

# AN INTERVIEW WITH...

## Roberto Iezzi, MD

One of the course directors for the MIO Live symposium discusses the distinguishing features of this European conference on interventional oncology, as well as progress in guideline creation and recent studies in this evolving specialty.



**As a course director for the MIO (Mediterranean Interventional Oncology) Live symposium, what aspects of this particular meeting set it apart, and what were some of your favorite moments from the 2018 sessions held earlier this year?**

Interventional oncology (IO) is an area that has significantly evolved over the past several years, and we have made it a point of emphasis at our meetings. The MIO Live symposium is an emerging meeting that has widely grown beyond the traditional conference concept. The primary mission of MIO Live is practical interactive education where colleagues can come together and hear talks that are relevant to their clinical practice, listen to discussions led by a group of global opinion leaders from various countries in the Mediterranean area, and observe some of the world's best interventional practitioners performing challenging cases. For all live cases, treatment indications, patient selection, and procedural planning are discussed during "Interactive Multidisciplinary Treatment Decision" sessions, guided by the mixed-specialty panel, with participants having the opportunity to be part of a large multidisciplinary tumor board together with leading experts. We provide a forum to observe new techniques and technology, which is really important given how quickly the area is developing.

Nearly 300 attendees from 18 Mediterranean countries joined us this past January in Rome, Italy, for the third edition, taking part in the discussions with enthusiastic participation. With 16 hours of scientific education and 18 live cases, treating both primary and secondary liver tumors, it was a great success. My favorite moments from the last meeting were related to the fruitful discussion during the practice guidelines session on hepatocellular carcinoma (HCC) in which, using a remote voting audience response system, we worked together to create real-life clinical guidelines for general practice. We also covered all aspects of treatment options for pancreatic tumors, providing the participant with a broad overview of the indications and techniques that can be applied in this very challenging area.

It was interesting to observe that ablative treatments are definitely evolving, gaining scientific evidence as an alternative, safe, and effective therapy for unresectable pancreatic tumors. Finally, another highlight of the past meeting was a focus on immunotherapy and local treatments, addressing the growth of immunotherapy in cancer treatment and the importance for interventional oncologists to learn more about this new method, because we are sure it will play a huge role in future treatments.

**Have you begun to plan for next year's meeting? What can physicians expect from the MIO Live 2019 conference?**

The fourth edition of MIO Live will take place in Rome on January 28–29, 2019. We are working hard to offer a more practical interactive meeting with oversight by several multidisciplinary international experts. The upcoming meeting will still focus on liver lesions but will also include an overview on the role of IO for treating renal tumors.

Evidence and future perspectives is the key theme of our next meeting, with a focus on the current guidelines and evidence, lectures on the best and most influential clinical literature of 2018 in IO, and a look at preclinical future directions. Finally, the format of our meeting will also offer the possibility to share the participant's experience by selecting the best innovative abstracts to be presented in our "Broaden Your Horizon and Be Innovative" session.

The most important thing we've learned over the previous years is how to get the right balance between live cases, talks, and panel discussions. I believe that if you get this spot-on, you keep the delegates' attention and maximize the educational benefit. In conclusion, for a successful meeting, it is mandatory to select the right faculty members. We are looking for thoughtful opinion leaders and experts in their field, all of them able to convey the finest details of how they perform a procedure, as well as the tips and tricks to avoiding complications and achieving success. It's really important to have a faculty composed of good communicators who also enjoy both the discussion and the debate.

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**In a recent study,<sup>1</sup> you and your colleagues found that combined treatments may be an effective option for early intermediate unresectable HCC patients. What was your biggest takeaway from these data? Can you share any tips/tricks for improving results while limiting procedural risks and complications?**

It is well known that the Barcelona Clinic Liver Cancer (BCLC) staging system is the most commonly used HCC management guideline because it helps predict survival outcomes and plan treatment options. However, the BCLC classification also has limitations, as it is not ideal for selecting the best treatment option for all the different stages of HCC. In particular, in the early stage (defined as a single nodule), without setting a maximum size and/or considering nodule location, the only treatment options are surgery or locoregional treatments. However, it is well known that ablation usually produces worse results for lesions > 3 cm in size and cannot be performed in about 10% to 25% of cases because of the unfavorable location, with poor conspicuity or high procedural risk for complications. In this subgroup of patients, the treatment option based on BCLC is chemoembolization. On the other hand, chemoembolization is the standard of care for patients in the intermediate stage, without considering the wide range of clinical and morphologic characteristics of this stage. It must be underlined that it is not possible to have a unique type of therapy (ie, chemoembolization) that is a palliative option in these subgroups of patients.

Based on this background, the principal purpose of research in this field should be to increase the population of patients who are suitable for nonsurgical curative treatment and consequently reduce indications for palliation alone. In this scenario, in recent years, in order to expand the indication for radiofrequency (RF) ablation, a combination of interventional therapies has been widely developed and performed. Our published data suggest that combined therapy with RF ablation followed by transarterial chemoembolization (TACE) is superior to either RF ablation or TACE alone in preventing incomplete necrosis of HCC and improving patient survival.

Even if the best combination of these two procedures is not yet clear, in our opinion, it is mandatory to use a single-step “combined” approach, making it possible to obtain and amplify the synergistic effects of RF ablation and TACE. This approach offers further significant advantages, such as the reduction of hospital stay, patient discomfort, and costs because both procedures are performed in the same session. Furthermore, this approach also allows effective treatment of complex lesions (hepatic tumors adjacent to the diaphragm with a consequent high risk of thermal injury or tumors located next to the intra-abdominal free surface or proximal to the hepatic portal region), because although RF ablation is limited to the tumor portions

located far from the target high-risk structures, these tumor portions can then be treated with chemoembolization after RF ablation to obtain an effective and secure safety margin. Finally, using this single-step approach could make it possible to also safely treat “complex patients” who have a high risk for bleeding complications without requiring blood transfusion or other prophylactic treatment. In fact, TACE performed after RF ablation could effectively and immediately treat any eventual RF ablation-induced hepatic bleeding.

**With transradial access (TRA) shown to be safe and feasible for chemoembolization,<sup>2</sup> what are the benefits of employing this approach? To what do you attribute the high technical success and crossover rate of TRA in this study? Does the success rate and patient preference compensate for the significant increase in procedure preparation time?**

Our experience demonstrated that hepatic chemoembolization performed through TRA is safe and feasible, without the need to switch the access during the procedure and with high technical success and less discomfort for the patient when compared with transfemoral access for all indicators taken into account (eg, pain during arterial puncture, intraprocedural discomfort, postprocedural discomfort, operative limitations for basic tasks). Furthermore, it also allows almost immediate postprocedural ambulation (resting only the catheterized arm), without limiting autonomous patient activity and requiring nursing support. An additional advantage is passive achievement of hemostasis by a pressure device or bandage, which reduces the workload of the nursing and medical staff. These advantages are particularly notable for hepatic embolization, in which the patient population frequently experiences nausea and vomiting.

The high technical success achieved in our study is related to (1) the routine use of ultrasound guidance for radial artery catheterization rather than the traditional palpation technique, (2) the use of dedicated radial devices such as low-profile vascular introducer sheaths and a single-catheter technique with a preformed shaped tip for accessing the thoracoabdominal aorta, and (3) performing selective catheterization of the hepatic arteries with no need for catheter exchange. Finally, appropriate case selection is an important issue for any new skill or technique and is essential for limiting complications. It makes sense to start with lower-risk and less complex cases to achieve high procedural success rates early in the learning curve, moving on to more complex cases later. The significant increase in procedure preparation time (only experienced in the early learning curve phase) highlights that it is necessary to have dedicated training and courses for the entire team involved—not only for interventional radiologists but also for technicians and nursing staff.

**What further applications do you see for ablation beyond the liver? Are there any areas currently being studied that you can share with us?**

In the last few years, percutaneous ablation has become an acceptable alternative for the treatment of patients with an inoperable lung malignancy. Advantages of this technique include its low invasiveness, simplicity, cost-effectiveness, a reduced morbidity and mortality compared with surgery, preservation of more lung tissue and pulmonary function, repeatability, and fast recovery. We performed a multicenter Italian study (not yet published) using microwave (MW) ablation to confirm its safety and mid-term efficacy for the treatment of both primary and secondary neoplasms due to the larger ablative necrotic area produced, not the characteristics of the tissue in which it is performed or by adjacent blood vessels or bronchi. We also tested standardized treatment protocols and saw a linear correlation between power applied and ablation area, granting a good reproducibility and overcoming main disadvantages of MW ablation represented by ablation control and reproducibility of results.

Furthermore, we also use ablation for renal tumors and renal graft neoplasms, in particular, achieving complete necrosis of the target lesion, a low rate of complications, and no significant alterations in postprocedural serum creatinine levels to offer a viable therapeutic option in very fragile patients.

**What is one thing you wish your patients knew about the capabilities of IO and what can now be offered?**

IO is the youngest and most rapidly growing offshoot of interventional radiology and is establishing itself as the fourth and independent pillar within the firmament of multidisciplinary oncologic care, alongside medical, surgical, and radiation oncology. It is a comprehensive and creative new specialty that is driven by seemingly unlimited technologic innovation.

An interventional radiologist is a specialist who is able to perform a diagnosis and discuss it with other colleagues to select and perform the best treatment for the patient. In the era of multidisciplinary, it is mandatory that patients are treated in centers that can offer all the possible therapeutic options: surgery, transcutaneous therapies, intra-arterial therapies such as chemoembolization and radioembolization, and so on. These therapies have increased in complexity but also dramatically improve our results. Technology is improving every day, so we can now reach tumors in different parts of the body safely and quickly with low costs, improving the quality and results of our treatments. We are changing the history of cancer by offering a real patient-centered treatment selection. I am proud to be an interventional radiologist who is mainly involved in cancer treatment. ■

1. Iezzi R, Pompili M, La Torre MF, et al. Radiofrequency ablation plus drug-eluting beads transcatheter arterial chemoembolization for the treatment of single large hepatocellular carcinoma. *Dig Liver Dis*. 2015;47:242-248.

2. Iezzi R, Pompili M, Posa A, et al. Transradial versus transfemoral access for hepatic chemoembolization: intrapatient prospective single-center study. *J Vasc Interv Radiol*. 2017;28:1234-1239.

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*Disclosures: None.*