



**ESGAR Liver Imaging Workshop**  
**Madrid, Spain**  
**September 26 – 27, 2024**

September 26, 2024		
08:30 – 09:00	Registration	
09:00 – 09:05	Opening remarks	F. Matute & P. Rodriguez Carnero
<b>S1 “Imaging modalities”</b>		
09:05 – 09:30	Multiparametric US application in liver  <u>Key discussion points:</u> <ol style="list-style-type: none"> <li>1) Basic principles and physics of low mechanical index CEUS</li> <li>2) Technique used to image the liver in different vascular phases</li> <li>3) The European Federation of Societies for Ultrasound in Medicine and Biology (EFSUMB) guidelines regarding liver CEUS.</li> <li>4) Examples of liver CEUS through recorded clips.</li> <li>5) Different types of US Elastography, and the current role in diagnosing liver fibrosis.</li> <li>6) Technique of estimation of liver elasticity through shear wave elastography (SWE).</li> <li>7) Steatosis quantification by US</li> </ol>	S. Martín Garre
09:30 – 09:55	MDCT of the Liver  <u>Key discussion points:</u> <ol style="list-style-type: none"> <li>1) The ideal ‘liver’ CT protocol</li> <li>2) Role of bolus tracking and importance of having both an angiographic and late hepatic arterial phase</li> <li>3) Current evidence regarding dual energy CT in the liver</li> </ol>	R. Méndez Fernández
09:55 – 10:25	Liver MRI: Modern protocols and hepatobiliary MRI  <u>Key discussion points:</u> <ol style="list-style-type: none"> <li>1) Basic concepts of extracellular contrast agent application for liver MRI</li> <li>2) Integration of DWI to a liver protocol</li> <li>3) Mechanism of action of liver specific contrast agents.</li> <li>4) Added value of liver-specific contrast agents in the characterization of focal liver lesions.</li> <li>5) Most common pitfalls and limitations of liver specific contrast agents</li> </ol>	S. Baleato González
10:25 – 10:30	Q&A	
10:30 – 11:00	<b>Coffee Break</b>	
11:00 – 12:45	<b>Interactive case discussions (3 x 35min)</b>	
	Cases from my workstation with focus US	S. Martín Garre
	Cases from my workstation with focus on hepato-biliary MRI	S. Baleato González
	Cases from my workstation with focus on CT	R. Méndez Fernández
12:45 – 13:45	<b>Lunch</b>	
<b>S2 “Focal and diffuse diseases in the non-cirrhotic liver”</b>		
13:45 – 14:10	Benign lesions in the non-cirrhotic liver – Value of hepato-biliary agents  <u>Key discussion points:</u>	R. Canella

	1) Role of hepatobiliary contrast media in the diagnosis of hemangioma, focal nodular hyperplasia, hepatocellular adenoma, large hyperplastic nodules, etc	
14:10 – 14:35	<b>Vascular diseases</b>  <u>Key discussion points:</u> 1) Pre-sinusoidal disorders (portal vein thrombosis, congenital intrahepatic portosystemic shunts, hereditary hemorrhagic telangiectasia, etc.) 2) Post-sinusoidal disorders (Budd-Chiari syndrome, sinusoidal obstruction syndrome, effect of congestive heart failure on the liver, etc.). 3) Vascular lesions seen in the context of vascular diseases of the liver, including large regenerative nodules	Y. Menu
14:35 – 15:00	<b>Biliary diseases: benign and malignant lesions</b>  <u>Key discussion points:</u> 1) Stone related biliary disease 2) Inflammatory, infective or immune-mediated biliary disease (primary sclerosing cholangitis, primary biliary cirrhosis) 3) Cholangiocarcinoma (intraductal, periductal infiltrating, mass-forming) 4) Bismuth Classification and its relevance to hepatobiliary surgery	M.A. Bali
15:00 – 15:15	<b>Q&amp;A</b>	
15:15 – 15:45	<b>Coffee Break</b>	
15:45 – 17:30	<b>Interactive case discussions (3 x 35min)</b>	
	How MRI can help to characterize a lesion in the non-cirrhotic liver	R. Canella
	Biliary diseases – my best cases	M.A. Bali
	Vascular diseases	Y. Menu
17:30	Adjourn	
<b>September 27, 2024</b>		
<b>S3 “HCC”</b>		
08:30 – 08:55	<b>Diagnosis and staging of hepatocellular carcinoma (HCC): Current guidelines</b>  <u>Key discussion points:</u> 1) Intracellular and intranodular alterations occurring in cirrhosis, with an emphasis on the mechanisms underlying regenerative/dysplastic nodules and HCC. 2) Role of CT and MRI in the diagnosis of typical and atypical HCC. 3) Similarities and differences between European, American, and Asian guidelines for the diagnosis, staging and management of HCC including LIRADS terminology	J. Rimola
08:55 – 09:20	<b>Focal lesions in cirrhosis: Not always HCC</b>  <u>Key discussion points:</u> 1) Benign lesions in cirrhosis (hemangioma, focal confluent fibrosis, etc.) 2) Malignant lesions in cirrhosis (cholangiocarcinoma, metastases, etc.).	R. Albazaz
09:20 – 09:45	<b>Structured reports using LIRADS</b>  <u>Key discussion points:</u> 1) To explain the rationale and scientific background of the LIRADS 2) To go through typical findings of HCC and how they are documented in the LIRADS systems. 3) To summarize the current scientific evidence for LIRADS.	A. Darnell Martín

09:45 – 09:55	Q&A	
09:55 – 10:15	<b>Coffee Break</b>	
10:15 – 12:00	<b>Interactive case discussions (3 x 35min)</b>	
	How MRI can help to characterize a lesion in the cirrhotic liver	R. Albazaz
	How to...LIRADS	A. Darnell Martín
	Staging of HCC – Case-based approach	J. Rimola
12:00 – 13:00	<b>Lunch</b>	
	<b>S4 “Malignant Liver Diseases and Liver Transplantation”</b>	
13:00 – 13:20	Liver Imaging in HCC and metastatic disease after locoregional and systemic therapies 1) LIRADS, RECIST 1.1. and mRECIST response assessment systems 2) Findings after local recurrences post RFA/MWA 3) Findings after intraarterial therapies (TACE, TARE) 4) Benign liver changes post chemotherapy / pseudoprogressio	C.J. Zech
13:20 – 13:40	Liver metastases detection and staging: methods and problems <u>Key discussion points:</u> 1) Pre-surgical staging with focus on detection and false positive rate of different imaging modalities (CT, PET-CT, MR with conventional and hepatobiliary contrast media) 2) Role of diffusion weighted imaging (DWI) and of the hepatobiliary phase in the diagnosis of metastases. 3) Differential diagnosis of liver metastases – especially to solid benign lesions. 4) Distinguishing slow-filling hemangiomas from metastases 5) The challenges of liver staging post chemotherapy.	M. Garbajs
13:40 – 14:00	Imaging after liver transplantation - immediate and delayed complications  <u>Key discussion points:</u> 1) Spectrum of early vascular and post-surgical complications after liver surgery and liver transplantation 2) Early and delayed biliary complications after liver transplantation 3) Imaging strategy and management of those complications	M. Radzina
14:00–14:15	Q & A	
14:15 – 14:30	Coffee Break	
14:30 – 16:15	<b>Interactive case discussions (3 x 35 min)</b>	
	My best cases after locoregional therapies of the liver	C.J. Zech
	Liver metastases detection – where hepato-biliary MRI made the difference	M. Garbajs
	Case collection of post transplantation imaging	M. Radzina
16:15 – 16:50	<b>Quiz Cases:</b> Incidental liver lesion - S. Baleato González LIRADS - A. Darnell Martín Non-HCC malignancy in cirrhosis - R. Albazaz Hemangioma in Cirrhotic Liver - C.J. Zech Metastases - M. Garbajs	P. Rodriguez Carnero
16:50 – 17:00	Closing remarks & Adjourn	