent routine protocol of tissue processing and then H&E slides were made. The slides were examined by two consultant histopathologists and assigned Modified Marsh Classification category i.e. Marsh class 0, Marsh class 1, Marsh class 2, Marsh class 3A, Marsh class 3B and Marsh class 3C according to its histological features. Bias was minimized by rejecting autolyzed biopsies, poorly processed/ stained slides and histological evaluation of duodenal biopsies by two histopathologists.

Results: Out of 190 patients, 116 (61%) were females and 74 (39%) were males. Mean age was 35.76± 17.31 years. Mean duration of disease was 12.61 ± 24.78months. Gluten free diet was taken by11 (5.8 %) of patients. On histopathological examination, 131 (68.9 %) were Marsh Class 0, 30 (15.8 %) Marsh Class 1, 18 (9.5%) Marsh Class 3A, 6 (3.2%) Marsh Class 3B and 5 (2.6%) were Marsh Class 3C. There was no case of Marsh Class 2. 2 Endoscopic findings of normal mucosa, reduced mucosal folds, serrated margins and nodularity of mucosa were observed in 54 (41%),61 (46.56 %), 24(18.3%) and 6(4.6%) cases of Marsh Class 0 respectively; 8 (26.67%), 15 (50%), 9(30%) and 3 (10%) cases of Marsh Class 1 respectively; 2 (11.11%), 13 (72.22%) 8(44.44%) and 2 (11.11%) cases of Marsh Class 3A respectively; 1 (16.67%), 5 (83.33%), 1(16.67%) and 0 (0%) cases of Marsh Class 3B respectively; 1 (20%), 3 (60%), 3(60%) and 0 (0%) cases of Marsh Class 3C respectively. However, none of the cases had absent mucosal folds and mucosal fissures/ grooves on endoscopic examination. P-value was statistically significant for endoscopic findings of normal mucosa (0.005), decreased height of mucosal folds (0.012) and serrated margins (0.007) in predicting histologically normal mucosa and villous abnormality respectively.

Conclusion: It is concluded from the study that endoscopic findings predict the histological changes in duodenal mucosa only in severe celiac disease (Marsh Class 3). The endoscopy accurately detected height of mucosal folds and serrated margins which correlated with histologic findings of severe celiac disease. Endoscopic findings did not prove to be statistically significant in detecting early celiac disease mucosal changes (Marsh Class 1), which can only be confirmed on histological examination.

Paper 7

Thrombocytosis and Thrombocytopenia in Treatment-Naïve patients of Rheumatoid Arthritis

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Background: A chronic autoimmune disease, RA affects the joints primarily but it can lead to systemic manifestations including hematological cytopenia and cytosis. Prevalence of thrombocytosis has been reported from as low as 18.9% to as high as 52% [1,2]. Thrombocytopenia is uncommon having an incidence varying from 0.1-10% [3,4]. This study investigated the frequencies of thrombocytosis and thrombocytopenia among treatment-naïve patients of rheumatoid arthritis from Lahore Pakistan.

Methods: This retrospective cross-sectional study was conducted at department of Medicine & Allied, Azra Naheed Medical College, Superior University Lahore from January to December 2023. The 2010 ACR Diagnostic Criteria was used to define RA [5]. Thrombocytosis was defined as platelet count greater than 400×10^9/L. Thrombocytopenia was defined as platelet count less than 150×10^9/L. DAS-28 score was used to categorize disease severity of RA [6]. Retrospective data of initial first visit of 165 RA patients including basic, demographic and clinical information such as age, gender, RA factor status, Anti-CCP antibody status, parameters and disease severity according to DAS-28 score, and CBC results including

hemoglobin, WBC count and platelet count were assessed and recorded. SPSS 26 was employed for data entry and analysis.

Results: Mean age was 42.5±13.6 years with 25 (15.2%) male and 140 (84.8%) female patients. RA Factor was positive in 128 (77.6%) and Anti-CCP antibody in 102 (61.8%). Mean DAS-28 score was 4.5±1.4 with 113 (68.5%) patients having mild-to-moderate disease and 52 (31.5%) patients severe disease. Mean Hemoglobin, WBC and platelet counts were 12.0±1.4 g/dl, 9.0±2.7 $\times 10^9$/L and 352.6±110.4 $\times 10^9$/L respectively. Thrombocytosis was seen in 52 (31.5%) patients while thrombocytopenia was seen in 11 (6.7%) patients.

Conclusion: Thrombocytosis was seen in almost one-third of RA patients having a significant association with age, RAF factor positivity and anti-CCP antibody negativity but not with gender and disease severity. Thrombocytopenia was relatively uncommon.

Paper 8

Active Surveillance in Prostate Cancer: Rate and Predictors of Upgrade on Repeat Transperineal Biopsy

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Background: Active surveillance (AS) is a widely accepted management strategy for men with low-risk prostate cancer, aiming to avoid overtreatment while monitoring for signs of disease progression. However, a proportion of patients initially classified as low risk are later found to have higher-grade disease on repeat biopsy. Trans perineal (TP) biopsy, with its improved sampling accuracy and lower infection risk compared to transrectal biopsy, is increasingly used in the Active surveillance (AS) setting. Understanding the rate and predictors of Gleason score upgrade on repeat TP biopsy is essential to refine surveillance protocols and optimize patient selection for AS.

Objective: To determine the rate of Gleason score upgrade on repeat trans perineal biopsy in patients undergoing active surveillance for prostate cancer.

Methodology: A retrospective review was conducted of patients with prostate cancer enrolled in active surveillance who underwent repeat Trans perineal biopsy at University hospital Waterford, Ireland between 01/03/2024 to 28/02/2025. Clinical data including age, PSA, MRI findings, and initial biopsy Gleason score were collected. The primary outcome was histological upgrading, defined as an increase in Gleason score on repeat biopsy. Statistical analysis was performed to identify predictors of upgrade, including PSA density, PIRADS score, and time interval between biopsies.

Results: A total of 124 patients were included in the analysis. Gleason score progression between the initial and repeat TP biopsy was as follows:

- 58 patients (47%) had stable Gleason scores.
- 48 patients (39%) demonstrated upgrading.
- 18 patients (14%) were downgraded.

The majority of upgrades occurred from Gleason 6 to Gleason 7, indicating progression to clinically significant prostate cancer. Downgrading may reflect sampling variability or interpretive changes between biopsies.

Conclusion: A significant proportion of patients on active surveillance demonstrated upgrading on repeat Trans perineal biopsy, highlighting the limitations of initial risk stratification. Identifying predictors of upgrade may improve patient selection and inform the timing of surveillance biopsies. These findings support the role of repeat Trans perineal biopsy as a valuable tool in the ongoing assessment of men with prostate cancer under active surveillance.

FREE PAPER SESSION-4

14 February 2026 (Day 2) | 09:00–10:30
Chairs: Dr. Sohail Rashid | Dr. Abubakar Hafeez | Dr. Sheraz Yaqub
Abstracts: 1-8

Paper 1

Breaking New Ground: Post-Transplant Gamma-GT as an Emerging Surrogate Marker for HCC Recurrence After Living Donor Liver Transplantatio: A 223-Patient Cohort Study from a High-Volume Transplant Centre

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Background: Post-liver transplant surveillance for hepatocellular carcinoma (HCC) recurrence relies on fixed imaging intervals, often missing early biochemical shifts. While alpha-fetoprotein (AFP) and protein induced by vitamin K absence-II (PIVKA-II) are established biomarkers, their sensitivity is limited. We evaluated the prognostic utility of postoperative gamma-glutamyl transferase (GGT) kinetics, both alone and in combination with AFP, for predicting recurrence following living-donor liver transplantation (LDLT).

Methods: This single-center retrospective cohort study analyzed 223 patients who underwent LDLT for HCC between 2012 and 2025. The primary outcome was the predictive value of serum GGT elevation for recurrence. Secondary outcomes included 5-year recurrence-free survival (RFS) and overall survival (OS). Predictive accuracy was assessed using ROC curves, and independent predictors were identified via Cox proportional hazards regression.

Results: A preoperative GGT elevation >66 U/L predicted recurrence with an AUC of 0.756, 79.5% sensitivity, and 68.9% specificity. AFP >9.3 ng/mL showed an AUC of 0.777 with 96.2% specificity. Their combination achieved superior discrimination (AUC 0.82). Multivariable analysis confirmed elevated AFP (HR 12.0; $p<0.001$), GGT (HR 4.93; $p=0.001$), and PIVKA-II (HR 3.33; $p=0.005$) as robust independent predictors, outperforming traditional morphologic criteria. Patients with dual-marker elevation had a median RFS of 22.2 months and <10% 5-year RFS, compared to >90% for those with both markers low. GGT elevation frequently preceded radiological confirmation.

Conclusion: Postoperative GGT is a powerful, independent predictor of HCC recurrence after LDLT. When combined with AFP, it creates a highly discriminatory prognostic model. Integrating these biomarkers into surveillance protocols enables individual-risk calibration and earlier intervention, potentially improving outcomes.

Paper 2

Expanding Transplant Access through Paired Exchange Liver Transplantation: First Experience from Pakistan

Muhammad Amar Qudeer, Muhammad Yasir Khan, Sohail Rashid, Ihsan UL Haq, Faisal Saud Dar
HPB and Liver transplant, Pakistan kidney and Liver institute and research center, Lahore, Pakistan

Background: Living donor liver transplantation (LDLT) in low- and middle-income countries is often limited by ABO incompatibility and graft-recipient size mismatch. Paired exchange LDLT (SWAP) offers a viable strategy to overcome these challenges by exchanging donors between two or more incompatible families. While well-established in kidney transplantation, SWAP LDLT remains underutilized globally. This study presents the first structured clinical experience of SWAP LDLT in Pakistan.

Methods: We conducted a retrospective analysis of 13 adult and pediatric recipients who underwent paired exchange LDLT at our high-volume transplant center between February 2022 and July 2025. Recipients were selected based on incompatibility with their intended donor due to blood group mismatch, suboptimal graft-to-recipient weight ratio (GRWR < 0.8), or complex graft anatomy. Donor and recipient demographics, graft type, ischemia times, intraoperative details, and outcomes were analyzed. Matching was performed manually across family pairs, and all transplants were from living donors.

Results: Among 13 SWAP recipients (mean age: 43.2 years; 61.5% male), the most common indications were: Blood group incompatibility: 8 patients (61.53%), Low GRWR: 3 patients (23.1%), Complex arterial anatomy: 1 patient (7.1%) and Donor was counselled for SWAP: 1 patient (7.1%) Underlying diagnoses included HCV-related HCC (30.8%), NBNC cirrhosis (23.1%), Budd-Chiari syndrome (15.4%), and biliary atresia (7.7%). Three way and Two-way SWAP transplant was done using this cohort. Ten recipients (76.9%) received right lobe grafts, with mean GRWR of 1.23 (range: 0.71–1.87); 4 patients (30.8%) had GRWR ≤ 0.8. Mean cold and warm ischemia times were 41 and 42.1 minutes, respectively. Donors (mean age: 30.6 years; 61.5% female) underwent left lateral, left lobe, or right lobe hepatectomies as per recipient requirements.

Conclusion: Paired exchange LDLT is feasible, safe, and effective in expanding access to liver transplantation, particularly in the context of ABO and size incompatibility. Our findings support the integration of algorithm-driven matching and strategic donor pooling especially for blood group O donors to optimize transplant opportunities in resource-limited settings.

Paper 3

Auxiliary Partial Orthotopic Liver Transplantation (APOLT) in Pediatric Patients with Crigler-Najjar Syndrome: A Single-Center Experience

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Background: Crigler-Najjar Syndrome (CNS) is a rare genetic disorder causing severe unconjugated hyperbilirubinemia due to UDP-glucuronosyltransferase deficiency. Auxiliary Partial Orthotopic Liver Transplantation (APOLT) presents a promising alternative to whole liver transplantation in pediatric CNS patients, allowing native liver preservation. This study evaluates the safety, efficacy, and early outcomes of APOLT in pediatric CNS patients at a single center.

Methods: A retrospective analysis was conducted 2022 to March 2025. Left lateral sector using a prospectively maintained database of seven pediatric patients who underwent APOLT at Pakistan Kidney and Liver Institute (PKLI), Lahore, from February grafts from living donors were used in all cases. Statistical analysis was performed using paired t-tests or Wilcoxon signed-rank tests for comparing pre- and post-transplant bilirubin levels.

Results: We performed APOLT on 10 patients suffering from CNS type 1 from February 2022 to Sep 2025. All ten recipients (mean age: 4.27±3.36 (range 1 to 11) years, 80% male) received Left lateral sector grafts from living donors and survived with no graft loss. Rapid metabolic correction was achieved, with bilirubin levels declining to 0.89±0.34 mg/dL by day 10 and 0.7 ± 0.5 mg/dL by day 30. Surgery: To optimize graft perfusion and minimize portal venous steal, portal flow modulation was performed in all cases. While hepaticojejunostomy is the commonly used biliary reconstruction technique in pediatric liver transplantation, duct-to-duct anastomosis was successfully performed in 3 out of 10 patients, ensuring physiological bile drainage. The remaining 7 patients underwent Hepaticojejunostomy. Mean GRWR: 1.85±0.62 (range 0.87 to 2.77), Mean Cold ischemia: 20.6 ± 5.3 (range 13–29) minutes, Mean Warm ischemia: 34.3 ± 15.0 (range 17–64) minutes, Median Blood loss: 160 ± 64 (range 50–300) mL and mean Recipient Surgery duration was 8.46±1.51(range 6.5 to 10.5) Hours. Perioperative outcome: Mean ICU Stay was 5.44 ± 0.73 (range 5–7) days for 09 patients. One pt. had prolonged ICU stay of 40 days. Mean Hospital Stay (Treatment to discharge) 11.1 ± 1.8 (range 9–14) days for 09 patients. One pt. had hospital stay of 53 days. No Readmission within 30 days of discharge. Complications: No major complications (hepatic artery thrombosis, biliary leaks, or rejection) occurred. One patient (14.3%) developed tacrolimus-related neurotoxicity, resolved with dose adjustment. One delayed vascular complication of PVT after 06 months of transplant. Immunosuppression was well-tolerated, with no episodes of acute rejection. Donors: (70% female, mean age 32.5 ± 7.9 years and Mean LAI: 10.00±5.29 (2-19)) demonstrated excellent safety profiles, with low blood loss (225.00±67.70 (100-300) mL). Mean duration of Surgery (Hours) was: 5.41±0.72 (4.3-6.23). All donors were discharged without any major complications

Conclusion: APOLT using left lateral sector grafts is a safe and effective treatment for pediatric CNS, providing rapid metabolic correction, minimal complications, and excellent donor

outcomes. This approach preserves the native liver for potential future therapies while ensuring stable graft function with standard immunosuppression.

Paper 4

Living Donor Liver Transplant Outcomes in Pediatric Patients with Liver Decompensation Secondary to Budd-Chiari Syndrome: A Single Center Experience from Pakistan

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Background: Budd-Chiari syndrome (BCS) is a rare disorder characterized by outflow obstruction of hepatic veins. This results in backup of blood in the liver, causing hepatomegaly, abdominal pain and ascites. The treatment offered to the patients depends on the type and extent of hepatic injury. Liver transplantation (LT) is considered as the definitive treatment for extensive/irreversible liver injury or when other therapies fail. This study evaluates the outcomes of living donor liver transplant (LDLT) in pediatric patients with decompensated liver disease secondary to BCS.

Methods: This case-series analyzed four male pediatric BCS patients who underwent LDLT at Pakistan Kidney and Liver Institute and Research Centre (PKLI & RC), Lahore, Pakistan. Diagnosis relied on non-opacified hepatic veins on triphasic CT and clinical findings. Limited hematologic workup was performed. Data included preoperative clinical features, surgical details, and post-LDLT outcomes.

Results: Among 103 pediatric liver transplants (July 2021-June 2025), 4 (3.8%) underwent LDLT for BCS. All were male, median age was 9 years (IQR 6.75 to 12). Age adjusted Protein C deficiency was found in all cases (100%). All patients had hepatomegaly and ascites (50% diuretic-resistant) while abdominal pain was reported in 50%. Jaundice and Melena were observed in 75% patients, hematemesis in 50% while hepatic encephalopathy (HE) and spontaneous bacterial peritonitis (SBP) were observed in 25%. Surgical findings included retro hepatic IVC narrowing (100%), with one patient (25%) underwent IVC replacement. Grafts included left lobe (50%), left lateral lobe (25%), and right lobe (25%). Median hospital stay was 17.5 (IQR 15.75 to 28.75) days. Postoperative complications included portal vein thrombosis (25%, explored), and biliary stricture (25%, requiring ERCP).

Conclusion: LDLT provides favorable survival outcomes for pediatric BCS with decompensated cirrhosis, though vascular complications, biliary strictures, and rejection require vigilant short- and long-term postoperative care. Larger studies are warranted to refine management strategies and enhance long-term results.

Paper 5

Evaluation of Health-Related Quality of Life Post Liver Transplantation in Pediatrics

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Background: Liver transplantation is a definitive treatment option for both acute and chronic liver failure in both adult and paediatric patients. With postoperative survival rates improving, more focus is required on patient quality of life as a marker of successful liver transplantation. This study assesses quality of life in paediatric liver transplant recipients at least 6 months after surgery.

Methods: A prospective, cross-sectional descriptive study was done on liver transplant recipients under 15 years of age. Patients were stratified according to primary disease and age at the time of surgery. Quality of life was assessed using the WHOQOL-BREF tool; a 26-item instrument assessing four domains: physical health, psychological health, social relationships, and environmental health. Scores in each domain were transformed to a 0-100 scale, with higher scores representing higher quality of life. Overall quality of life and general health was assessed by 2 questions. Quality of life was anaylsed during outpatient follow-up visits at least 6 months after surgery.

Results: 41 living donor liver transplant recipients under 15 years of age were enrolled in the study. A male predominance of 70.3% was observed. The causes of end-stage CLD were varied and included progressive familial intrahepatic cholestasis and biliary atresia (24.4% with previous Kasai surgery and 4% without) as the two most common reasons for liver transplant at our centre. 56.1% of parents marked overall quality of life and general health as very good, 12.2% as good and 4.9% as nor good nor bad. Mean scores of quality-of-life domains (physical, psychological, social relationship and environmental domains) were 91.4.0 (SD = 6.26), 93.3(SD = 7.54), 96.6 (SD = 8.64), 85.4 (SD = 6.88), respectively.

Conclusion: Liver transplant leads to improvement in quality of life as compared to pre-transplant state. The significance of the data from this study will aid in better defining expectations for patients and their families, as well as directing the clinical course following liver transplantation. Transplant teams may also target early interventions.

Paper 6

Prothrombin-Induced by Vitamin K Absence II as a Prognostic Factor in Living Donor Liver Transplantation for Hepatocellular Carcinoma

Abu Bakar Hafeez Bhatti, Usman Shafique, Nazish Ahmed, Ghazanfar Abbas, Muslim Atiq, Haseeb Haider Zia, Nusrat Yar Khan, Atif Rana
Shifa International Hospital Islamabad

In hepatocellular carcinoma (HCC), there is a need for novel tumor markers to enhance patient selection for liver transplantation. This study evaluates the prognostic value of Prothrombin Induced by Vitamin K Absence-II (PIVKA-II) in predicting microvascular invasion (MVI) and

post-transplant recurrence, either alone or in combination with alpha-fetoprotein (AFP), following living donor liver transplantation (LDLT). We reviewed 400 patients who underwent LDLT under expanded criteria (largest tumor diameter ≤ 10 cm, any tumor number, AFP < 1000 ng/ml). PIVKAII outperformed AFP and tumor size in predicting MVI, with a C-statistic of 0.777 compared to 0.579 and 0.631. On multivariate analysis, AFP > 20 ng/ml [HR 3.3, P = 0.003] and PIVKAII > 1000 mAU/ml [HR 3.5, P = 0.001] were predictors of recurrence. PIVKAII > 1000 mAU/ml was associated with MVI (21.6% vs. 65.7%, P < 0.001) and lower 5-year RFS (79% vs. 50%, P < 0.001). A combination of AFP > 20 ng/ml and PIVKAII > 1000 mAU/ml predicted 47.1% of recurrences, whereas HCC recurred in 6.1% of patients not meeting this threshold. The 5-year RFS was 45% for dual tumor marker positive HCC versus 77% for all others (P < 0.001). PIVKAII is a strong predictor of MVI and post-transplant recurrence. Dual tumor marker positive HCC can serve as an exclusion criterion for upfront LDLT.

Paper 7

Mental Health in Adults with Living Donor Liver Transplantation

Rashk e Hinna, Madeeha Khan

Background: Living donor liver transplantation (LDLT) offers a vital approach to addressing the shortage of donor organs for patients with advanced liver failure, offering benefits like higher survival rates and reduced healthcare costs. However, the surgery poses significant risks for donors, both physically and psychologically. This study investigates the psychological well-being of adult LDLT donors in Pakistan, where LDLT is the prevalent option of liver transplantation due to sociocultural and spiritual factors.

Methods: In this cross-sectional study, 120 adult LDLT donors were assessed and evaluated using the Strengths and Difficulties Questionnaire (SDQ) to measure mental and behavioral health, while the mental well-being of guardians was assessed using the WHO-5 Well-Being Index. Data were analyzed using descriptive statistics, logistic regression, and chi-square tests, with internal consistency verified by Cronbach's alpha.

Results: The mean age of donors was 47.16 ± 9.88 years, with 75.9% being male. Post-surgery, significant increases were observed in emotional problems (p < 0.001), hyperactivity (p < 0.001), and conduct issues (p = 0.01), alongside a decline in prosocial behavior (p = 0.006). Logistic regression analysis indicated that employment status and guardian mental health were significantly associated with donors' post-transplant mental health. The SDQ and WHO-5 demonstrated high reliability; α= 0.846 and 0.951 respectively.

Conclusion: The findings indicated that LDLT donors in Pakistan experience notable psychological challenges post-transplantation. Employment status of donors and the mental well-being of caregivers significantly influence these outcomes. This study underscores the need for targeted mental health interventions to support LDLT donors in Pakistan.

Paper 8

Socioeconomic Factors among Chronic Liver Disease Patients: Experience from Largest Tertiary Care Hospital of Pakistan

Bushra Shahid
Jinnah Postgraduate Medical Center, Karachi

Background: Pakistan has one of the highest global rates of viral hepatitis, contributing significantly to the prevalence of chronic liver disease (CLD). The progression and outcomes of CLD are influenced by social determinants of health (SDOH), including economic disparities, healthcare accessibility, environmental conditions, and public awareness. Understanding these factors will enhance disease prevention and management.

Objective: To analyze the economic and social challenges confronting chronic liver disease patients in Karachi, Pakistan.

Methods: It is an ongoing cross-sectional study that began in August 2024 at the Jinnah Post Graduate Medical Centre in Karachi. This study included CLD patients and their socioeconomic status, healthcare access, education, social and community context, neighborhood-built environment, hospitalizations or readmissions, as well as disease complications, these were among the outcome variables of interest.

Results: The study enrolled 1200 patients with chronic liver disease (CLD), predominantly from Sindh 1179 (94%) and Balochistan 41 (3.2%). Of these, 665 (53%) were males and 586 (47%) were females, with a mean age of 50 ± 13 years. Most patients 1092 (91%) were married. Within Sindh, Karachi was home to the majority 1043 (83%), particularly the Malir 237 (17%), outskirts 234 (16.4%), followed by, Korangi 199 (14%), South district 197(13.8%), Central Karachi 172 (1%) and Orangi 157(11%). Etiologies contributing to CLD are shown in table below. A significant proportion 893 (71.4%) had decompensated CLD (DCLD), with a Child-Turcotte-Pugh (CTP-B) score in 767 patients (62%) and a MELD score below 15 in 922 (74%). Stratification by income revealed significant disparities in disease severity and clinical complications. Patients in the low-income group exhibited disproportionately higher rates of Decompensated CLD: 81% vs. 50% (middle-income) and 25% (high-income), CTP class B: 72% vs. 35% and 24% and MELD score <15: 61% vs. 100% and 96%. Complications were also more frequent among low-income patients, Jaundice: 68% (vs. 48% and 28%), Ascites: 57% (vs. 35% and 16%), Upper GI bleed: 56% (vs. 33% and 21%) Hepatic encephalopathy: 38% (vs.15% and 8%). All associations were statistically significant ($P < 0.001$). These findings indicate a clear socioeconomic gradient in CLD severity, with the lowest-income patients experiencing the greatest disease burden and complications.

Conclusion: Low-income patients with chronic liver disease experience significantly higher rates of disease severity and complications, underscoring the critical impact of socioeconomic status on clinical outcomes and healthcare disparities. These important elements must not be disregarded to prevent disease-related morbidity.

FREE PAPER SESSION-5

14 February 2026 (Day 2) | 15:00–16:30
Chairs: Dr. Asim Masood Chaudhry | Prof. Dr. Nadeem Bin Nusrat
Abstracts: 1-8

Paper 1

Assessment of Bladder Cancer Care Delivery: Complexity of TURBT, Treatment Timelines, and Follow-up Compliance

Nusrat NB, Imtiaz S, Aslam A, Rehman AU, Muhammad S, Zafar N, Ashfaq AM, Arshad H
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Transurethral resection of bladder tumor (TURBT) is a cornerstone in bladder cancer management, but completeness, procedural complexity, and adherence to follow-up impact outcomes, including recurrence and survival. Understanding these patterns is essential for optimizing care delivery, particularly in resource-constrained settings.

Objective: To evaluate procedural complexity, completeness of TURBT, timelines to radical cystectomy or intravesical therapy, follow-up adherence, and recurrence in bladder cancer patients.

Methods: This is a Retrospective Observational Cohort study, where 70 patients with histologically proven bladder cancer, who underwent primary TURBT and were later referred for Radical Cystectomy, were selected from the patient pool of the Pakistan Kidney & Liver Institute & Research Center. during the period of February 2023 to August 2025. The variables assessed included the Complexity, Completeness, Perioperative Complications, Time to intravesical treatment/Surgery, and Time to Follow-up (Cystoscopy, Radiological, Urine Cytology) using Descriptive methods. The metrics used for the calculation of recurrence were Histological confirmation of the tumor after a tumor-free status.

Results: The cohort comprised 54 males (77.1%), mean age 54.1 ± 9.6 years. TURBT was complete in 50 patients (71.4%), while 13 (18.6%) procedures were complex. Intraoperative complications occurred in 38 patients (54.3%), including bleeding in 23 (32.9%) and bladder perforation in 15 (21.4%). Follow-up was initiated in 40 patients (57.1%), with cystoscopy in 8 (11.4%) and imaging in 32 (45.7%). Disease recurrence occurred in 9 patients (12.9%) at a mean of 15.2 ± 14.1 months. Overall survival was 28 patients (40.0%).

Conclusion: The completeness of TURBT and adherence to follow-up remain suboptimal in this cohort-despite the fact that all patients underwent radical cystectomy. Such findings point to structured quality-improvement initiatives, standardized surveillance, and timely treatment pathways that might help optimize bladder cancer outcomes in resource-constrained settings. This study provides real-world insights into procedural and follow-up gaps in bladder cancer care in Pakistan, highlighting areas for targeted interventions to improve long-term patient outcomes.

Paper 2

Safety and Efficacy of Retrograde Intrarenal Surgery (RIRS) in Pediatric Patients: Insights from a Single-Center Study

Nusrat NB, Rehman A, Muhammad S, Zafar N, Bajwa SI, Iqbal S
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Pediatric urolithiasis is increasingly encountered worldwide, with minimally invasive techniques gaining prominence. Retrograde intrarenal surgery (RIRS) has emerged as a promising option; however, evidence regarding its safety, efficacy, and predictors of outcomes in children remains limited.

Objective: To evaluate the safety and efficacy of RIRS in pediatric patients and identify predictors of stone clearance and postoperative complications.

Methods: A retrospective observational study was conducted at a tertiary-care center from September 2022 to August 2024. Pediatric patients aged <14 years undergoing RIRS for renal or upper urinary tract stones ≤27 mm were included. Demographic, stone-related, operative, and postoperative variables were analyzed. Multivariate logistic regression identified predictors of stone clearance and complications. Study Design: Single-center retrospective observational study.

Results: Twenty-four pediatric patients underwent RIRS with a mean age of 9.0 ± 4.27 years; 18 (75.0%) were male. Complete stone clearance was achieved in 17 (70.8%) patients. Access failure occurred in 4 (16.7%), requiring staged procedures. Postoperative complications were observed in 5 (20.8%), including sepsis in 4 (16.7%). Anatomical abnormalities were present in 5 (20.8%) patients and were independently associated with reduced complication risk ($p = 0.037$). Stone size >15 mm significantly reduced the likelihood of complete clearance ($p = 0.009$).

Expected Outcomes: RIRS is expected to provide acceptable stone-free rates with manageable morbidity when appropriate patient selection is employed.

Conclusion: RIRS is a safe and effective minimally invasive option for pediatric urolithiasis. Larger stone burden negatively impacts clearance, while anatomical abnormalities may reduce complication risk. This study provides regional single-center data and identifies predictors of outcomes, supporting evidence-based selection of RIRS in pediatric stone disease.

Paper 3

Evaluating the Role of Bone Scan in Staging Intermediate-Risk Prostate Cancer: Insights from ISUP Grade Groups II and III

Moazzam, Muhammad; Zafar, Nauman
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Prostate cancer (PCa) staging commonly includes bone scans to detect metastases, particularly in intermediate-risk patients classified under ISUP grade groups II and

III. However, the necessity of routine bone scans in this subgroup remains debated. Misuse of imaging may lead to unnecessary costs and patient burden. Limited evidence exists regarding the predictors of bone metastases in this population.

Objective: To determine the rate of positive bone scan findings in intermediate-risk PCa (ISUP grade groups II and III), identify clinical and pathological predictors of bone metastases, and assess the necessity of routine bone scans.

Methods: A retrospective observational study of 400 intermediate-risk PCa patients (ISUP II–III) was conducted between 2022–2024 at University Hospitals of Derby and Burton NHS Trust. Data included clinical stage, radiological T stage, PSA levels, perineural invasion, and biopsy information. Logistic regression and ROC curve analysis were used to evaluate predictors of positive bone scans.

Results: Bone scan positivity increased with advancing clinical and radiological stages and higher PSA levels (>20 ng/mL). ISUP grade III patients had higher positivity (5.8%) than grade II (1.3%). ROC analysis showed excellent predictive accuracy for PSA (AUC = 0.836). Clinical stage, radiological T stage, and D'Amico risk group were significant predictors of bone metastases, whereas PSA, Gleason score, and core involvement were not.

Conclusion: Bone scan positivity in intermediate-risk PCa is primarily influenced by clinical and radiological factors. Routine bone scans may be unnecessary for all patients, and imaging can be guided by these predictors. This study provides robust evidence supporting risk-stratified bone scan use in intermediate-risk PCa, refining staging protocols and minimizing unnecessary imaging.

Paper 4

Clinical and Pathological Predictors of Recurrence in Bladder Cancer: A Single-Center Retrospective Study

Nusrat NB, Imtiaz S, Aslam A, Rehman AU, Muhammad S, Zafar N, Ashfaq AM, Arshad H
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Bladder cancer carries a high risk of recurrence even after transurethral resection of bladder tumor (TURBT) and intravesical therapy. Identifying clinical and pathological predictors of recurrence is critical to optimize follow-up schedules and guide adjuvant therapies.

Objective: To assess potential demographic, clinical, and pathological factors associated with bladder cancer recurrence after TURBT.

Methods: A single-center retrospective observational cohort study was conducted at the Pakistan Kidney and Liver Institute & Research Center, Lahore, including adult patients with histologically confirmed bladder cancer who underwent TURBT between February 2023 and August 2025. Patients with metastatic disease or treated elsewhere were excluded. Data collected included demographics, tumor characteristics, treatment details, and follow-up outcomes. Recurrence was analyzed in patients with documented follow-up (n = 40).

Univariate analyses were performed to identify associations with recurrence, followed by exploratory binary logistic regression.

Results: Baseline cohort (n = 70), 54 patients (77.1%) male, and most patients belonged to the high grade cancer (80.0%). In the analytical cohort of recurrence (n = 40), recurrence occurred in 9 patients (22.5%) at a median of 5.0 ± 2.7 months. On univariate analysis, histological subtype was the only factor associated with recurrence; squamous cell carcinoma (n = 4) showed higher recurrence compared with urothelial carcinoma (p = .019), though this finding should be interpreted cautiously due to the small sample size. No other demographic, tumor-related, or treatment-related variables showed significant associations. Multivariable logistic regression was underpowered and exploratory, with no stable independent predictors identified. Follow-up was short and heterogeneous, limiting the ability to capture all recurrence events reliably.

Conclusion: Short and heterogeneous follow-up limited robust detection of recurrence and identification of independent predictors. Squamous cell carcinoma may confer higher recurrence risk, but larger prospective studies with standardized, longer follow-up are needed to validate predictors and guide risk-adapted surveillance. This study provides regional data on recurrence patterns in bladder cancer, highlights the potential role of histological subtype in recurrence risk, and emphasizes the need for larger studies for evidence-based follow-up strategies.

Paper 5

Pattern of Aggressiveness of Renal Cell Carcinoma in Patients Under 40 Years: A Decade of Experience at SKMCH

Vikram Lal Seetlani
Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan

Background: Renal cell carcinoma (RCC) is typically seen in older adults, but aggressive disease is increasingly reported in patients under 40. Understanding its patterns in younger adults is essential for early recognition and management.

Objective: To evaluate clinicopathological features and aggressiveness of RCC in patients aged 18–40 years at a tertiary cancer center.

Methods: We retrospectively analyzed 132 patients aged 18–40 who underwent radical or partial nephrectomy for RCC at Shaukat Khanum Memorial Cancer Hospital and Research Centre (SKMCH&RC) from 2009 to 2020. Aggressive RCC was defined as pathological stage ≥pT3, high-grade (G3/G4), nodal involvement (pN1), metastasis at presentation, aggressive histology, or recurrence within one year.

Results: 1105 radical/partial nephrectomies performed from 2009 to 2020 at SKMCH. Median age was 34 years, with 63% males (M:F 70:48). Aggressive RCC was observed in 47.7% (n = 63). Clear cell RCC comprised 70.5% (n = 93), chromophobe RCC 15.2 % (n = 20), papillary RCC 8.3% (n= 11), Ewing 3% (n= 4), XpT 1.5% (n=2), Others 1.5% (n=2), and 13 patients

had benign histology. Recurrence occurred in 16 patients (12.5 %), 12 of whom had aggressive RCC, predominantly in males (male:female = 3:1). Aggressive RCC showed higher early recurrence compared to non-aggressive tumors (p= 0.029).

Conclusion: Aggressive RCC affects a significant proportion of patients under 40, with worse behavior in males patients. Rising trends in young adults are concerning, though underlying risk factors remain unclear. Prospective studies are needed to elucidate drivers of aggressive disease and guide management in this population.

Paper 6

Early Experience with Versius (CMR Surgical) Robotic Partial Nephrectomy: Perioperative Outcomes and Early Pentafecta Achievement

Muhammad Zohair, Nauman Zafar, Nadeem Bin Nusrat, Sarmad Imtiaz, Assad ur Rehman, Shujah Muhammad
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Robot-assisted partial nephrectomy (RAPN) aims to optimize oncologic control while preserving renal function; composite endpoints facilitate standardized reporting.

Objective: To report our early experience with the Versius (CMR Surgical) robotic system and evaluate trifecta and early pentafecta achievement.

Methods: We retrospectively reviewed 33 consecutive Versius RAPN cases performed by a single surgeon. Trifecta was defined as warm ischemia time (WIT) <=25 minutes, negative surgical margins, and no Clavien >=III complications. Early pentafecta was defined as trifecta plus >=90% estimated glomerular filtration rate (eGFR) preservation and no chronic kidney disease (CKD) stage upstaging at hospital discharge.

Results: Median age was 51 years (IQR 34-66) and 60.6% were male. Median tumor size was 4.3 cm (IQR 3.0-5.0) and RENAL score 6 (IQR 6-8). Median operative time was 160 minutes (IQR 120-165), WIT 17 minutes (IQR 15-19), and estimated blood loss 200 mL (IQR 100-213). Major complications (Clavien IIIA) occurred in 3.0% and positive surgical margin in 3.0%. Trifecta was achieved in 93.9% (31/33). Median eGFR changed from 96.3 to 86.1 mL/min/1.73 m2 at discharge; >=90% eGFR preservation occurred in 48.5% and no eGFR stage/category upstaging at discharge in 63.6%, yielding early pentafecta in 42.4% (14/33).

Conclusion: Versius RAPN was feasible in our early series with excellent perioperative and oncologic surrogates; longer follow-up is needed to report definitive functional pentafecta outcomes.

Paper 7

The Effect of Small Residual Stones After Minimally Invasive Endourology Procedures for Renal Stones: A Prospective Study

Muhammad Ahmad Ijaz
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Minimally invasive endourological procedures such as percutaneous nephrolithotomy (PCNL) and flexible ureterorenoscopy (F-URS) have significantly reduced morbidity in renal stone management. However, the optimal management of residual stone fragments remains controversial, as even small fragments may lead to symptoms, complications, or the need for re-intervention.

Objective: To evaluate the natural history of residual stone fragments following PCNL and F-URS and identify clinical outcomes and predictors of complications associated with residual renal stone fragments.

Methods: Patients undergoing elective PCNL or F-URS were prospectively followed. Residual fragments were assessed using radiological imaging, and outcomes including spontaneous passage, symptom development, complications, and need for additional intervention were recorded. Study Design: Prospective observational cohort study.

Results: A total of 373 patients were included. Stone-free rates were higher after F-URS (76.3%) compared to PCNL (67.7%). Residual fragments were observed in 257 patients. Spontaneous passage occurred in 34 patients (13.4%). Pain or colicky symptoms developed in 47 patients (18.2%), while complications such as readmission for pain, fever, or urinary tract infection occurred in 26 patients (10.5%). Additional surgical intervention was required in 43 patients (16.7%). Residual fragments >4 mm were significantly associated with higher complication rates ($p < 0.003$), recurrent pain ($p = 0.04$), and need for re-intervention ($p < 0.002$). Fragment size, number, and multicalyceal distribution were significant predictors of adverse outcomes ($p = 0.04$). Identification of patients at higher risk of complications following endourological stone surgery.

Conclusion: Residual stone fragments are common and clinically significant. Fragment size, number, and location strongly influence postoperative morbidity and re-intervention rates. This large prospective study provides robust evidence that even small residual fragments can lead to adverse outcomes, supporting risk-stratified follow-up and early intervention strategies.

Paper 8

Evaluation of Surgical Outcomes of Nephron-Sparing Surgery in a Leading Hospital of an Advanced Nation

Nusrat NB, Walsh K, Darcy F, Durkan G, Aslam A
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Partial nephrectomy is the preferred treatment for small, localized renal tumors, balancing oncologic control with preservation of renal function. Renal score grading is widely used to guide surgical planning, predict perioperative outcomes, and stratify tumor complexity. Understanding its predictive value helps optimize patient selection and surgical outcomes.

Objective: To assess the efficacy of renal score grading in guiding therapy decisions, predicting perioperative outcomes, and characterizing tumors following partial nephrectomy.

Methods: This retrospective single-center study included patients aged >18 years who underwent partial nephrectomy at University College Hospital Galway, Ireland, between January 11, 2012, and June 17, 2016. Demographics, tumor characteristics, surgical approach, complications, recurrence, and survival outcomes were analyzed using SPSS v20. Correlations between clinical variables and perioperative outcomes were evaluated.

Results: Among 76 patients, 52 (68.4%) were male and 24 (31.6%) female, with a median age of 58 years (IQR: 16). Tumors were predominantly right-sided 44 (57.9%) and located in the lower pole 36 (47.4%), with a median tumor size of 2.35 cm (IQR: 1.0 cm) and median renal score of 5 (IQR: 2). Open surgery was performed in 70 (92.1%) patients. Complications occurred in 6 (7.9%) and were significantly associated with higher BMI, ASA score, warm ischemia time, and tumor size ($p<0.05$). Tumor recurrence correlated with tumor size and positive margins ($p<0.05$). Median disease-free survival (DFS) was 30 months (IQR: 6), with no recorded mortality during a maximum 36-month follow-up.

Conclusion: Partial nephrectomy is a safe and effective approach for small, localized renal tumors, with low complication rates, favorable DFS, and preserved renal function. Renal scoring effectively guides surgical planning and perioperative risk stratification, providing evidence for its routine use in nephron-sparing surgery.

FREE PAPER SESSION-6

14 February 2026 (Day 2) | 15:00–16:30
Chairs: Dr. Muhammad Saleh | Dr. Adil Baskiran | Dr. Imran Ali Syed
Abstracts: 1-8

Paper 1

Atezolizumab–Bevacizumab as First-Line Systemic Therapy in Advanced Hepatocellular Carcinoma: Largest Real-World Data set from Pakistan

Amjad Zafar
Hameed Latif Hospital, Lahore

Background: The combination of atezolizumab and bevacizumab has emerged as the global standard of care for patients with unresectable hepatocellular carcinoma (HCC). However, real-world evidence from South Asia remains limited. We present the first dataset from Pakistan evaluating the efficacy, safety, and quality-of-life outcomes of this regimen in a tertiary-care oncology setting.

Methods: A retrospective, single-center study was conducted at Hameed Latif Hospital, Lahore, including 126 patients with advanced/unresectable HCC treated between 2021 and 2024. Eligible patients received atezolizumab 1200 mg and bevacizumab 15 mg/kg intravenously every three weeks. Tumor response was assessed every 3–4 months using immune-adapted RECIST (iRECIST). Quality of life (QOL) was recorded on a 0–100 scale across symptom domains including fatigue, jaundice, nutrition, pain, and abdominal swelling. Survival outcomes were estimated using Kaplan–Meier methods.

Results: The median age was 61.5 years; most patients were male (79%) with preserved liver function (Child–Pugh A: 82%) and good performance status (ECOG 0–1: 88%). Hepatitis C was the predominant etiology. At first radiologic assessment (after four cycles), responses were partial response in 45.2%, stable disease in 20.9%, and progressive disease in 15.2%. The objective response rate (ORR) was 36%, and the disease control rate (DCR) was 57% in the final analysis at 1 year. Patients received a mean of 17.7 cycles (range: 4–51). Treatment continuation was 42.8% at 6 months, 26.7% at 1 year, and 9.8% at 2 years. Median overall survival was 20.4 months. Complete response was observed in 3% with 2 patients referred for LDLT. Adverse events included treatment-related discontinuation (6.5%) and mortality (6.5%), with most toxicities manageable. QOL assessment revealed that fatigue (≥50/100 in 34%), jaundice (≥50/100 in 12%), and nutrition impairment (≥50/100 in 22%) were the most frequently reported high-burden symptoms. Sexual health was significantly affected, with 68% reporting moderate-to-severe dysfunction.

Conclusions: This study provides the first real-world evidence of atezolizumab–bevacizumab in advanced HCC from Pakistan, demonstrating outcomes consistent with international clinical trial data. The regimen achieved meaningful tumor control and survival benefits with acceptable safety, even in a resource-limited setting with high hepatitis C prevalence. These findings underscore the need for broader regional access to immunotherapy-based combinations.

Paper 2

Efficacy of Azathioprine Versus Methotrexate in Chronic Inflammatory Demyelinating Polyneuropathy

Ali Muhammad
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Chronic inflammatory demyelinating polyneuropathy (CIDP) is an immune-mediated neuropathy requiring long-term immunosuppressive therapy. Azathioprine and methotrexate are commonly used steroid-sparing agents, particularly in low-resource settings; however, comparative efficacy data remain limited.

Objective: To compare the efficacy of azathioprine and methotrexate as adjunctive immunosuppressive therapies in patients with CIDP.

Methods: This comparative study included adult patients (≥18 years) of either gender with progressive chronic polyneuropathy for at least eight weeks, fulfilling Koski criteria for CIDP, and with no evidence of paraproteinemia or genetic neuropathy. Patients were divided into two groups. Group 1 received oral prednisolone combined with azathioprine, while Group 2 received oral prednisolone combined with methotrexate. Treatment efficacy was assessed using the Overall Neuropathy Limitation Scale (ONLS) at baseline and during follow-up up to 12 months.

Results: ONLS scores were comparable between the two groups during the initial 1–3 months of therapy. From the fourth month onward, patients receiving azathioprine demonstrated significantly greater improvement. At 12 months, the mean ONLS score was 3.69 in the azathioprine group compared to 5.30 in the methotrexate group, showing a statistically significant difference ($p = 0.001$).

Conclusion: Azathioprine demonstrated superior efficacy compared to methotrexate when used as adjunctive therapy with corticosteroids in CIDP. Based on functional improvement measured by ONLS, azathioprine should be considered a preferred first-line immunosuppressive agent for CIDP, particularly in low-income countries.

Paper 3

Pancreatic Resection for Benign and Borderline Malignant Periampullary Tumors

Muhammad Nauman-ul-Haq, Abubakar Hafeez Bhatti, Usman Shafique Khokhar, Abdullah Safdar Kaiani, Musa Aamer, Muhammad Ahmad Nadeem
Shifa International Hospital, Islamabad

Objective: Pancreatic resection (PR) offers a potential cure for benign and borderline malignant tumors of the periampullary region. This study aimed to evaluate the short- and long-term outcomes of PR in this patient population.

Methods: This retrospective single-center cohort study included 35 patients who underwent PR for benign or borderline malignant periampullary tumors between 2012 and 2024. Data on perioperative morbidity, mortality, recurrence, and long-term survival were analyzed.

Results: The median follow-up duration was 60 months (IQR: 22–98). Standard pancreatic resection (S-PR) was performed in 29 patients (82.8%), and multivisceral pancreatic resection (MV-PR) in 6 patients (17.2%). Pancreatic procedures included pancreaticoduodenectomy (n=27, 77.1%), distal pancreatectomy (n=5, 14.3%), and central pancreatectomy (n=3, 8.6%). Major postoperative complications occurred in 7 patients (20%) and three patients (8.6%) developed clinically relevant post operative pancreatic fistula. The in-hospital mortality rate was 2 out of 35 patients (5.7%). Tumor recurrence occurred in 5 patients (14.3%), with a median time to recurrence of 20 months (IQR: 7–21). The 10-year OS was 84% for the S-PR group and 67% for the MV-PR group (P = 0.212). Disease-free survival at 10 years was 87% for S-PR and 60% for MV-PR (P = 0.064). Out of six patients who underwent MV-PR, five were alive and remained free from recurrence, with the longest follow-up time of 144 months in one patient.

Conclusion: Pancreatic resection, including MV-PR, is a viable and potentially curative option for benign and borderline malignant periampullary tumors, with favorable long-term outcomes.

Paper 4

From Pixels to Pathology: Radiologic-Histologic Concordance of Hepatic Lesions

Umar Ali Khan, Abdullah Saeed, Muhmmad Ramzan
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Accurate evaluation of hepatic lesions is essential for diagnosis, prognosis, and management of liver disease. Contrast-enhanced computed tomography (CT) provides detailed non-invasive assessment of liver morphology and lesion characteristics, but histopathologic confirmation remains crucial for atypical, mixed, or non-hepatocellular lesions. This study assessed the concordance between radiologic and histopathologic diagnoses of hepatic lesions and evaluated the diagnostic performance of contrast-enhanced CT, particularly for hepatocellular carcinoma (HCC), in a tertiary care setting.

Methods: This retrospective correlation study at Pakistan Kidney and Liver Institute and Research Center, Lahore, reviewed electronic medical records of patients with hepatic lesions detected on dynamic contrast-enhanced CT and confirmed by ultrasound-guided core needle biopsy between June 2023 and December 2024. Of 430 records screened, I00 patients met inclusion criteria. Radiologic findings were compared with histopathology to assess concordance. Sensitivity, specificity, positive predictive value **(PPV),** negative predictive value (NPV), and overall diagnostic accuracy were calculated.

Results: The median age was 57 (46.5-63) years, with 55 (55%) males. Histopathology revealed hepatocellular carcinoma in 23 (23%) patients, metastases in 21 (21%), adenocarcinoma of pancreaticobiliary origin in 12 (12%), cholangiocarcinoma in 9 (9%),

lymphoma in 7 (7%), neuroendocrine tumors in 5 (5%), and benign lesions in 1 (1%). Overall CT sensitivity and specificity for detecting malignancy were 97.9% and 80.0%, respectively, with a diagnostic accuracy of 97.0%. For HCC, CT demonstrated a sensitivity of 82.6% and specificity of 67.5%. Viral hepatitis was present in 18 (78.3%) of histologically confirmed HCC cases and was significantly associated with cirrhosis and HCC.

Conclusion: Contrast-enhanced CT demonstrates high sensitivity and accuracy for detecting malignant hepatic lesions. Nevertheless, histopathologic confirmation remains essential for atypical lesions and non-HCC tumors. Integration of imaging and pathology is critical for accurate diagnosis and optimal clinical decision-making.

Paper 5

When Fat Mimics Benignity in Steatotic Hepatocellular Carcinoma without Metabolic Dysfunction–Associated Steatotic Liver Disease

Bilal Ahmad Shoukat, Yumnah Riaz, Swaiba Samar, Urfa Shafi, Muhammad Atique, Ahmad Karim Malik, Usman Aujla

Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Steatohepatitic hepatocellular carcinoma (SH-HCC) is a histologic variant of hepatocellular carcinoma (HCC) characterized by features resembling steatohepatitis, including large-droplet steatosis, ballooning of malignant hepatocytes, Mallory–Denk bodies, intratumoral inflammation, and pericellular fibrosis. Increased tumor fat raised a suspicion of the lesion being benign, leading to misdiagnosis. In most of the literature SH-HCC is associated with metabolic dysfunction–associated steatotic liver disease (MASLD). We present a case series where SH-HCC with typical histological features in cirrhotic livers was identified but without MASLD or risk factors for metabolic syndrome.

Methods: This is a retrospective study. Patients were identified through a review of hepatocellular carcinoma (HCC) and histopathology databases. All patients diagnosed with HCC from its inception in 2017 until 2025 were reviewed, and cases fulfilling the criteria for SH-HCC were included. The clinical characteristics and risk factors of all patients were studied, along with the treatment modalities used.

Results: Out of 4 patients, 2 (50%) were above the age of 50 years, and 3 (75%) were male. The mean tumor size was 3.65 cm. Two patients (50%) had BMI < 25 and two (50%) had BMI 25–30. None had diabetes mellitus, dyslipidemia, alcohol use disorder, or metabolic syndrome. Two patients (50%) had a history of smoking, and 1 (25%) had hypertension. All patients were cirrhotic; two had hepatitis C and one had hepatitis B. All patients had Liver Imaging Reporting and Data System (LI-RADS) category 5 lesions. The median alpha-fetoprotein was 18.8 ng/mL (range:2.19–6317 ng/mL). One patient had fat on imaging. Three patients (75%) had explant biopsies, while 1 (25%) had a core biopsy. Tumor steatosis ranged from 50% to 80%, and mostly showing 70–80% (n = 2). All patients demonstrated ballooning degeneration, pericellular fibrosis, and Mallory-Denk bodies, while 2 patients (50%) had lobular

inflammation. In immunohistochemical staining, 1 patient (25%) was positive for hepatocyte paraffin-1, and 3 patients (75%) were positive for Glypican-3.

Conclusion: SH-HCC can occur in patients without MASLD or metabolic risk factors. Diagnosis relies primarily on histology, supported by LI-RADS 5 imaging features. Larger population studies are needed to better understand the prevalence and characteristics of this variant.

Paper 6

Comparison Between Point-of-Care Ultrasound and Invasive and Non-Invasive Methods for Assessment of Fluid Responsiveness in Patients with Septic Shock

Mohsin Asif
Pakistan Kidney and Liver Institute and Research Centre, Lahore, Pakistan

Background: Accurate assessment of fluid responsiveness is critical in septic shock, particularly in patients with end-stage renal disease (ESRD) and end-stage liver disease (ESLD), where altered venous compliance, third-spacing, and impaired fluid excretion render traditional static preload markers unreliable. Dynamic assessment using point-of-care ultrasound (POCUS) may provide a more physiologically sound approach in this high-risk population.

Objective: To compare the diagnostic performance of POCUS-based dynamic parameters with conventional invasive and non-invasive methods for predicting fluid responsiveness in patients with septic shock.

Methods: This prospective comparative study was conducted in the Medical ICU of a tertiary liver and kidney transplant center. Eighty adult patients with septic shock on invasive mechanical ventilation and vasopressor support were enrolled. Stroke volume (SV) and cardiac output were measured using LVOT velocity–time integral (VTI). Fluid responsiveness was defined as a ≥15% increase in SV or cardiac output following a passive leg raise (PLR) maneuver and/or standardized fluid challenge. Diagnostic performance of LVOT-VTI change, IVC distensibility, central venous pressure (CVP), and pulse pressure variation (PPV) was evaluated using ROC analysis.

Results: Of 80 patients, 55 (69%) were fluid responders and 25 (31%) were non-responders. The median SOFA score ranged from 7 to 9, with a high prevalence of advanced renal and hepatic dysfunction. Responders demonstrated a significantly higher increase in LVOT-VTI following PLR compared with non-responders (median ΔVTI ≈ 18% vs <10%). LVOT-VTI showed excellent diagnostic accuracy, with an AUC of 0.94 on ROC analysis. IVC distensibility and CVP showed substantial overlap between responders and non-responders and poor discriminatory ability, particularly in patients with ESRD and ESLD. PPV demonstrated moderate predictive value but was inferior to POCUS-derived LVOT-VTI assessment.

Conclusion: In mechanically ventilated patients with septic shock—especially those with end-stage renal and liver disease—POCUS-based dynamic assessment using LVOT-VTI provides superior accuracy for predicting fluid responsiveness compared with conventional invasive and static parameters. Incorporation of POCUS into routine hemodynamic assessment may enable safer and more individualized fluid resuscitation in this vulnerable population.

Paper 7

Post-Transplant Delirium After Living Donor Liver Transplantation: Incidence, Risk Factors, and Outcomes

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Background: After major surgery including living donor liver transplantation (LDLT), delirium is a common and serious neuropsychiatric complication. It is linked to grave clinical results, longer stay in intensive care unit (ICU) and higher mortality. Despite the rapid expansion of transplant programs in Pakistan, locally generated data on prevalence and associated risk factors remain limited.

Objective: To ascertain the incidence, associated risk factors, and clinical outcomes of delirium in adult patients undergoing LDLT at Pakistan Kidney and Liver Institute and Research Centre (PKLI & RC), Lahore.

Methodology: This was a prospective observational cohort study conducted over a six-month period from 11 June 2025 to 11 December 2025 in the surgical intensive care unit of Pakistan Kidney and Liver Institute & Research Centre (PKLI & RC), Lahore. Consecutive adult patients undergoing elective living donor liver transplantation (LDLT) during the study period were enrolled. Delirium was assessed daily for the first seven postoperative days using the Confusion Assessment Method for the ICU (CAM-ICU), and patients with at least one positive CAM-ICU assessment were classified as having postoperative delirium. Demographic characteristics, comorbidities, pre-operative disease severity scores including MELD-Na, Child-Turcotte-Pugh, and CLIF-C, intra-operative variables (duration of surgery, blood loss, transfusion and vasopressor use), post-operative laboratory parameters, and clinical outcomes including ICU length of stay, hospital length of stay, and in-hospital mortality were recorded. The postoperative day of delirium onset was calculated relative to the date of surgery. Data was entered into Microsoft Excel and analyzed using SPSS version 27. Continuous variables were expressed as mean ± standard deviation or median (interquartile range), and categorical variables as frequencies and percentages. Comparisons between delirium and non-delirium groups were performed using appropriate parametric and non-parametric tests, with a p-value < 0.05 considered statistically significant.

Results: A total of 107 adult patients underwent living donor liver transplantation during the study period. Postoperative delirium, defined by at least one positive CAM-ICU assessment within the first seven postoperative days, was observed in 7 patients, yielding an incidence of 6.5%. Baseline demographic characteristics were comparable between the delirium and non-

delirium groups. There was no significant difference in age (45.0 ± 8.2 vs 47.6 ± 12.5 years, p = 0.61) or sex distribution (male: 71.4% vs 78.0%, p = 0.68). However, patients who developed delirium had significantly greater preoperative disease severity, reflected by higher MELD-Na scores (19.4 ± 5.1 vs 16.3 ± 5.5, p = 0.04), higher Child–Turcotte–Pugh scores (median 9 [IQR 8–10] vs 8 [7–9], p = 0.03), and higher CLIF-C scores (25.6 ± 4.8 vs 20.9 ± 5.6, p = 0.02). Preoperative serum sodium levels were significantly lower in the delirium group (131.8 ± 4.9 vs 135.6 ± 4.5 mmol/L, p = 0.02). Intraoperatively, patients who developed delirium experienced longer surgical duration (12.1 ± 2.3 vs 10.4 ± 2.1 hours, p = 0.03) and significantly greater estimated blood loss (2350 ± 820 vs 1620 ± 710 mL, p = 0.01). Although vasopressor use was more frequent in the delirium group (85.7% vs 59.0%), this difference did not reach statistical significance (p = 0.18). Patients with delirium had significantly prolonged ICU length of stay (median 7 [5–11] vs 4 [3–6] days, p = 0.01) In-hospital mortality was also significantly higher in the delirium group (28.6% vs 7.0%, p = 0.04). The majority of delirium episodes occurred early in the postoperative course, with 85.7% developing within the first three postoperative days (median onset POD 3, IQR 2–3).

Conclusion: Postoperative delirium occurred in 6.5% of LDLT recipients and was predominantly an early postoperative complication. Delirium was associated with greater preoperative disease severity, intra-operative stress, electrolyte disturbances, prolonged ICU and hospital stay, and increased mortality. Early identification of high-risk patients may allow targeted preventive and monitoring strategies to improve postoperative outcomes following liver transplantation.

Paper 8

Clinical Spectrum and Management of Paediatric Chronic Pancreatitis

Nida Zeeshan
Pakistan Kidney and Liver Institute and Research Centre, Lahore

Background: Chronic pancreatitis is a long-standing inflammatory condition of the pancreas that leads to progressive damage and impaired pancreatic function resulting in various complications. Recent years have seen a growing incidence in the paediatric population. This study is an overview on chronic pancreatitis in children. It also highlights essential clinical practice insights and importance of multidisciplinary team management to optimize patient outcomes.

Method: This Cross-sectional, retrospective study was conducted in Department of Paediatric Gastroenterology and Hepatology at the Pakistan Kidney & Liver Institute and Research Centre (PKLI &RC), Lahore. It included data from children diagnosed with chronic pancreatitis between September 2021 and September 2023. A total of 23 patients were enrolled, the majority of whom were between six and twelve years of age. Data were collected using a questionnaire and analysed using SPSS.

Results: A total of 23 children met the inclusion criteria and were included in the analysis. Two were lost to follow up which then makes a total of 21 patients. There were 11 male and

10 females. The mean age of the children was 10.52 years. In terms of residence, the largest proportion (eight participants, 57.2%) were residing in Punjab. 18 patients (85.7%) were from consanguineous marriages. Epigastric pain was reported by all patients (21, 100%). In 10 (47.5%) participants, the cause could not be identified. Pancreatic amylase was elevated in the majority of patients (90.5%) and lipase levels were raised in 81.0% of cases. The CT scan findings varied, with 38.1% of patients exhibiting a moderately dilated pancreatic duct. Magnetic resonance cholangiopancreatography (MRCP) findings revealed minimal prominence of the pancreatic duct in 42.9% of cases. Endoscopic retrograde cholangiopancreatography (ERCP) results indicated that 23.8% of patients required stent placement. Medical management was the primary approach for treatment. Surgical intervention was required in cases refractory to medical management, with 52.4% of patients who didn't want to proceed for surgery and are on follow up. Total of 47.6% required the surgical intervention.

Conclusion: Early diagnosis, guided by clinical presentation, laboratory results, and radiological investigations, can enhance the overall management strategy. While prompt medical treatment is essential for alleviating symptoms, surgical intervention is critical for pain relief and preventing complications that may arise from delayed diagnosis.

FREE PAPER SESSION-7

14 February 2026 (Day 2) | 15:00–16:30
Chairs: Dr. Najim Alshahrani | Dr. Kashif Asghar | Dr. Ali Hyder Baig
Abstracts: 1-8

Paper 1

Perforation and Spillage of Gallstones During Laparoscopic Cholecystectomy: A Single-Center Study

Aqil Hareem Butt
Riphah International University, Islamabad

Background: Laparoscopic cholecystectomy has become the standard treatment for symptomatic gallstone disease due to its minimal invasiveness and faster recovery. However, intraoperative complications such as gallbladder perforation and gallstone spillage remain clinically significant, potentially leading to postoperative infections, bile leakage, and conversion to open surgery. Understanding their frequency and associated factors is critical for surgical safety and quality improvement.

Objective: To determine the frequency and associated complications of gallbladder perforation and gallstone spillage during laparoscopic cholecystectomy in a tertiary care hospital.

Methods: This single-center cross-sectional audit was conducted among 89 consecutive patients who underwent laparoscopic cholecystectomy at Shalamar Hospital, Lahore, between August and October 2021. Data were collected prospectively using a structured proforma, including demographic variables, diagnosis, operative findings, and postoperative outcomes.

Statistical analyses were performed using SPSS version 27, applying Chi-square and Fisher's exact tests with significance set at $p<0.05$.

Results: The mean age of patients was 42.5±8.0 years, with females comprising 76.4% of the sample. Gallbladder perforation occurred in 21 patients (23.6%), while gallstone spillage was observed in 15 (16.9%). Perforation was more common in acute cholecystitis (35%) and correlated with longer operative duration ($p=0.041$) and higher conversion to open surgery ($p<0.001$). The most frequent complications were abdominal abscesses (6.7%), bile leakage (5.6%), and trocar-site infection (3.4%). Prolonged hospitalization was significantly associated with perforation ($p=0.049$).

Conclusion: Gallbladder perforation and stone spillage remain common intraoperative events in laparoscopic cholecystectomy, particularly among patients with acute cholecystitis. Although most complications are minor, these findings highlight the importance of surgical expertise, meticulous dissection, and standardized intraoperative documentation to minimize morbidity.

Paper 2

Retrospective Analysis of 100 Whipple Procedures: A Single-Center Experience

Fatir Daad Khan
ALTU, PEMH Rawalpindi

Background: Carcinoma of the head of pancreas remains one of the most aggressive gastrointestinal malignancies, with poor survival largely due to late presentation and limited resectability. Pancreaticoduodenectomy (Whipple procedure) remains the only potentially curative option. The choice between pylorus-preserving pancreaticoduodenectomy (PPPD) and classical pancreaticoduodenectomy (CPD) continues to be debated, particularly regarding perioperative outcomes and postoperative morbidity.

Objective: To compare perioperative and postoperative outcomes of PPPD and CPD in patients undergoing Whipple procedures at a single tertiary care center.

Methods: A retrospective review was conducted of 100 consecutive patients who underwent pancreaticoduodenectomy between January 2021 and December 2024**.** Patients were divided into two groups: PPPD (n=79) and CPD (n=21)**.** Outcomes assessed included operative time, intraoperative blood loss, need for blood transfusion, R0 resection rates, lymphadenectomy, and postoperative complications. Pancreatic fistula was classified according to ISGPS 2016 guidelines**.**

Results: Patients undergoing PPPD had a shorter operative time**,** less intraoperative blood loss**,** and reduced transfusion requirements compared to the CPD group. Oncological outcomes, including R0 resection and lymph node yield, were comparable between the two techniques. There was no significant difference in postoperative mortality or major morbidity. Rates of pancreatic fistula, biliary leakage, and postoperative bleeding were similar between groups, with no statistically significant differences.

Conclusion: Pylorus-preserving pancreaticoduodenectomy offers clear perioperative advantages without compromising oncological adequacy or increasing postoperative complications. In experienced hands, PPPD is a safe and effective alternative to classical pancreaticoduodenectomy for selected patients with pancreatic head malignancy.

Paper 3

Outcome of Acute Liver Failure in Pregnancy: Experience from Karachi, Pakistan

Nimrah Mehak
Jinnah Postgraduate Medical Center Karachi

Background: Acute liver failure (ALF) is a rare but intense clinical set of symptoms, characterized by abrupt and immense liver necrosis of a previously healthy liver parenchyma, resulting in jaundice, coagulopathy (INR>1.5), and hepatic encephalopathy. ALF in pregnancy is a serious condition with adverse maternal and fetal outcomes.

Objective: To determine the outcome of ALF in Pregnancy.

Methods: This was a prospective cohort study conducted at the Gastroenterology department of JPMC, Karachi, from July 2019 to December 2024. All pregnant females with deranged LFTS and liver failure according to King's College criteria were included in the study. The data obtained was analyzed using the statistical software SPSS version 23. Frequencies and percentages were obtained for descriptive statistics.

Results: We admitted 209 patients with ALF, out of them 72 pregnant female patients were included in the study. The mean age of patients was 27.56±5 years. Around 66(91.7%) patients presented in 3rd trimester of pregnancy at 33.15±5.36 weeks of gestational age. The majority have no known co-morbid condition. Hepatitis E virus was the most common etiology of ALF, positive in 58(80.6%), followed by Hepatitis A virus in 2(2.8%) and others. Most of the patients 37(51.4%) were at grade III encephalopathy.

The majority of them 45(62.5%) had required ICU care. Pregnant females admitted with ALF had high mortality rates 36(50%).

Conclusion: ALF in pregnancy is a fatal condition. Early recognition and optimum management can prevent adverse fetal and maternal complications.

Paper 4

Laparoscopic Trans Vesical Ureteric Reimplantation, A Challenging but Invasive Procedure for Correction of VUR in Children

Ghulam Mujtaba Zafar
The Children's Hospital, Lahore

Background: Cohen's open ureteral reimplantation (OUR) is the gold standard for the surgical management of vesicoureteral reflux (VUR) in children. There are many reports on

laparoscopic & robotic assisted (LUR) but there is lot of controversy, as these are extravesical approach with reduced success compared with open repair. We present our experience with tansvesicoscopic ureteral reimplantation (TVUR) for primary reflux. In this procedure, cross-trigonal reimplantation was performed in a manner analogous to open Cohen's repair under carbondioxide 'pneumovesicum'.

Objective: To review outcomes of laparoscopic trans vesical ureteric reimplantation an emerging minimally invasive approaches for the correction of reflux.

Study design: All patients who underwent TVUR during last two years at the current institution were retrospectively reviewed. The following were recorded for each patient: age, sex, grade of reflux, operative time, hospital stay, outcome, and complications.

Results: The series consisted of 16 consecutive patients and 17 ureters underwent TVUR. There were 12 girls and 04 boys. Mean age was 5 years (range 12 months – 13 years). Two had failed prior STING therapy & one extravesical ureteral reimplant. Ten (10) underwent bilateral repairs and 06 unilateral, including the one with double ureter (Post ureterocele incision). Mean operative time for bilateral repairs was 190 (145–260) minutes and 146 (120–190) for unilateral. Hospital stay was 02-05 days (2.5 days). DJ stent was placed in 12 ureters but not in 5 ureters. All DJ stent were removed at 4-5 weeks by cystoscopy. Minor complications like prolong hematuria & febrile UTI and transient Hydronephrosis were seen in three patients (one each), all resolved with conservative management. Postoperative voiding cystourethrogram (VCUG) was obtained in 06 patients and all found normal.

Conclusion: Trans vesicoscopic ureteral reimplantation is a minimally invasive approach that completely recreates all steps of open cross-trigonal technique with few minor complications and shorter hospital stay & good outcome.

Paper 5

Textbook Outcomes in Liver Surgery: A Decade of Experience at A Cancer-Dedicated Center

Muhammad Anas Bin Akhtar, Sibgha Aimon, Syed Tatheer Abbas, Aamir Ali Syed, Shahid Khattak
Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan

Background: Surgical resection is the main treatment for both primary and metastatic liver cancers, but it comes with notable risks of complications and mortality. Traditional metrics such as mortality rates, readmission rates, and length of stay (LOS) are commonly used to evaluate hospital performance, but they often do not offer a complete picture of the quality of surgical care. To address this gap, a composite "score" known as the "textbook outcome" (TO), has been developed which reflects the ideal surgical result. Achieving a TO signifies optimal care, encompassing various quality aspects throughout the patient's treatment process. A "textbook outcome in liver surgery" (TOLS) refers to patients who undergo an ideal perioperative course after liver resection.

Methods: A retrospective analysis of data for ten years, starting from 1st January 2014 to 31st December 2023. Patients who underwent liver resections for various conditions, such as hepatocellular carcinoma, intrahepatic and extrahepatic cholangiocarcinoma, primary gallbladder cancers, and metastases from other primary cancers like colorectal, gastric, pancreatic, and breast cancer were included. Additionally, liver resections for benign conditions, including large symptomatic hemangiomas and hydatid cysts, were also included. Patients with incomplete data required to define textbook outcomes were excluded, along with those who underwent multivisceral resections and paediatric age group (under 18 years).

Results: The study included a total of 232 patients, with 54% being female. The average age was 52 ± 12 years, with a BMI of 27 kg/m². Most patients (55%) had an ECOG score of 0, and 89% had an ASA score of 2. At the time of presentation, 9% of the patients had jaundice. The most common reason for liver resection was metastatic disease, accounting for 42.6%, followed by hepatocellular carcinoma at 25.9%. Among the metastases, 22.4% were due to colorectal cancer. Surgery was performed via an open approach in 75% of cases, and 30% of patients underwent major liver resection. Seven key outcomes were analyzed in terms of textbook outcomes, with the most achieved outcome being no in-house or 90-day mortality, which occurred in 97% of patients. This was followed by no bile leak, no liver failure grade B/C, no intraoperative complications, negative resection margins, and no 90-day readmissions, achieved in 94%, 94%, 93%, 92.2%, and 90.5% of cases, respectively. Additionally, 89.6% of patients had Clavien-Dindo grade < 3 complications post operatively. The overall rate of TOLS was 68.1%.

Conclusions: TOLS is valuable for assessing individual hospital performance and enabling international comparisons across centres with varying clinical practices, which can help improve patient outcomes. Our centre has attained textbook outcomes that are comparable with international standards, demonstrating the patient-centered care provided at our institution.

Paper 6

Correlation of Shearwave Elastography with Liver Biopsy in Children with Chronic Liver Disease

Mehwish Imtiaz
Pakistan Kidney and Liver Institute and Research Centre, Lahore

Background: Liver biopsy remains the gold standard for assessment of liver fibrosis; however, it is limited practically because of issues of sampling errors and invasiveness. This opens the way for other important non-invasive processes of diagnosis including the role and utilisation of Shear Wave Elastography in coming years for liver diseases. This post-hoc study will firstly aim to establish the correlation existing between the currently preferred gold standard liver biopsy and 2D-Shear Wave elastography's diagnostic accuracy in paediatric patients presenting with suspected or confirmed liver disease.

Methods: This retrospective study was conducted in Pakistan Kidney and Liver Institute and Research Center in Lahore, Pakistan from August 2017 to January 2024. In this analysis, 37

paediatric patients with various liver diseases who underwent liver biopsy for autoimmune hepatitis, Budd-Chiari syndrome, Wilson disease and other liver-related pathologies were included.

Results: Thirty-seven patients with a mean age of 10 years (ranging from 4–14 years) were enrolled. According to this study, sixteen out of thirty-seven (43%) cases of chronic liver disease were caused by autoimmune hepatitis. Patients' average liver stiffness as determined by SWE was 12.14 ± 0.75 kPa. According to elastography, the average liver stiffness in individuals with F0–F1 fibrosis was 6 ± 0.01 kPa, 7.67 ± 0.29 in stage F2, 8.62 ± 0.20 in stage F3, and 14.05 ± 3.69 kPa in stage F4. We discovered that the mean level of hepatic stiffness varied significantly depending on the degree of fibrosis ($p = 0.0001$).

Conclusion: SWE gauges the liver tissue's stiffness, which rises with fibrosis severity. Research has demonstrated that SWE, which is frequently equivalent to liver biopsy, has a high degree of accuracy in identifying and staging hepatic fibrosis.

Paper 7

Early and Late Recurrence Patterns of Pancreatic Ductal Carcinoma after Pancreaticoduodenectomy

Ali Arif Khan
Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan

Background: Survival after pancreaticoduodenectomy (PD) for pancreatic ductal adenocarcinoma (PDAC) remains poor, primarily due to high rates of recurrence. This study examines the risk factors, recurrence patterns, and post-recurrence survival among patients with early recurrence (ER) and late recurrence (LR) following PD.

Methods: A retrospective analysis was conducted on patients who underwent PD for PDAC. Recurrence was categorized as ER (≤12 months) or LR (>12 months). Patient demographics, pathological tumor characteristics, treatment details, recurrence patterns, and post-recurrence survival (PRS) were analyzed. Continuous variables were compared using Student's t-test or Mann–Whitney U test, and categorical variables using Chi-square or Fisher's exact test. Survival analysis was performed using Kaplan–Meier curves and log-rank tests.

Results: Among 125 patients, 20 (16.0%) developed recurrence, with 15 (75.0%) classified as ER and 5 (25.0%) as LR. Multivariate analysis identified lymph node metastasis ($p < 0.001$), positive resection margin (R1/R2 status, $p = 0.001$), and lymphovascular invasion ($p = 0.003$) as significant risk factors for recurrence. Patients with ER showed a higher proportion of liver and peritoneal recurrences ($p < 0.05$) and significantly worse median PRS compared to those with LR ($p < 0.001$). Failure to receive adjuvant chemotherapy was also significantly associated with recurrence ($p = 0.048$).

Conclusion: Lymph node metastasis, positive resection margins, and lymphovascular invasion are key predictors of recurrence after PD for PDAC. Early recurrence is associated with poorer

post-recurrence survival, underscoring the need for aggressive adjuvant therapy and close surveillance in high-risk patients.

Paper 8

Comparison of Robotic Surgery and Laparoscopic Surgery to Perform Complex Procedures

Rehana Kanwal

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Background: Minimally invasive surgery has transformed the management of complex gynecological conditions by reducing postoperative discomfort, hospital stay, and recovery time. Laparoscopic surgery remains the most widely practiced technique; however, its limitations restricted instrument mobility, 2D visualization, and a steep learning curve pose challenges in advanced cases. Robotic-assisted surgery was introduced to overcome these barriers, offering 3D imaging, enhanced articulation, and improved ergonomics. In Pakistan, robotic gynecological surgery using the CMR Versius platform has expanded rapidly, allowing surgeons to manage difficult cases involving severe adhesions, recurrent disease, and anatomically deep pelvic pathology.

Objective: This study aims to compare robotic surgery and laparoscopic surgery for complex gynecological procedures by evaluating operative time, blood loss, complication rates, conversion to laparotomy, disease resection completeness, and postoperative recovery. The goal is to identify the most effective approach based on patient needs and resource availability.

Methods: A retrospective analysis of 220 patients was conducted, including 80 robotic done in PKLI, NHMC and DHMC and 140 laparoscopic cases done in DHMC and HLH. Inclusion criteria involved complex conditions such as grade 3-4 endometriosis, large fibroids, dermoid cysts, recurrent pelvic disease, and gynecologic cancers. Standardized surgical steps, pain scoring, complication grading, blood loss measurement, and statistical analysis using SPSS were applied.

Results: Robotic surgery demonstrated significantly shorter operative time (112.9 vs. 163.3 minutes, p=0.007), reduced blood loss (186.5 vs. 384.7 ml, p=0.044), and no conversions to laparotomy. Laparoscopy reported higher transfusion rates and more postoperative complications.

Conclusions: Robotic-assisted surgery provides superior precision, less blood loss, fewer complications and improved surgeon ergonomics in complex gynecological procedures. Despite higher cost, it offers long-term clinical advantages over conventional laparoscopy.
