

BC Cancer Protocol Summary of Yttrium-90 for Transarterial Radioembolisation (TARE) for Hepatocellular Cancer or Neuroendocrine Tumours with Hepatic Disease

Protocol Code

GIYTT

Tumour Group

Gastrointestinal

Contact Physician

Dr. Dave Liu

Dr. Theresa Chan

ELIGIBILITY:

Suitability for Yttrium-90 TARE therapy will be established via consultation with Intervention Radiology at accredited sites (institutions that have completed and maintained the proctoring or qualification for administration of Y-90) in accordance with the following eligibility criteria:

- **Hepatocellular cancer (HCC)**
 - **HCC** with portal venous invasion
 - **HCC** with T3 tumours, potentially amenable to downstage for liver transplantation or resection
 - **HCC** outside of thermal ablation criteria (≤ 3 lesions, each ≤ 3 cm and/or anatomically inaccessible) or surgical resection criteria (based on comorbidities, location in the liver, and hepatic anatomy) or stereotactic ablative radiotherapy (SABR) criteria as per liver tumour rounds discussion
 - **HCC** meeting Up-to-7 criteria (up to 7 lesions with a total of 7 cm in diameter)
 - **HCC** exceeding Up-to-7 criteria in patients that cannot tolerate systemic therapy or have demonstrated non-response in the setting of liver only disease, Childs Pugh score less than 7, and adequate hepatic reserve
- **Metastatic neuroendocrine tumours (NETs) with liver dominant disease with low volume extra-hepatic disease**

All patients should have:

- Definable disease burden by imaging criteria
- Mesenteric vascular anatomy amenable to TARE

EXCLUSIONS:

- Presence of ascites or encephalopathy
- **HCC with** infiltrative disease greater than 50% or Childs Pugh score greater than 8 (late B)
- **HCC with** extrahepatic disease
- **NETs with** life-limiting extrahepatic disease
- Life expectancy less than 3 months
- Compromised hepatic function consisting of Total Bilirubin greater than 2.5 x ULN, hypoalbuminemia less than 3.0 g/dL, AST, ALT or ALP greater than 5 x ULN

TREATMENT:

Prescribing

- Written directive for prescribed dose (radioactivity) from Nuclear Medicine physician in conjunction with Interventional Radiology

Delivery of treatment

- Treatment must be performed in the angiography suite

Call the GI Systemic Therapy physician at your regional cancer centre or the GI Systemic Therapy Chair Dr. [Theresa Chan](#) at (604) 877-6000 or 1-800-670-3322 with any problems or questions regarding this treatment program.

References:

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4. Lewandowski RJ, Kulik LM, Riaz A, et al. A comparative analysis of transarterial downstaging for hepatocellular carcinoma: chemoembolization versus radioembolization. *Am J Transplant* 2009;9(8):1920-8.
5. Liu DM, Kennedy A, Turner D, et al. Minimally invasive techniques in management of hepatic neuroendocrine metastatic disease. *Am J Clin Oncol* 2009;32(2):200-15.
6. Kennedy AS, Dezarn WA, McNeillie P, et al. Radioembolization for unresectable neuroendocrine hepatic metastases using resin 90Y-microspheres: early results in 148 patients. *Am J Clin Oncol* 2008;31(3):271-9.
7. Rhee TK, Lewandowski RJ, Liu DM, et al. 90Y Radioembolization for metastatic neuroendocrine liver tumors: preliminary results from a multi-institutional experience. *Ann Surg* 2008;247(6):1029-35.