Real-time probe-guided intraprocedural biopsies in the world of Theranostics

The clinical management of lesions suspicious for malignancy relies not only on diagnosis of benign versus malignant potential but also tumor grading, immunohistochemical and genetic information. Pathological analysis remains the gold standard for definite diagnosis. Hence, a carefully performed biopsy with low risk of complication is crucial. Compared to open biopsy, image-guided biopsies are minimally invasive and confer several advantages including low morbidity, low complication rate and cost savings. FDG-PET/CT has shown higher diagnostic accuracy than conventional imaging CT in characterizing tumor in initial staging, treatment response evaluation and follow-up. PET/CT guided biopsies may allow early histologic diagnosis and staging before morphologic changes are evident. PET/CT biopsy can therefore rule out/in malignancy in early stage of disease and re-stage different types of cancer. Non-real-time PET/CT biopsies have used the image co-registration of a prior PET with an intraprocedural CT. However, this method is inaccurate in time and space, takes long time and requires special software. The aim of this study is to report the initial experience of utilizing the real-time intraprocedural PET/CT guided biopsies, including feasibility and technical requirements.

Biography

Carina Mari Aparici is a Clinical Professor at Stanford University. She is a Nuclear Molecular Physician with residencies in both Europe (Barcelona) and US (Stanford), and with Molecular imaging fellowships from Stanford University. She is a Physician-Scientist in the development of Molecular Imaging. She has more than 20 years of clinical and research experience in the field, more than 10 years of a leadership position as Chief Nuclear Medicine at the San Francisco VAMC as part of her prior appointment as a UCSF faculty member, and now as Head of the Theranostics and Nuclear Therapies program at Stanford University. She has published more than 100 papers in reputed journals, has been serving as an Editorial Board Member of reputed journals, has been PI of NIH and non-NIH grants and serves as a Member of several committees at her University and several Societies. Her expertise is in evaluation and passion is in improving the health and wellbeing.

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