

Title: Y-90 patients PET/CT & SPECT/CT and corresponding contours dataset

Introduction: Interest in quantitative imaging of Y-90 is growing because transarterial radioembolization (RE) with Y-90 loaded microspheres is a promising and minimally invasive treatment that is FDA approved for unresectable primary and metastatic liver tumors. These cancers are a leading cause of cancer mortality and morbidity. Radioembolization is a therapy that irradiates liver tumors with radioactive microspheres administered through a microcatheter placed in the hepatic arterial vasculature. Radioembolization is based on the principle that healthy liver and tumor are mainly vascularized by the portal vein and the hepatic artery respectively. As a result, radioactive microspheres are preferentially located in the lesions after they are administered via the hepatic artery.

Methods: PET/CT (SPECT/CT) images were acquired with Siemens PET/CT (SPECT/CT) system and tumor/organ boundaries have been manually labeled on CT by a radiologist for Y-90 patients in our clinics. All patient private information is anonymized using commercial software.

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