



Ministry of Health  
Malaysia



Institut Kanser Negara

# UNDERSTANDING **IGRT** & **IMRT**

IMAGE GUIDED RADIOTHERAPY  
INTENSITY MODULATED RADIOTHERAPY

## WORKSHOP



Date:

**5th - 7th May 2015**

Venue:

**Main Auditorium  
Institut Kanser Negara**

*Jointly Organized by*

Department of  
Radiotherapy & Oncology  
Institut Kanser Negara



**Kesora**

Kelab Kebajikan & Sosial  
Radiotherapy & Oncology Department  
Institut Kanser Negara

## Speaker's Profile



**Dr. Alvaro Martinez**  
**Senior VP of Scientific and Clinical Strategy**  
**Michigan Healthcare Professional, 21<sup>st</sup> Century Oncology**

For two decades, Dr. Alvaro Martinez has pioneered several cancer treatments in Radiation Oncology leading to the significant improvement of today's Radiation Therapy outcomes. These include Intensity Modulated Radiation Therapy (IMRT) and Image Guided Radiation Therapy (IGRT) to improve precision and accuracy in radiation treatment delivery, special applicators used to treat prostate, gynaecological and other pelvic malignancies to preserve organ function as well as Omnibeam, which is designed for treating very difficult tumors deep within the body.



**Dr. Tony Wong**  
**Director, Medical Physics and Dosimetry,**  
**Seattle Cancer Care Alliances, Proton Therapy Center**

Dr. Tony Wong is the Director of Medical Physics and Dosimetry at the Seattle Cancer Care Alliances. He has a PhD in Physics from RMIT University, Australia and is certified in therapeutic physics by the American Board of Radiology (ABR) and the Australasian College of Physical Scientists and Engineers in Medicine. He is a member of the American Association of Physicists in Medicine (AAPM), the American Society of Therapeutic Radiology & Oncology (ASTRO) and the Australasian College of Physical Scientists and Engineers in Medicine. Tony started his medical physicist career in 1988 and was the Chief Physicist at the Austin Medical Center in Melbourne, Australia before he was recruited by the William Beaumont Hospital in Michigan, USA in 2001. Tony has over 70 published articles and conference presentations in radiation oncology physics and also has a book chapter in image-guided radiation therapy. His current clinical and research interests are in image-guided radiation therapy and volumetric modulated arc therapy.

Tentative Programme			
Date/Time	Course	Speaker	Venue
<b>Day 1 (5/5/2015)</b>			
8:00-8:30	Registration		Auditorium
8.30-8.45	Welcome and introduction		
8.45-9.15	Clinical outcomes, why use IMRT & IGRT	AM	
9.15-9.45	General Principles of Head & Neck Cancer Management	AM	
<b>Imaging and Outlining</b>			
9.45-10.25	Outlining the GTV	AM	
10.25-11.00	GTV to CTV, plus OARs	AM	
11.00-11.20	Coffee		
<b>Geometric Uncertainty</b>			
11.20-12.00	Errors, margins, PTV and PRV	TW	
12.00-12.40	Set up accuracy	TW	
12:40-2:00	Lunch		
<b>IMRT</b>			
2.00-2.30	Understanding and management of organ motion on H/N cancer	AM	
2.30-3.00	Objective function for IMRT	TW	
3.30-4.00	IMRT Treatment planning	TW	
4.00-4.30	IMRT Plan evaluation	TW	
4.30-5.00	IMRT QA	TW	

<b>Day 2 (6/5/2015)</b>			
<b>IGRT</b>			Auditorium
9.00-9.30	Introduction to IGRT	TW	
9.30-10.00	Concomitant dose in IGRT	AM	
10.00-10.30	Practicality of IGRT on the linac	TW	
10.30-11.00	Coffee break		
11.00-11.30	The effect of image guidance on TCP	TW	
11.30-12.00	The effect of IGRT on PTV margins	TW	
12.00-12.30	Motion management	TW	
12.30-1.00	Quality Assurance in an Image-Guided Era	TW	
1.00-2.00	Lunch		
2.00-2.30	Issues in Radical Radiotherapy for Head & Neck Cancer	AM	
2.30-3.00	Anatomy and Contour Guidelines	AM	
3:00-3:30	Margin design	TW	
3:30-5:00	Practical Session: Image registration for Head & Neck Cancer	AM	

<b>Day 3 (7/5/2015)</b>				
<b>IGRT</b>			Auditorium	
9.00-9.30	Strategies and Tactics for IGRT	TW		
9.30-10.00	Correction Strategies for Guidance	TW		
10.00-10.30	Guidance Motion Management – CBCT	TW		
10.30-11.00	Coffee break			
11.00-11.30	Machine/image/dosimetric QA	TW		
11.30-12.00	Adaptive radiation therapy	TW		
12.00-12.30	Advanced imaging for target delineation, treatment planning & IGRT	TW		
12.30-1.00	General principle for Prostate cancer Management	AM		
1.00-2.00	Lunch			
2.00-2.30	Issues in Radical Radiotherapy for Prostate Cancer	AM		
2.30-3.00	IGRT and treatment planning in Prostate Cancer	TW		
3.30-5.00	Practical Session: Image registration for Prostate Cancer	AM		LINAC

REGISTRATION FEES		
Category	Rate (RM)	/
KKM / University	RM150	
Private Centre (Radiotherapy)	RM200	
*The registration fee is including free-flow coffee and snacks only. Lunch is not provided.		
<b>Closing date: 29 April 2015. Please email or fax the registration form.</b>		

PARTICIPANT'S DETAILS									
Name									
Designation									
E-mail					Fax				
Telephone					(Mobile)				
Payment option	Telegraphic transfer	<input type="checkbox"/>	Local Order	<input type="checkbox"/>	Cheque	<input type="checkbox"/>	Cash	<input type="checkbox"/>	

Correspondence Address :


**Payment Method:** Telegraphic Transfer / Cheque / Local Order / Cash  
**Payable to :** Kelab Kebajikan dan Sosial, Jabatan Radioterapi dan Onkologi, Institut Kanser Negara (KESORA)  
**Banker:** Bank Islam Berhad  
**Account number :** 1601 8010 0207 47  
**Branch:** Cawangan Putrajaya

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