WORKSHOP on Radiopharmaceutical Therapy (RPT) Normal Tissue Effects in the Clinic (TEC) **RPT-TEC-2022**

September 25-28, 2022



Mon Repos Conference Hall

Corfu, Greece

We are organizing a 4-day international workshop to review the collective clinical experience in radiopharmaceutical therapy (RPT) as it relates to the relationship between toxicity and tissue absorbed dose.

The objectives of the workshop are to arrive at normal organ toxicity avoidance (NOTA) absorbed doses, expressed as two-Gy equieffective dose (EQD2) applicable to different RPT agent/radionuclide combinations. We envision a gathering whereby physicians with experience treating patients with RPT will compile/present their patient toxicity experience for different agents and administered activity (AA) schedules. These data will be used by the physics attendees to reconstruct organ absorbed dose estimates. We anticipate an iterative process whereby the physicists ask the physicians for their best estimates of potential input (e.g., clearance kinetics, localization, potential impact of prior treatment on observed tissue toxicity); some of this data may also be available from pre and post-imaging (i.e., theranostics) RPT imaging and also from the literature.

The product of this workshop will be a single or series of QUANTEC-like publications for RPT agents (RPT-TEC). We also anticipate that a metaanalysis of clinical experience in RPT will arise from the workshop. Recognizing that input into deriving NOTA absorbed doses will be a combination of rigorous published data and physician's experience from ongoing (unpublished) patient therapy experience, we will implement the NCCN categorization to rank the reliability of the evidence supporting recommended NOTA absorbed dose estimates. We anticipate that this may be the first of a series of workshops towards this goal.

Day 1; Sunday, 25 September

Workshop objectives and approach			
9:00	9:30	Final product and how we will get to it	
Clinical Experience with small molecules			
9:30	10:30	labeled with beta-emitters	
10:30	11:00	break/open discussion	
11:00	11:45	labeled with alpha-emitters	
11:45	12:00	break/open discussion	
Clinical Experience with peptides			
12:00	12:45	labeled with beta-emitters	
12:45	12:50	break/open discussion	
12:50	13:30	labeled with alpha-emitters	
13:30	16:30	light lunch, open discussions, beach	
Clinical Experience with immunoconjugates			
16:30	17:20	labeled with beta-emitters	
17:20	17:40	break/open discussion	
17:40	18:30	labeled with alpha-emitters	
18:30	19:30	Open Discussion, adjourn	

Welcome reception

Day 2; Monday, 26 September

Approach/formalism for reconstructing organ absorbed dose (AD) from Administered Activity (AA) data				
9:00	9:45	Reconstructing initial organ uptake (% of AA); sub-organ localization		
9:45	10:15	break/open discussion		
10:15	11:00	Reconstructing organ pharmacokinetics (PK) (uptake/clearance half-lives)		
11:00	11:30	break/open discussion		
Best estimates of initial uptake, sub-organ localization, PK in kidneys				
11:30	12:15	small molecules, peptides		
12:15	12:45	break/open discussion		
12:45	13:30	antibodies		
13:30	16:30	light lunch, open discussions, beach		
Best estimates of initial uptake, sub-organ localization, PK in red marrow and salivary glands				
16:30	17:30	small molecules, peptides		
17:30	18:00	break/open discussion		
18:00	18:45	antibodies		
18:45	19:30	open discussion, adjourn		

Greek Night

Day 3; Tuesday, 27 September

beta-emitter dosimetry				
10:00	11:00	sub-organ scale, dose-rate		
11:00	11:30	break/open discussion		
Initial NOTA* absorbed dose estimates for kidneys				
11:30	12:30	small molecules, peptides		
12:30	13:00	break/open discussion		
13:00	13:30	antibodies		
13:30	16:30	light lunch, discussions, beach or boat w/ lunch, discussions		
Initial NOTA absorbed dose estimates for red marrow and salivary glands				
16:30	17:30	small molecules, peptides		
17:30	17:45	break/open discussion		
17:45	18:45	antibodies		
18:45	19:30	Open Discussion, adjourn		
*NOTA = Normal Organ Toxicity Avoidance				

Organizing Committee, speaker dinner

<u>Day 4; Wednesday, 28 September</u>

Alpha-emitter dosimetry			
9:00	9:45	Daughter fate	
9:45	10:05	break/open discussion	
10:05	11:00	RBE, sub-organ	
11:00	11:30	break/open discussion	
Initial NOTA* absorbed dose estimates for kidneys			
11:30	12:30	small molecules, peptides	
12:30	13:00	break/open discussion	
13:00	13:30	antibodies	
13:30	16:30	light lunch, discussions, beach or boat w/ lunch, discussions	
Initial NOTA absorbed dose estimates for red marrow and salivary glands			
16:30	17:30	small molecules, peptides	
17:30	17:45	break/open discussion	
17:45	18:45	antibodies	
18:45	19:30	Open Discussion, meeting adjourned	
*NOTA = Normal Organ Toxicity Avoidance			

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General

The European Institute for Sciences and their Application (EISA) has hosted a large number of very successful scientific events in Corfu since 1982. The success is also due to the infrastructure and the facilities that the EISA makes available to the events' organizers and participants.

Mon Repos Conference Hall

The Conference Hall is in the Mon Repos Estate on the top of the Analipsis Hill. This is in the area of Palaiopolis at a distance of 2-3 km from the Corfu Town (map). It is located about 2km from the Kanoni area where several hotels offer special prices for the accommodation of the participants. It is easily accessible by bus and all nearby hotels are located next to a bus station. The main conference hall can accommodate 120 participants. Smaller seminar rooms are also available for smaller and/or parallel sessions.