**Radiology and Pathology**

**by Varia Kirschner and David Victor**

For the first time at the ILTS, Oral abstract Sessions dedicated to the allied fields of Radiology and Pathology were introduced. Newer concepts in imaging, state of the art imaging modalities and their performance/usefulness in particular situations, and results of ablative treatments via interventional radiology, were presented. Pathological and molecular analysis in patients with cancers, infections, and assessment of long term post-LT biopsies were discussed.

**LB O-009 - Diagnostic performance of MRI texture features in prediction of microvascular invasion in HCCs of pre-transplant patients *Nagihan Inan, Istanbul, Turkey***

Inan and colleagues introduced MRI texture analysis, which utilizes pixel-based content of the image, to predict microvascular invasion in patients with hepatocellular carcinoma undergoing liver transplantation. The methodology yielded 95.8% sensitivity and 92.3% specificity in prediction of microvascular invasion. Authors concluded that MRI texture analysis can be utilized for pre-transplant patients to accurately predict the presence of microvascular invasion and the need for further pre-transplant locoregional treatment.

**O-097 - Transcriptome-based molecular subtypes for hepatocellular carcinoma in liver transplantation *Zuyuan Lin, Hangzhou, China***

This study explored selection of patients for transplantation with HCC. The authors developed distinct molecular subtypes using transcriptome sequences that identified patients with a lower chance of tumor recurrence than with the Hangzhou criteria alone.

**O-098 - Cytomegalovirus (CMV) infection induces an angiogenic response through hepatic stellate cells (HSCs) and leads to early post-transplant liver fibrosis (LF) and poor graft survival *Binnaz Handan Ozdemir, Ankara, Turkey***

Dr. Ozdemir et al presented a novel concept that cytomegalovirus infection may have multiple roles in inflammation and fibrosis in transplanted patients. Their study showed increased risk of rejection and hepatic stellate cell (HSC) activation in patients with CMV infection. They showed that HSC activation increased angiogenesis, which was associated with higher rates of graft fibrosis.

**O-101 - Expression of Keratin 19 in advanced hepatocellular carcinoma and resistance to sorafenib treatment *Xue Wen, HangZhou, China***

Tumor biology was explored by Wen et al. who showed that the expression of Keratin 19 may help predict tumor activity after TACE and may also help define patients who may respond to sorafenib.

**O-103 - EUS guided fine needle aspiration helps accurately characterize FDG-18 PET avid lymph nodes in prospective recipients with hepatocellular carcinoma *Prashant Bhangui, Medanta, India***

Bhangui et al. shows that cytological evaluation of PET positive or larger lymph nodes is important. Their studies showed only 19% of their 73 patients had metastatic disease despite radiographic suspicion. Their study allowed 46 patients to undergo liver transplantation who otherwise would have been excluded using radiographic criteria only, and considering the lymph nodes as metastatic.

**O-104 - Outcome of liver transplant for HCC after high intensity focused ultrasound as bridging therapy *Cheung Tan To, Hong Kong, Hong Kong***

Dr Cheung Tan To et al. that showed high intensity focused ultrasound (HIFU) ablation of hepatocellular carcinomas had safe and effective outcomes for ablation as compared to TACE as bridging therapy. This small study showed outcomes of HIFU trending toward superiority compared to TACE.

**O-105 - The association of number and type of liver directed therapies (LDT) on portal vein thrombosis (PVT) in waitlisted patients with hepatocellular cancer (HCC) *Raphael Meier, San Francisco, United States***

Dr Meier et al. showed that despite concerns that multiple locoregional treatments increase the risk of portal vein thrombosis, review of the University of California at San Francisco transplant database, did not reveal any increased risk.

**O-153 - Allograft histology and biopsychosocial health 10 years after liver transplantation in children, *Sunitha Vimalesvaran, London, UK***

Vimalesvaran and colleagues reviewed long-term outcomes following liver transplantation in children. The team has focused on the changes in allograft histology and the psychosocial state of the pediatric liver recipients. Majority of liver grafts (67%) demonstrated low-grade inflammation and fibrosis. Liver transplantation carried a significant impact on psychosocial state of the pediatric recipients. In the follow-up, 26% of patients carried diagnosis of mental health disorders, 13% had learning difficulties and 12% were not working or studying due to ongoing medical concerns.

**O-154 - Non-contrast-enhanced hepatic magnetic resonance angiography with inflow sensitive inversion recovery technique: Clinical application of vascular evaluation in pre-liver transplantation recipients with impaired renal function*. Po Hsun Huang, Taiwan, Province of China.***

Huang and colleagues introduced inflow sensitive inversion recovery MRA (ISIR MRA) as a non-invasive tool to assess hepatic vasculature prior to liver transplantation in patients with impaired renal function. The pre-transplant imaging was correlated with the intra-operative vascular findings. Success ratings for accurate evaluation of proper hepatic artery, portal veins and IVC were greater than 90%. However, recipients with high MELD score (>23) had lower image quality in assessment of proper hepatic artery and IVC when ISIR MRA was utilized.