QuiremSpheres® treatment of a 47-year-old female patient with mCRC after multiple hepatic resections

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CLINICAL CASE
A 47-years old female patient diagnosed with left colon adenoCa (kRAS mut codon 13, BRAF wt, NRAS wt, MSS) and synchronous hepatic metastasis three years before, treated with multiple hepatic resections, percutaneous ablation and >3 lines of systemic chemotherapy. Patient presents with mild hepatic progression and stable subcentimetric bilateral lung metastases (ECOG 0, normal liver function).

PROCEDURE
SIRT was approved by multidisciplinary tumor board. Based on vascular anatomy angiography, $^{99m}$Tc-MAA were injected in the hepatic artery nourishing the entire residual liver parenchyma. Lung shunt was 9.6%. The total tumor volume was 27cc. A reduced dose of 40 Gy (instead of 60 Gy) was planned on the remnant liver volume (1093 cc) because of prior partial resection and chemotherapy. QuiremSpheres® ($^{166}$Ho-PLLA microspheres) with a total net activity of 2.2 GBq were injected via a 2.7F microcatheter. Treatment was well-tolerated with no periprocedural complications.

FOLLOW UP/ CONCLUSION
Post-treatment SPECT-CT and $T_2^*$ MRI showed excellent concentration of the microspheres in the liver lesions. Forty-five days after SIRT, CT demonstrated reduction in size of the majority of the hepatic lesions, the largest showing peripheral calcifications. Accordingly, PET-CT showed only a faint $^{18}$FDG uptake of the hepatic metastasis. However, extrahepatic tumor progression was observed consisting in increased lung metastases and abdominal lymph nodes.