

2nd World Congress on

RADIOLOGY AND ONCOLOGY

July 16-17, 2018 Dubai, UAE



Partha S Choudhury

Rajiv Gandhi Cancer Institute & Research Centre, India

Current concepts of theranostic approach in precision oncology : The changing paradigms

The term theranostics is the combination of a diagnostic tool that helps to define the right therapeutic tool for specific disease. It signifies the “we treat what we see & see what we treat” concept. A diagnostic radionuclide labelled with the target and once expression is documented, the same target is labelled with a therapeutic radionuclide and treatment is executed. In addition a molecular biomarker based targeted treatment can be tailored with either biomarker or molecular imaging. The concept is utilized in few malignancies especially NET & prostate cancer currently. Molecular imaging modalities exploit the receptor expression aspects of the pathophysiology for both diagnostic imaging & therapeutic purposes. The receptor expression changes with tumor grades and hormone resistance. We have reported excellent sensitivity and detection capability of both primary and metastatic disease. Besides evaluation of recurrence, 68Ga-labelled radiopharmaceuticals can be utilized for detection of metastasis and selection of patients for therapy. 68Ga- DOTA or PSMA serves the basis of treatment of these conditions with 177Lu. Based on the theranostic concept the aims of treatment with 177Lu are to improve outcome by early interventions in suboptimal responders, sparing low risk patients from over treatment, reduce treatment related side effects, ensure effective palliation & improve quality of life. Tumor targeting with 177Lu DOTA or PSMA saves normal tissue & delivers high dose to tumor. Easy radiopharmaceutical labelling & high expression in all cancer cells makes it an optimal target for radionuclide therapy, with a low toxicity profile. In our experience at RGCI & RC (our institute) we have seen objective regression in lesions and symptomatic relief. It has been found to be a safe & effective method for treating end stage androgen independent, progressive CRPC and metastatic NET. Similarly a personalized treatment model based on molecular biomarkers and imaging in breast cancer is possible based on imaging of estrogen receptors and 18F FES imaging in breast cancer. In this presentation, I am going to discuss our experience in precision oncology based on the above concepts.

Biography

Partha S Choudhury is an internationally acclaimed leading Nuclear Medicine Physician of India with special interest in Radionuclide Therapy of various types of cancers. He has more than 25 years of experience in Nuclear Oncology. He is heading the department of Nuclear Medicine in Rajiv Gandhi Cancer Institute & Research Centre Delhi India since 1998 and has been instrumental in its sustained growth over the last 20 years. He has introduced and standardized new procedures in the department both in terms of disease specific diagnostic, molecular imaging & molecular therapy. He is an invited speaker in conferences and symposiums across many countries, the main ones being United Kingdom, Austria, South Africa and South America. He is an avid clinical researcher with publications in peer reviewed journals. He is a technical co-operation consultant & participant of co-ordinated research projects of International Atomic Energy Agency (IAEA) Vienna

pschoudhary@hotmail.com