消化系 Gastroenterology

October 19, 2025 (Sun)
Room 101

主　　題：肝腫瘤消融:現在與未來展望
Liver Tumor Ablation – Current Situation and New Perspectives

內容簡述：肝腫瘤消融是早期肝癌治療能提供有效治癒的方法之一。本次的研討會將討論肝腫瘤包含中大型肝癌治療後的長期治療後的觀察及預後，同時討論肝腫瘤治療的新趨勢肝轉移癌的消融以及新型高強度超音波組織碎化術對肝腫瘤治療的探討。

Moderator: 王嘉齊 Chia-Chi Wang 台北慈濟醫院
林成俊 Chen-Chun Lin 土城醫院

時間 Time	題目 Topic	演講者 Speaker
14:00-14:05 GI-S10	Opening Remarks	王嘉齊 Chia-Chi Wang 台北慈濟醫院
14:05-14:30 GI-S11	Viral Hepatitis HCC after RFA – Prognosis Analysis	李懿宬 I-Cheng Lee 臺北榮民總醫院胃腸肝膽科
14:30-14:55 GI-S12	Long-term (>10 years) Outcomes of Ablation Therapy in Hepatocellular Carcinoma Patients: A Subgroup Analysis	王勝永 Shen-Yung Wang 馬偕醫院胃腸肝膽科
14:55-15:20 GI-S13	Long-term Experience of Microwave Ablation for HCC	江明峰 Ming-Feng Chiang 羅東博愛醫院胃腸肝膽科
15:20-15:30 Oral Presentation GI-O01	Are Gallbladder Abnormalities in Critically Ill Patients Clinically Relevant? Insights from the Medical ICU of a Medical Center	黃稚雯 Chih-Wen Huang 彰化基督教醫院
15:30-15:45	Coffee Break	
15:45-16:10 GI-S14	Long-term Outcome (10-year) of Single HCC Up to 7cm after Ablation by Switching Multiple-electrode RFA	林成俊 Chen-Chun Lin 土城長庚醫院胃腸肝膽科
16:10-16:35 GI-S15	Local Ablation for Metastatic Liver Tumors	洪肇宏 Chao-Hung Hung 高雄長庚胃腸肝膽科
16:35-17:00 GI-S16	Histotripsy – New Weapon for HCC	吳志宏 Chih-Horng Wu 臺大醫院影像學部
17:00-17:05	Closing Remarks	林成俊 Chen-Chun Lin 土城長庚醫院胃腸肝膽科

ePoster

GI-P01	Diagnostic Performance of Endoscopic Ultrasound-Guided Tissue Acquisition for Malignant and Pre-malignant Pancreatic Tumors in a Southern Medical Center	孫煒智 Wei-Chih Sun 高雄榮民總醫院

GI-S10

Opening Remarks

Chia-Chi Wang
Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation and School of Medicine, Tzu Chi University, Hualien, Taiwan

The upcoming symposium, titled " Liver Tumor Ablation: Current Situation and Future Perspectives " brings together renowned domestic experts to explore recent advancements and long-term outcomes in the field of liver tumor ablation. This comprehensive session will cover a range of topics reflecting both the clinical achievements and technological innovations shaping the future of liver-directed therapies. Key presentations include an in-depth analysis of long-term prognostic outcomes following liver tumor ablation, highlighting clinical trends and survival data derived from extensive retrospective and prospective studies. Another featured topic will focus on the ten-year results of ablation treatment for medium to large hepatocellular carcinoma (HCC), addressing both the challenges and successes in managing tumors beyond conventional size thresholds. In addition, the symposium will explore the expanding role of microwave ablation, which has emerged as a powerful modality due to its efficiency, speed, and thermal consistency. The increasing application of ablation for metastatic liver tumors will also be discussed, reflecting a growing body of evidence supporting ablation as a viable local control strategy in select metastatic cases. The session will conclude with an introduction to the latest non-thermal ablation device, histotripsy, a novel ultrasound-based technique that mechanically disrupts tissue without heat. This technology represents a significant leap forward, offering precise, non-invasive tumor destruction while preserving adjacent structures—a potential paradigm shift in image-guided tumor therapy. Altogether, this symposium promises a rich and insightful program, combining clinical evidence, technological innovation, and future directions in the evolving field of liver tumor ablation. It will serve as a valuable platform for knowledge exchange and inspire continued advancement in minimally invasive oncologic treatment.

GI-S11

Viral Hepatitis HCC after RFA – Prognosis Analysis

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Radiofrequency ablation (RFA) is a widely adopted curative treatment for early-stage hepatocellular carcinoma (HCC), with hepatitis B and C being the leading underlying causes in most patients. However, recurrence after RFA remains a significant clinical challenge that adversely impacts long-term outcomes. This presentation will explore key prognostic factors related to post-RFA recurrence and survival, with a focus on viral hepatitis-associated HCC. We will review established predictors of recurrence following HCC ablation, encompassing tumor-related, host-specific, and viral factors. Additionally, we will introduce an AI-assisted system for HCC diagnosis and recurrence prediction, which integrates imaging data and clinical variables to improve early detection and enable personalized risk stratification. Finally, we will analyze post-recurrence clinical outcomes and management strategies, emphasizing how recurrence patterns and timing influence overall prognosis. By incorporating AI-driven tools into clinical practice, we aim to enhance patient selection, optimize surveillance protocols, and guide individualized post-recurrence treatment planning.

GI-S12

Long-term Outcomes of Ablation Therapy in

Hepatocellular Carcinoma Patients: A Subgroup Analysis

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Hepatocellular carcinoma (HCC) is the fourth leading cause of cancer death worldwide, and the second most among all cancers in Taiwan. For patients with early-stage disease, the primary curative-intent treatments include surgical resection, liver transplantation, and local ablation. Ablation therapy, primarily radiofrequency ablation (RFA) and microwave ablation (MWA), is widely adopted as a first-line treatment, especially in patients unsuitable for surgery.

While 5-year survival outcomes of ablative therapy for HCC are well-established, the durability of these results beyond a decade has been less clearly defined. Recent evidence demonstrates that long-term survival exceeding 10 years after ablative therapy is achievable in carefully selected patients, particularly those with preserved liver function and low tumor burden. Nonetheless, tumor recurrence remains a major challenge, with intrahepatic distant recurrences occurring up to 80% at 10 years.

This presentation will review the evidence on long-term outcomes after ablative therapy, with a focus on subgroup factors that stratify prognosis. By examining these long-term results and their clinical implications, the role of ablative therapy in the multidisciplinary HCC management will be better clarified.

GI-S13

Long-term Experience of Microwave Ablation for HCC

Ming-Feng,Chiang
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Microwave ablation (MWA) has recently emerged as a promising alternative to radio-frequency ablation (RFA) for the local treatment of hepatocellular carcinoma (HCC). Current evidence suggests no significant difference in outcomes between the two modalities when treating small HCCs. However, certain features make MWA more suitable in specific clinical situations. In addition, MWA offers advantages over RFA, including shorter ablation times and the ability to achieve a more consistent ablation margin.

In February 2025, a new generation of high-energy MWA generators became available, marking a new era in treatment and potentially addressing some of the limitations of earlier systems. In this review, we summarize five years of experience and clinical outcomes with MWA for HCC management in Taiwan.

GI-O01

Are Gallbladder Abnormalities in Critically Ill Patients Clinically Relevant? Insights from the Medical ICU of a Medical Center

Chih-Wen Huang[1], Fu-Tse Hsiao[1], Chao-Hung Yu[2], Yang-Yuan Chen[1], Hsu-Heng Yen[1]
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Background:

Gallbladder (GB) abnormalities are frequently observed in critically ill patients, but their clinical relevance remains uncertain. This study aimed to evaluate the incidence of GB abnormalities and their association with clinical outcomes in patients admitted to a medical intensive care unit (ICU).

Methods:

We conducted a retrospective study of adult patients admitted to the medical ICU of Changhua Christian Hospital from February to September 2023 who underwent abdominal ultrasound. Patients with prior cholecys-

tectomy or diagnosed acute cholecystitis were excluded. Clinical variables, ultrasound findings, and 30-day outcomes were analyzed.

Results:

A total of 59 patients were included (mean age 68.9 ± 14.7 years; 69.5% male). GB abnormalities were identified in 33 patients (55.9%), with wall thickening (35.6%) and pericholecystic fluid (30.5%) being most common. GB abnormalities were significantly associated with lower serum albumin (2.8 ± 0.5 vs. 3.3 ± 0.8 g/dL, p = 0.018) and prolonged nil per os (NPO) status (p = 0.002), but not with age, sex, APACHE II score, or 30-day mortality (p = 0.980). Sludge was more frequent in patients with ICU stays ≥48 hours (30.0% vs. 5.1%, p = 0.008).

Conclusion:

GB abnormalities are common among medical ICU patients and are associated with hypoalbuminemia and prolonged fasting, but not with increased short-term mortality. These findings may help guide clinical management and avoid unnecessary interventions.

Keyword:

Gallbladder abnormalities, Acute cholecystitis, Critically ill patients

GI-S14

Long-term Outcome (10-year) of Single HCC Up to 7cm after Ablation by Switching Multiple-Electrode RFA

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Hepatocellular carcinoma (HCC) is one of the leading causes of cancer-related death in Taiwan. Radiofrequency ablation (RFA) is recommended as a first-line treatment for solitary tumors less than 2 cm, and as an alternative for unresectable HCC, limited to no more than three nodules, each measuring ≤3 cm. Long-term survival outcomes following RFA have been reported, with 5-year overall survival (OS) rates ranging from 50–70%, and 10-year OS rates from 30–50%. In contrast, recurrence-free survival (RFS) rates are lower, estimated at 25–45% at 5 years and 10–20% at 10 years. Recent advancements in RFA technology, such as multiple-electrode techniques, image-guidance with navigation systems, and contrast-enhanced ultrasound have significantly improved treatment efficacy. These innovations not only enlarge the ablation zone but also enhance the likelihood of achieving an adequate safety margin, thereby reducing local recurrence and improving long-term survival. In our previous study, we demonstrated that complete ablation rates for HCCs measuring 3–5 cm and 5–7 cm were comparable when using multiple-electrode RFA. We further reported that switching multiple-monopolar RFA (SW-mRFA) significantly increased the rate of achieving adequate safety margins for HCCs between 3–5 cm, compared with single-electrode overlapping ablation. Patients treated with SW-mRFA showed superior 5-year OS and RFS. Inadequate safety margins were identified as a major contributor to post-ablation recurrence and reduced survival. Recently, we analyzed outcomes from 192 patients with solitary HCCs up to 7 cm in size. The majority had tumors larger than 3 cm and Child-Pugh A liver function. All underwent SW-mRFA as first-line treatment. The observed 5-year and 10-year OS rates were 54.0% and 32.2%, respectively, while RFS rates were 31.9% and 23.6%. Notably, there was no significant difference in OS between patients with tumors measuring 3–5 cm and those with tumors 5–7 cm. Conclusion: In selected patients, SW-mRFA can be considered a first-line, locally-curative treatment for solitary HCC, especially for those who are not ideal candidates for surgical resection.

GI-S15

Local Ablation for Metastatic Liver Tumors

Chao-Hung Hung

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Liver is a common site for secondary tumor spread. While systemic therapies remain the cornerstone of treatment for metastatic liver tumors, local ablation has emerged as a valuable adjunct in a multimodal strategy aimed at improving tumor control and extending survival. Thermal ablative techniques, such as radiofrequency ablation (RFA) and microwave ablation (MWA) therapy have offered minimally invasive options for patients ineligible for surgical resection. There have been some retrospective studies demonstrating similar oncological outcomes between ablative therapy and surgical resection in selected populations with small (<3 cm) solitary metastatic liver tumor.

Recent consensus guidelines, as those developed by the Taiwan Academy of Tumor Ablation, emphasize evidence-based recommend-dations for the use of ablation in metastatic liver tumor, recognizing the distinct biological behavior of metastatic versus primary liver tumors. The guidelines advocate for individualized treatment planning based on tumor type, burden, and anatomical considerations, and highlight the need for further research to refine patient selection and optimize outcomes. As the role of ablation continues to evolve, its integration into multidisciplinary care pathways offers promising avenues for enhancing the management of metastatic liver disease.

GI-S16

Histotripsy – New Weapon for HCC

Chih-Horng Wu
National Taiwan University

Histotripsy is a promising non-invasive therapeutic technology that uses short-cycle, high-intensity ultrasound mechanical pulses to liquefy targeted tissues through controlled cavitation, breaking them down into acellular debris that is naturally absorbed within 1–2 months, leaving only a small scar. This technique offers several advantages, including the absence of skin incisions, no radiation exposure, and no thermal injury, thereby protecting surrounding structures such as blood vessels. With its high tissue selectivity, histotripsy is particularly suitable for local treatment of hepatocellular carcinoma and is not limited by thermal coagulation effects, allowing precise targeting under real-time ultrasound guidance. Beyond tumor ablation, histotripsy can modulate the tumor microenvironment to stimulate immune responses, and when combined with immunotherapy, it has the potential to enhance treatment efficacy and improve patient outcomes, positioning it as a highly promising tool in the future of cancer care.

GI-P01

Diagnostic Performance of Endoscopic Ultrasound-Guided Tissue Acquisition for Malignant and Pre-malignant Pancreatic Tumors in a Southern Medical Center

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Background:

Endoscopic ultrasound-guided tissue acquisi-tion (EUS-TA) is essential for the diagnosis of pancreatic tumors. This study aimed to identify factors that determined the diagnostic performance of EUS-TA for malignant and pre-malignant pancreatic tumors.

Material and Methods:

A total of 165 patients, who underwent

EUS-TA for pancreatic tumors between December 2019 and December 2024, were enrolled in this study. At our institute, we embarked EUS-TA in 2019, and both rapid on-site evaluation in cytology (ROSE) and routine sedation were unavailable till now. Clinical and procedural factors were analyzed and compared for patients with definitive and inconclusive EUS-TA sampling for the diagnosis of malignant and pre-malignant pancreatic tumors.

Results:

A total of 171 EUS-TA samples were included, of which 37 cases (21.6%) were inconclusive. Of 37 patients without a definite diagnosis from initial EUS-TA, 16 were subsequently proved by surgery, 12 by clinical progression of malignant behavior, 4 by repeat EUS-TA, 2 by CT-guided biopsy, 1 by trans-papillary biopsy, and 1 by endoscopic biopsy of duodenal tumor invasion. There were 3 (1.8%) adverse events, including 2 mild-degree pancreatitis and 1 self-limited bleeding. In univariate analyses, pancreatitis, biliary obstruction, pre-procedural biliary drainage, cystic tumor, tumor at the head or uncinate, smaller tumor size, trans-duodenal access, and patient intolerance were associated with a higher rate of inconclusive diagnosis. In the multivariate analysis, cystic tumor (OR: 0.115; 95% CI: 0.033 to 0.399; p=0.001), smaller tumor size (OR: 1.422; 95% CI: 1.013 to 1.996; p=0.042), and patient intolerance (OR: 0.028; 95% CI: 0.003 to 0.308; p=0.003) were the independent factors for the diagnostic performance of EUS-TA for malignant and pre-malignant pancreatic tumors.

Conclusion:

When initiating EUS-TA for malignant and pre-malignant pancreatic tumors, the diagnostic yield would be affected by cystic tumor pattern, small tumor size, and patient intolerance.

Key words:

Endoscopic ultrasound-guided tissue acquisition, pancreatic tumor