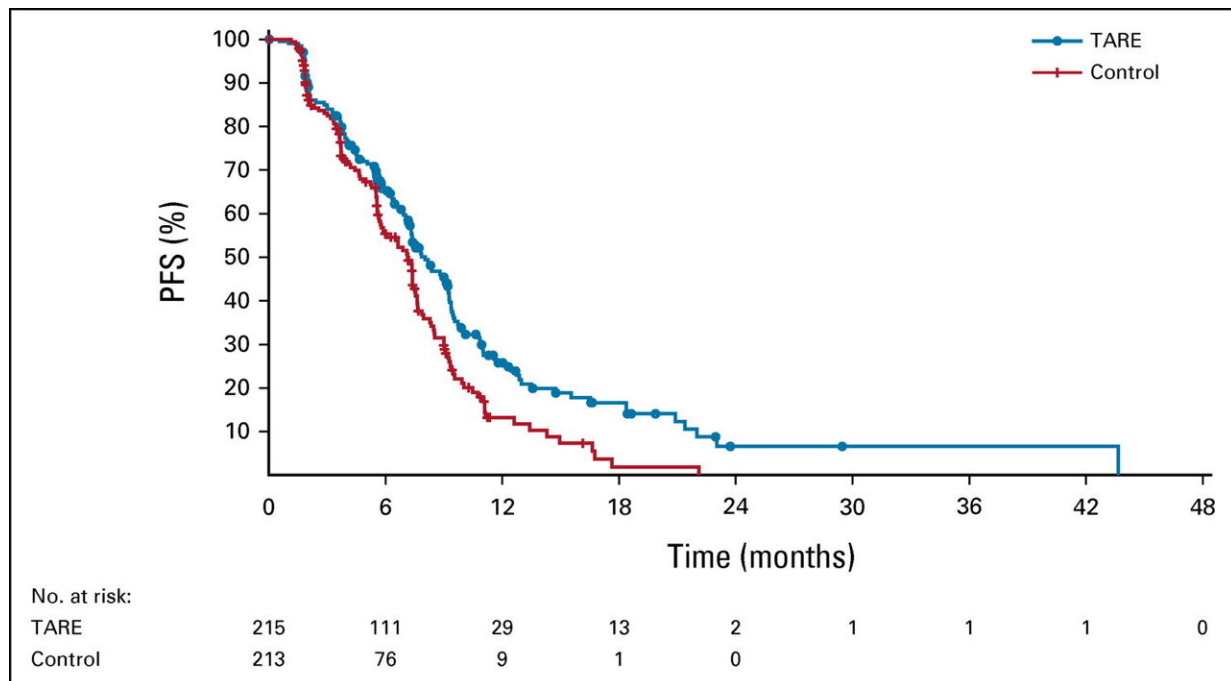


Microspheres delay progression of colon cancer

December 20 2021, by Will Doss



Kaplan-Meier analysis of overall PFS for TARE plus chemotherapy versus chemotherapy in the intention-to-treat population. PFS, progression-free survival; TARE, transarterial yttrium-90 radioembolization. Credit: DOI: 10.1200/JCO.21.01839

Targeted radioembolization alongside chemotherapy improved progression-free survival for patients with colon cancer that had metastasized to the liver, according to a study published in the *Journal of Clinical Oncology*.

Most [patients](#) with colorectal liver metastases (CLM) are poor candidates for resection surgery, so this new treatment could be a better option compared to chemotherapy alone, according to Mary Mulcahy, MD, '00 GME, professor of Medicine in the Division of Hematology and Oncology and lead author of the study.

"We know systemic chemotherapy will ultimately fail, so we're looking for non-surgical therapy that can address these patients," said Mulcahy, who is also a professor of Radiology and of Surgery in the Division of Organ Transplantation and associate director of clinical operations at the of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University.

Riad Salem, MD, chief of Vascular and Interventional Radiology and vice chair of image guided therapy in the Department of Radiology, and a member of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University, was senior author of the study.

About 60 percent of patients diagnosed with [colorectal cancer](#) will eventually have their cancer spread, with the liver being the main site of spread. While the cancer in the colon is often treatable by [surgical resection](#), diffuse liver metastases are much less amenable to surgical treatment.

"The cancer is either distributed in a way that it can't be operated on safely, or the size of the lesions make it impossible," Mulcahy said.

The standard therapy for colon cancer that has spread outside the colon is chemotherapy. Treatment with chemotherapy is limited by side effects and eventual resistance, according to Mulcahy.

In the current study, investigators combined chemotherapy with transarterial radioembolization (TARE), in which patients are infused

with small glass microspheres, within which a radioactive isotope—yttrium-90—is embedded. The microspheres are directed to the [hepatic artery](#) and from there travel to the liver, where they embed themselves in the small blood vessels of the tumor and irradiate the [cancer](#).

A total of 428 patients at 95 centers in North America, Europe and Asia with spread of [colon cancer](#) to the liver only were randomly assigned to chemotherapy with or without TARE. Patients receiving chemotherapy and TARE had longer progression-free survival. Importantly, the addition of TARE did not impact their ability to receive subsequent therapy—something investigators were concerned about.

The addition of TARE to chemotherapy did not improve the overall survival. Some subsets of patients had greater benefit from TARE than others. Characteristics which may identify patients who would benefit from the addition of TARE are the location of the original colon tumor, the genetic make-up of the tumor and the amount of tumor in the liver. Ongoing studies will identify those patients more likely to benefit from this therapy, Mulcahy said.

More information: Mary F. Mulcahy et al, Radioembolization With Chemotherapy for Colorectal Liver Metastases: A Randomized, Open-Label, International, Multicenter, Phase III Trial, *Journal of Clinical Oncology* (2021). [DOI: 10.1200/JCO.21.01839](https://doi.org/10.1200/JCO.21.01839)

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