

A population Based Study of the Effect of FDG PET/CT in the management liver limited colorectal adenocarcinoma (CRC) metastases

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Background: PET/CT scans are publically funded in British Columbia for staging in liver limited metastatic CRC. However, past studies have been equivocal about the utility of PET/CT as some report as high as a 20-30% change in management while others report <10% change in management. Our primary objective was to assess the effect of the addition of PET/CT to CT scanning for the management of liver limited colorectal cancer.

Methods: Patients who underwent PET/CT scan for de novo liver limited metastatic disease from 2005-2011 in the province of British Columbia were identified using the PET/CT database. Patients recently completed or currently on chemotherapy were excluded. We determined the concordance rates between CT and PET/CT scans with respect to the extra-hepatic disease, the number of lesions in the liver and the location of liver lesions.

Results: 349 patients were identified. The most common indications for PET/CT scans after an initial CT scan were: detection of extrahepatic disease (77%), confirmation of the malignant nature of the liver lesions (8%) and the extent of extrahepatic disease (15%). PET/CT and CT were discordant in 39% of cases for the extent of metastatic disease. PET/CT revealed extrahepatic disease in 27% of the cases for which CT only detected liver limited disease. In contrast, 13% of patients were downstaged when CT liver lesions were demonstrated not to be FDG avid. Concordance of PET/CT and CT scans on the number and location of liver lesions was 52% and 85%, respectively. PET/CT revealed additional number of liver lesions and multilobar disease in 26% and 12% of cases, respectively. Furthermore, the median time between PET/CT and CT were 64.3 days and 64.1 days for concordant and discordant cases ($p=0.88$).

Conclusion: PET/CT scans provided additional information compared to CT scans which could have implications for surgical management. Our study supports the utility and public funding of PET/CT in addition to CT in patients with potentially surgically curable metastatic CRC involving the liver.



BC Cancer Agency

CARE & RESEARCH

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April 4th, 2012

Re: Maria Ho's Application for the Novartis Oncology Young Investigator Award 2012

To the Selection Committee of the *NOYCIA 2012*,

I am pleased to offer my support towards Dr. Maria Ho's application for the 2012 Novartis Oncology Young Canadian Investigator Award (NOYCIA). She fulfills all of the eligibility criteria for award consideration.

Maria is currently a senior gastrointestinal oncology fellow at the University of British Columbia Medical Oncology Training Program where she also completed her general medical oncology residency. Throughout her clinical training, she has consistently shown herself to be a hard working, intelligent and thoughtful clinician. Her knowledge of oncology as well as general medicine is consistently strong, frequently functioning at the level of a junior consultant.

In addition to her excellent clinical work, she has exhibited a real flare for clinical research. During her residency and fellowship, Maria has completed and published a number of ambitious research projects. Most recently, she conducted a project titled "A population-based study of the effect of FDG PET/CT scans in the management of liver limited colorectal cancer metastases" under the guidance of Dr. Howard Lim and myself. This work was submitted for presentation at the upcoming 2012 ASCO Annual Meeting in Chicago and it has since been accepted [REDACTED] the Gastrointestinal (Colorectal) Cancer Session on Monday, June 4th. Maria has been leading this project effectively and participating at each step of the research process diligently, including data collection, analyses, and interpretation of the results.

In summary, Maria is a solid trainee who has clearly distinguished herself clinically as well as in her aptitude for research. She is extremely well suited for an academic career. Her work on this current project is very deserving of the NOYCIA.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "Winson Y. Cheung".

Winson Y. Cheung, MD, MPH, FRCPC
Assistant Professor, UBC Division of Medical Oncology
Staff Medical Oncologist

MARIA HO

I conducted all the retrospective chart review for this project and analyzed the data using Excel statistical software. Furthermore, I also drafted and revised the abstract using comments from the co-authors.

Contribution percentage:

90%