

Paolo Marra



Personal Details

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Career Statement

I am a general consultant radiologist at ASST Papa Giovanni XXIII Hospital. Besides general and acute responsibilities, I report multimodality imaging including thoraco-abdominal CT and MR examinations. My main activity involves interventional radiology in adults and pediatric patients, with expertise in diagnosis and interventional management of complications of liver transplantation. I am exposed to all thoraco-abdominal pathologies, including peri-surgical assessment, trauma, oncology, vascular and chronic diseases. I am the contact person for Ultrasound section with advanced skills in CEUS and US-guided interventions. I regularly run multidisciplinary meetings for lung cancer, liver and biliary tract cancers, adult and pediatric hepatology and liver transplantation. I completed my radiology training at San Raffaele Hospital, Milan, focusing on hepatobiliary and pancreatic diagnostic and interventional radiology and experimental preclinical imaging. This has included advanced clinical and preclinical liver and pancreatic imaging and interventions, with independent research projects. My professional goal is to improve the quality of work, optimizing organizational aspects and defining operational standards. I do my best in teamwork. I invest in professional development, research and teaching colleagues in training.

Education and Qualifications

Aug 2013 – Sept 2018	Postgraduate School of Radiology – Final degree mark 70/70 cum laude – Vita-Salute San Raffaele University, Milan, Italy
Feb 2013	Italian Medical Licence to Practice Examination
Oct 2006- July 2012	School of Medicine and Surgery – Final degree mark 110/110 cum laude – Vita-Salute San Raffaele University, Milan, Italy
Sept 2001- July 2006	High School Diploma – Final degree mark 100/100 Lorenzo Mascheroni High School, Bergamo, Italy

Career History, Clinical Skills and Experience

Oct 2019 – Ongoing	Consultant General and Interventional Radiologist (permanent staff), ASST Papa Giovanni XXIII Hospital, Bergamo, Italy <ul style="list-style-type: none">- Sub-specialty reporting and practice: Liver Ultrasound (CEUS), CT and MR in adult and pediatric chronic liver disease and transplantation; vascular and extravascular interventional radiology in adults and pediatric patients- Leading MDT: lung cancer, hepatology and liver transplantation- General ultrasound, Color Doppler ultrasound and CEUS- General reporting (XR, CT, MR)- Acute CT reporting Clinical Lead: Prof Sandro Sironi
Oct 2018 – Sept 2019	Consultant General and Interventional Radiologist (contractor), IRCCS San Raffaele Hospital, Milan, Italy <ul style="list-style-type: none">- Sub-specialty reporting and practice: Hepatobiliary and pancreatic Ultrasound, CT and MR; vascular and extravascular interventional radiology- Leading MDT: hepatobiliary cancer, neuroendocrine neoplasms- General and Color Doppler ultrasound- General reporting (XR, CT, MR)- Acute CT reporting- Preclinical Imaging facility of the Experimental Imaging Center: advanced

Aug 2013- Sept 2018

ultrasound and MR imaging of liver and pancreatic cancer animal models
Clinical Lead: Prof Alessandro Del Maschio; Subspeciality Lead: Prof Francesco de Cobelli, Prof. Massimo Venturini; Preclinical Lead: Prof. Antonio Esposito
Radiology Resident in the Postgraduate school of Radiology at San Raffaele University Hospital, Milan, Italy
- Sub-specialty practice: vascular and extravascular interventional radiology
- Abdominal ultrasound, CT and MR for hepatobiliary and pancreatic cancer, neuroendocrine neoplasms,
- General CT and MRI reporting
- General ultrasound, plain films, contrast studies
- Abdominal MRI (pancreas, liver, kidney, enteric-MRI)
- Leading oncological MDT meetings – Liver, Pancreatic and GI cancer
- Clinical Trials: screening and follow up imaging for several randomised controlled trials on lung cancer and solid tumours
- Preclinical Imaging facility of the Experimental Imaging Center: advanced ultrasound and MR imaging of liver and pancreatic cancer animal models
Supervisors: Prof Alessandro Del Maschio, Prof Francesco De Cobelli, Prof Massimo Venturini, Prof Antonio Esposito

Management and leadership experience

2020-ongoing	Contact person for the Ultrasound section of the Radiology Department at ASST Papa Giovanni XXIII Hospital
2014-2018	Resident representative during the Postgraduate School of Radiology at Vita-Salute San Raffaele University.

Academic role and teaching experience

2021-ongoing	Tutor for medical students and radiology residents; School of Medicine and Surgery: IMS International Medical school, Postgraduate School of diagnostic Radiology; University of Milano Bicocca
2020-ongoing	Lectures for medical students and radiology residents; School of Medicine and Surgery: IMS International Medical school; Postgraduate School of diagnostic Radiology; University of Milano Bicocca
2019-ongoing	Regular supervisor for Radiology Residents; Postgraduate School of diagnostic Radiology, University of Milano Bicocca
2018-2019	Thesis co-supervisor for two medical students at Vita-Salute San Raffaele University
2017	Scientific secretary of the congress “New Frontiers in Endovascular Therapy and Interventional Radiology”; San Raffaele Hospital, Milan, June 16-17 th , 2017

Awards

2012	Magna cum laude and Honourable Mention in Medicine degree
2013, 2014, 2015, 2017	“Invest in the youth” programme winner at ECR
2015	Magna cum laude award winner at ECR 2015 for the electronic poster entitled: “Preclinical MRI and US to detect and monitor the development of early pancreatic alterations and pancreatic tumors in a transgenic mouse model of pancreatic ductal adenocarcinoma (PDA)”
2015	Onsite Best Scientific Paper Presentation in the ECR session SS1901a

Book Chapters and written texts

1. Imaging Modalities (Pages 61-75), Systematics of Imaging Morphology (Pages 77-89) and Differential Diagnosis of Benign Liver Tumors (Pages 77-89). Benign Tumors of the Liver. ISBN: 978-3-319-12984-6 (Print) 978-3-319-12985-3 (Online), Springer, 2015
2. La gestione delle complicanze post-operatorie in radiologia interventistica – L' imaging nel Post-Operatorio. ISBN:9788879476195, Idelson Gnocchi, 2016

Scientific publications on peer-reviewed journals

1. Arterioportal Fistulas (APFs) in Pediatric Patients: Single Center Experience with Interventional Radiological versus Conservative Management and Clinical Outcomes. Published: Jun 2021 in Journal of Clinical Medicine DOI: 10.3390/JCM10122612
2. Visceral Artery Aneurysms Embolization and Other Interventional Options: State of the Art and New Perspectives. Published: Jun 2021 in Journal of Clinical Medicine DOI: 10.3390/JCM10112520
3. IVC filter retrieval: a multicenter proposal of two score systems to predict application of complex technique and procedural outcome. Published: July 2021 in Radiologia Medica DOI 10.1007/S11547-021-01356-6
4. Percutaneous transhepatic treatment of a unique portal vein malformation with portal hypertension in a pediatric patient. Published: Jun 2021 in CVIR Endovascular DOI: 10.1186/S42155-021-00239-1
5. RAB39B-mediated trafficking of the GluA2-AMPA subunit controls dendritic spine maturation and intellectual disability-related behaviour. Published: May 2021 in Molecular Psychiatry DOI: 10.1038/S41380-021-01155-5
6. Oligometastatic Colorectal Cancer Management: A Survey of the Italian College of Interventional Radiology- Published: Oct 2020 in CardioVascular and Interventional Radiology DOI: 10.1007/S00270-020-02516-3
7. Elective Embolization of Splenic Artery Aneurysms with an Ethylene Vinyl Alcohol Copolymer Agent (Squid) and Detachable Coils. Published: Jul 2020 in Journal of Vascular and Interventional Radiology DOI: 10.1016/J.JVIR.2019.12.797
8. CIRSE Standards of Practice on Thermal Ablation of Primary and Secondary Lung Tumours. Published: May 2020 in CardioVascular and Interventional Radiology DOI: 10.1007/S00270-020-02432-6
9. Comparison between percutaneous and laparoscopic microwave ablation of hepatocellular carcinoma. Published: Jan 2020 in International Journal of Hyperthermia DOI: 10.1080/02656736.2020.1769869
10. Percutaneous Microwave Ablation Versus Cryoablation in the Treatment of T1a Renal Tumors. Published: Jan 2020 in CardioVascular and Interventional Radiology DOI: 10.1007/S00270-019-02313-7
11. Safety and effectiveness of ultrasound-guided percutaneous transhepatic biliary drainage: a multicenter experience. Published: Dec 2019 in Journal of Ultrasound DOI: 10.1007/S40477-019-00399-W
12. Percutaneous ablation techniques for renal cell carcinoma: current status and future trends. Published: Oct 2019 in International Journal of Hyperthermia DOI: 10.1080/02656736.2019.1647352
13. Percutaneous Ultrasound-Guided Direct Glue Embolization: A Practical Approach to Iatrogenic Inferior Epigastric Artery Pseudoaneurysms. Published: Oct 2019 in Journal of Vascular and Interventional Radiology DOI: 10.1016/J.JVIR.2019.05.029
14. Glucose metabolism during tumorigenesis in the genetic mouse model of pancreatic cancer. Published: Sep 2019 in Acta Diabetologica DOI: 10.1007/S00592-019-01335-4
15. Ultrasound elastography techniques for diagnosis and follow-up of hepatic veno-occlusive disease. Published: Jul 2019 in Bone Marrow Transplantation DOI: 10.1038/S41409-019-0432-5
16. The Suv420h histone methyltransferases regulate PPAR-gamma and energy expenditure in response to environmental stimuli. Published: Apr 2019 in Science Advances DOI: 10.1126/SCIADV.AAV1472
17. Transcatheter embolization with Squid, combined with other embolic agents or alone, in different abdominal diseases: a single-center experience in 30 patients. Published: Feb 2019 in CVIR Endovascular DOI: 10.1186/S42155-019-0051-7
18. A rare case of a giant arterio-venous fistula (AVF) following metastatic choriocarcinoma conditioning pulmonary embolism: multimodal transcatheter embolization using a simultaneous transarterial and transvenous approach. Published: Nov 2018 in CVIR Endovascular DOI: 10.1186/S42155-018-0039-8
19. Covered stenting and transcatheter embolization of splenic artery aneurysms in diabetic patients: A review of endovascular treatment of visceral artery aneurysms in the current era. Published: Sep 2018 in Pharmacological Research DOI: 10.1016/J.PHRS.2018.07.023
20. Colorectal liver metastases: surgery versus thermal ablation (COLLISION) – a phase III single-blind prospective randomized controlled trial. Published: Aug 2018 in BMC Cancer DOI: 10.1186/S12885-018-4716-8
21. Four-class tumor staging for early diagnosis and monitoring of murine pancreatic cancer using magnetic resonance and ultrasound. Published: Jul 2018 in Carcinogenesis DOI: 10.1093/CARCIN/BGY094
22. Embolization of superior rectal arteries for transfusion dependent haemorrhoidal bleeding in severely cardiopathic patients: a new field of application of the "emborrhoid" technique. Published: Jun 2018 in Techniques in Coloproctology DOI: 10.1007/S10151-018-1802-5
23. Allo- and auto-percutaneous intra-portal pancreatic islet transplantation (PIPIIT) for diabetes cure and prevention: the role of imaging and interventional radiology. Published: Apr 2018 in Gland Surgery DOI: 10.21037/GS.2017.11.12
24. Endovascular Repair of 40 Visceral Artery Aneurysms and Pseudoaneurysms with the Viabahn Stent-Graft:

- Technical Aspects, Clinical Outcome and MidTerm Patency. Published: Mar 2018 in CardioVascular and Interventional Radiology DOI: 10.1007/S00270-017-1844-5
25. Therapeutic EUS: Biliary drainage - The interventional radiologist's perspective. Published: Dec 2017 in Endoscopic Ultrasound DOI: 10.4103/EUS.EUS_77_17
 26. Endovascular Treatment of Visceral Artery Aneurysms and Pseudoaneurysms in 100 Patients: Covered Stenting vs Transcatheter Embolization. Published: Oct 2017 in Journal of Endovascular Therapy DOI: 10.1177/1526602817717715
 27. Modeling the Iatrogenic Pancreatic Cancer Risk After Islet Autotransplantation in Mouse. Published: Oct 2017 in American Journal of Transplantation DOI: 10.1111/AJT.14360
 28. Pre-treatment MDCT-based texture analysis for therapy response prediction in gastric cancer: Comparison with tumour regression grade at final histology. Published: May 2017 in European Journal of Radiology DOI: 10.1016/J.EJRAD.2017.02.043
 29. Gastric cancer: texture analysis from multidetector computed tomography as a potential preoperative prognostic biomarker. Published: May 2017 in European Radiology DOI: 10.1007/S00330-016-4540-Y
 30. Microwave ablation of liver malignancies: comparison of effects and early outcomes of percutaneous and intraoperative approaches with different liver conditions. Published: Apr 2017 in Medical Oncology DOI: 10.1007/S12032-017-0903-8
 31. Identification of endocrine/metabolic biomarkers associated to early PDC in a transgenic mouse model. Published: Dec 2016 in Cancer Research DOI: 10.1158/1538-7445.PANCA16-A07
 32. Chemoembolization with drug eluting beads preloaded with irinotecan (DEBIRI) vs doxorubicin (DEBDOX) as a second line treatment for liver metastases from cholangiocarcinoma: a preliminary study. Published: Nov 2016 in The British Journal of Radiology DOI: 10.1259/BJR.20160247
 33. IFN gene/cell therapy curbs colorectal cancer colonization of the liver by acting on the hepatic microenvironment. Published: Feb 2016 in EMBO Molecular Medicine DOI: 10.15252/EMMM.201505395
 34. CMR in the Assessment of Cardiac Masses Primary Malignant Tumors. Published: Oct 2014 in JACC: Cardiovascular Imaging DOI: 10.1016/J.JCMG.2014.08.002
 35. CMR in Assessment of Cardiac Masses Primary Benign Tumors. Published: Jul 2014 in JACC: Cardiovascular Imaging DOI: 10.1016/J.JCMG.2013.11.00

Journal reviewer

PLOS one; Diagnostics, La Radiologia Medica, CVIR, International Journal of Hyperthermia, Cancers, Journal of Clinical Medicine

Participation/contribution in Clinical trials

- RETNET trial: Randomized Embolization Trial in Neuroendocrine Tumors (RETNET) UPCC 01215, NCT02724540
- COLLISION trial: Colorectal Liver Metastases: Surgery vs Thermal Ablation (COLLISION), NCT03088150
- RAD-18-TAcE trial: "Transarterial Embolization Alone Versus Drug-Eluting Beads Chemoembolization for Hepatocellular Carcinoma (RAD-18-TAcE)" EudraCT: 2018-000740-25
- PORTAL registry: The international, multicentre collaboration on portal vein obstruction revascularisation therapy after liver transplantation in paediatric: evaluation of standard of care
- Substantial contribution to the study design of the project "Definition of radiological and endocrine/metabolic/inflammatory biomarker(s) to identify high-grade dysplasia/invasive carcinoma in patients with intraductal papillary mucinous neoplasms of the pancreas", winner of Bando Giovani Ricercatori GR-2018-12366897

Course/Congress attendance, scientific presentations and posters

Author and co-author of several scientific presentations and poster at National and International congresses of Radiology (SIRM 2012, 2014, 2016, 2018; ICIR 2015, 2017, 2019; ECR 2013-2018; RSNA 2014; CIRSE 2016, 2017, 2018, 2019, 2021).

Invited lectures, case presentations and moderations at regional and national radiologic conferences: ICIR 2019, 2021; Lombardy regional group conference of SIRM 2013, 2017, 2021.

Main courses:

Good Clinical Practice (Investigator version), version #2.1 (6/4/2021)

Good Clinical Practice e-learning course and certification for good clinical practice (26/03/2018): ICH GOOD CLIN ICAL PRACTICE E6 (R2) score 100% certificate number 379964

Interventional Radiology and Liver:

Webinar "HCC e SIRT: Management tecnico interventistico e dosimetrico" (10/6/2021)

1° Penumbra Peripheral Workshop: Embolization and Thrombectomy (Lodi-Crema, 20-21/11/2019)

European School of interventional radiology course: ESIR 2018, Mastering liquid embolics, Zaragoza (25-26/10/2018)

2ND Interventional Radiologist under 40 meeting: The dark side of the guidelines (Bologna, 8-10/5/2017)

ICIO 2017: Italian Conference on Interventional Oncology Metastases (Milano, 12-13/12/2017)

Movie Interventional 2016 (Torino 2016)

XI campus specializzando radiologia interventistica vascolare (Pisa 2016)

Impianto ecoguidato degli accessi venosi centrali: 16ma e 17ma edizione (Milan, 18-19/5/2017 e 28-29/6/2018)

Vascular Club Embolizzazione III Edizione (Turin, 16-17/12/2019)

5TH international meeting on sonoelastography (EFSUMB endorsed course, Bardolino 24-25/9/2015)

Pancreas:

Ablazioni pancreatiche (Verona, 10-11/11/2017)

Expert Practice in Pancreatic Cancer: Maximizing Patient Care With Innovation and Collaboration (Wien, 28-29/9/2018)

prIME Masterclass in Neuroendocrine Tumors (Berlin, 16-17/11/2018)

Society Membership

- Società Italiana di Radiologia Medica e Interventistica (SIRM)
- Italian College of Interventional Radiology (ICIR)
- European Society of Radiology (ESR)
- Cardiovascular and Interventional Society of Europe (CIRSE)
- Member of the youth board of the Italian Collage of Interventional Radiology (ICIR) 2016-2022

Information technology skills

- Competent user of Word, Excel, Power Point
- Competent user of radiological post processing software (for liver segmentation; volume rendering etc.)
- Able to use SPSS (statistical software)

Language skills

- Italian: mother tongue
- English: conversational and medically fluent; good writing and reading
- Spanish: basic conversational

References

Professor Sandro Sironi

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Professor Francesco De Cobelli

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BERGAMO, July 1, 2021

PAOLO MARRA

