

# Introduction to Issue on Yttrium-90 Radioembolization



**I**nterventional oncology (IO) has developed into a subspecialty within interventional radiology and is evolving into the fourth pillar of cancer care in conjunction with medical, surgical, and radiation oncology. Interventional oncology is one of the most exciting and growing areas in minimally invasive interventions with the advent of innovative therapeutic platforms and dedicated devices. Yttrium-90 radioembolization, also known as selective internal radiation therapy or simply Y90, has become established as a very important therapeutic modality in the armamentarium of the interventional oncologist. The role of yttrium-90 radioembolization in the management of primary and metastatic hepatic malignancies has expanded significantly in the past decade and Y90 has become incorporated into many treatment guidelines.

Radioembolization is well established as a palliative procedure for both primary and metastatic liver cancer. In hepatocellular carcinoma, it can be utilized to downstage patients to transplant, bridge patients on the transplant list, and potentially cure patients with early stage disease. Finally, it is also being increasingly used in patients prior to hepatic resection via a “radiation lobectomy” approach to both control the hepatic disease as well as induce contralateral hypertrophy. Advantages of radioembolization include excellent response rates and improved survival with improved tolerability and fewer side effects compared to other treatment alternatives.

In this issue, we have sought to provide our readers with a comprehensive review of Yttrium-90 radioembolization

which will be useful to both seasoned practitioners as well as those in their training. It has been our goal to touch on many points along the spectrum from basic science to the practical to relatable experiences. This issue was designed to provide informational topics including patient selection, clinical data, and complications as well as pragmatic and practical topics such as management of elevated lung shunts, dosimetry, Y90 retreatment and Y90 after hepatic resection.

We have not touched on the role of radioembolization with immunotherapy as this field is at its infancy. The role of liver directed therapies in the era of immunotherapy are just beginning to be explored and I look forward to the continued exploration and investigation of radioembolization in this exciting area in the coming years.

I would like to thank the contributing authors for their significant time and effort in sharing their experiences and insight in creation of the articles of this special issue. The knowledge shared by experts in this issue will hopefully be transformational to your practice as many actionable clinical pearls and technical tips and tricks have been provided.

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