



PROFESSOR KATHERINE VALLIS

Professor of Experimental Radiotherapeutics
Group Leader, Oxford Institute for Radiation Oncology Honorary Consultant in Clinical Oncology, Oxford
University Hospitals, NHS Trust, UK

PRESENTATION TITLE: Antibody-based therapeutics against intracellular cancer targets.

ABSTRACT: The last decade has seen rapid growth in the use of theranostic radionuclides for the treatment and imaging of a cancer. Radionuclide therapy and imaging rely on a radiolabelled carrier molecule to specifically target cancer cells. It is possible to label the carrier with a radionuclide for imaging (such as a positron emitter for PET) and then, having established that the tracer is taken up by the tumour, swap in a therapeutic radionuclide such as a beta-emitter. For example ^{68}Ga -PSMA and ^{177}Lu -PSMA are being used to image and treat prostate cancer respectively. This concept exemplifies the principle of personalised cancer medicine. Some exemplars and the future directions of theranostics will be discussed.

BIOGRAPHY: Dr. Katherine Vallis heads the Experimental Radiotherapeutics Group at the Oxford Institute for Radiation Oncology, Oxford University, and is a Consultant Radiation Oncologist at Oxford University Hospitals NHS Foundation Trust. Her research focuses on the development of peptide-, oligonucleotide- and antibody-based radiopharmaceuticals, to image and treat cancer. The aims are to improve drug design and delivery, and to understand the biodistribution, dosimetry and radiobiological effects of new and approved agents. A major focus is on how best to combine radionuclide therapy with other treatments, particularly external beam radiotherapy.
