مدينة الملك عبد العزيز للعلوم و التقنية KACST

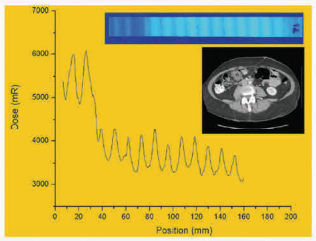
مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre
Gen. Org. مؤسسة عامة

IAEA

IAEA Course TRS 457:
Joint KFSHRC/IAEA Advanced School on Dosimetry in Diagnostic Radiology and its Clinical Implementation

Venue:
King Faisal Specialist Hospital & Research Centre
Riyadh, Kingdom of Saudi Arabia
on
14-18 Rabi Al-Awal 1431 (28 February to 4 March 2010)





PROGRAM SCHEDULE

Hosted by:
Biomedical Physics Department
King Faisal Specialist Hospital & Research Centre

Sponsored by:
International Atomic Energy Agency
King Abdulaziz City for Science and Technology

Endorsed by:
Academic and Training Affairs
Training and Education Office,
Research Centre

Contact Information:
Biomedical Physics Department
Tel: +966 (1) 442 7714 or 4427869
Fax: +966 (1) 4424777
Email: josfin@kfshrc.edu.sa

Course Director

Belal Moftah, PhD, FCCPM
Chairman, ICRM 2010
Chairman, Biomedical Physics Department
King Faisal Specialist Hospital & Research Centre

Speakers

Donald Mclean, PhD (IAEA)
Claire-Louise Chapple, PhD (IAEA)
Konstantinos Hourdakis, PhD (IAEA)
Slobodan Devic, PhD (McGill University)
Abdalla Al-Haj, PhD (KFSH&RC)

www.radmed.org

TRAINING & EDUCATION

CME Accreditation:
Saudi Commission for Health Specialities (SCHS)
American Academy of Continuing Education

Table of Contents

Message from the Course Director

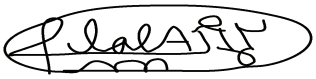
I wish to welcome you to the "IAEA Regional Training Course on Diagnostic X-ray Dosimetry Based on TRS 457", hosted by the Biomedical Physics Department of the King Faisal Specialist Hospital and Research Centre (KFSH&RC), Riyadh, Saudi Arabia, from 28 February to 04 March 2010. This training course is organized by KFSH&RC in cooperation with the International Atomic Energy Agency (IAEA) and King Abdulaziz City for Science and Technology (KACST), in line with IAEA mission of upgrading the knowledge of medical physics professionals in Arab-Asia member states.

On behalf of KFSH&RC, we are honored to host this training course which aims to enhance the knowledge of health professionals in the field of clinical diagnostic radiology dosimetry and to improve the measurement and understanding of the dose delivered to patients undergoing diagnostic radiology examinations.

It is indeed a great opportunity to hold this year's IAEA training course in conjunction with the ICRM 2010, an international conference for which KFSH&RC, KACST, and IAEA are also co-organizers. The scientific program of both events certainly affords all participants informative lectures and workshops conducted by IAEA and world-renowned speakers who are acclaimed authorities and experts in their respective fields and professions.

We take pride to have been entrusted this IAEA program activity and likewise to have the expertise and state-of-the-art resources at KFSH&RC to effectively fulfill the mission set for this undertaking.

Sincerely,



Belal Moftah, PhD, FCCPM
Course Director, IAEA Course
Chairman, ICRM 2010
Chairman, Biomedical Physics Department

Course Description and Objectives

The widespread use of ionizing radiation in the course of wide range of diseases raises a question of accurate assessment of dose delivered to the subjects under investigation, especially if repeated examinations are required. This course concentrates on procedures in place to asses both *in vitro* and *in vivo* dose delivered to patients in the course of diagnostic radiology procedures that involve use of the low energy X-ray tubes.

Target Audience:

The course is aimed for diagnostic radiologists, radiation oncologists, and radiation physicists who are keen to update themselves on the latest developments in diagnostic radiology dosimetry.

Lectures:

Introduction to radiological dosimetry
DRL determination
Calibration at an SSDL facility
Phantoms, dose and image quality
Selection of instrumentation
Dosimetry for fluoroscopy - basics
Patient dose audit methods and results
Dosimetry in interventional radiology
Pediatric dosimetry with examples
Dosimetric quantities and units introduction
Dosimetry framework, formalism including uncertainties
Dosimetry for general radiology and clinical uncertainty
Dosimetry for CT #1: Basic Dosimetry
Calibration of KAP meters and CT chambers
Dosimetry for mammography
Dosimetry for CT #2: Multi slice technology
X ray spectra and beam qualities
Fetal dose and pregnancy policy
Dosimetry for CT #3: Practical experiences
Effective dose and its limitations
Dosimetry for Dental radiography
Optimization

Tutorials:

Uncertainty in instrumentation measurement
Uncertainty in clinical measurement
GafChromic film Dosimetry in Diagnostic Radiology

Course Description and Objectives

Course Description:

The goal of this course is to demonstrate hands on procedures in place to asses both *in vitro* and *in vivo* dose delivered to patients in the course of diagnostic radiology procedures that involve use of low energy X-ray tubes. Reference dosimetry procedures for the ionization chambers in low energy photon beams will be demonstrated.

Target Group:
The workshop is aimed primarily for diagnostic radiologists, radiation oncologists, and radiation physicists who are keen to update themselves on the latest developments in diagnostic radiology dosimetry

The core objectives of this program constitute the following:

1. to understand the physics principles and theory involved for diagnostic radiology imaging modalities;
2. to identify possible areas for improvement in the field of diagnostic x-ray dosimetry;
3. to provide participants with a better understanding of the technology and physical principles of the equipment used in radiology;
4. to provide a forum where advances in diagnostic x-ray dosimetry can be discussed;
5. to meet demands of Member States for the Agency's support in disseminating the new Code of Practice for dosimetry in diagnostic radiology;
6. to enhance the capabilities of medical physics professionals in the region.

Speakers

Ian Donald McLean, PhD
Medical Radiation Physicist
Dosimetry and Medical Radiation Physics
International Atomic Energy Agency, Austria
Tel: +43-1-2600-21663 or 28332
Fax: +43-1-26007-21662
Email: i.mclean@iaea.org; I.Mclean@iaea.org

Claire-Louise Chapple, PhD
Principal Physicist, Diagnostic Radiology &
Radiation Protection
Regional Medical Physics Department,
Freeman Hospital Newcastle upon Tyne, UK
International Atomic Energy Agency Expert, Austria
Tel: +44 191 2563413
Fax: +44 191 2260970
Email: Claire.chapple@nuth.north.nhs.uk

Konstantinos Hourdakis, PhD
Director, Development Research & Training
Greek Atomic Energy Commission, Greece
International Atomic Energy Agency Expert, Austria
Tel: +30 210-650 6765; +30 210-650 6765
Email: khour@eeae.gr

Slobodon Devic, PhD
Assistant Professor & Radiation Oncology Physicist
Department of Medical Physics
McGill University Health Centre, Canada
Tel: +1 514 340 8222 ext. 2595
Fax: +1 514 340 7548
Email: slobodan.devic@mcgill.ca

Abdalla Al-Haj, PhD
Chief Health Physicist
Biomedical Physics Department
King Faisal Specialist Hospital & Research Centre
Riyadh, Saudi Arabia
Tel: +966-1-442 7855
Email: abdal@kfshrc.edu.sa

Opening Ceremony

Sunday, 28 February 2010
Venue: Prince Salman Auditorium

0930 – 1000	**Breakfast** *at the Prince Salman Auditorium Foyer*
1000 – 1005	**Recitation of the Holy Quran** *Dr. Adnan Al-Hebshi* Consultant Radiation Oncologist, Oncology Center, KFSH&RC
1005 – 1015	**Opening Remarks** *Dr. Belal Moftah* Director, IAEA Course 2010 Chairman, ICRM 2010 Chairman, Biomedical Physics Department Research Centre, KFSH&RC
1015 – 1025	**IAEA Course Coordinator Address** *Dr. Ian Donald Mclean* Medical Radiation Physicist International Atomic Energy Agency
1025 – 1035	**Chief Executive Director Address** *Dr. Qasim Al-Qasabi* Chief Executive Director King Faisal Specialist Hospital & Research Centre, KFSH&RC

Activity Schedule

Day 1
Sunday, 28 February 2010

0730 – 0800	Registration and Breakfast (Venue: **Prince Salman Auditorium**)
	LECTURE SESSIONS *(Venue: Research Centre Room # 304)*
0800 – 0845	**Introduction to Radiological Dosimetry** Presenter: *Claire-Louise. Chapple, PhD*
0845 – 0930	**Dosimetric Quantities and Units Introduction** Presenter: *Abdalla Al-Haj, PhD*
0930 – 1000	**Coffee Break**
1000 – 1040	**Dosimetry Framework, Formalism Including Uncertainties** Presenter: *Konstantinos Hourdakis, PhD*
1040 – 1120	**Dosimetry for General Radiology and Clinical Uncertainty** Presenter: *Abdalla Al-Haj, PhD*
1120 – 1200	**Selection of Instrumentation** Presenter: *Konstantinos Hourdakis, PhD*
1200 – 1330	**Lunch Break**
1330 – 1410	**Dosimetry for Fluoroscopy - Basics** Presenter: *Konstantinos Hourdakis, PhD*
1410 – 1450	**Patient Dose Audit Methods and Results** Presenter: *Claire-Louise. Chapple, PhD*
1450 – 1530	**DRL Determination** Presenter: *Ian Donald McLean, PhD*
1530 – 1600	**Coffee Break**
1600 – 1640	**Phantoms, Dose and Image Quality** Presenter: *Ian Donald McLean, PhD*
1640 – 1720	Tutorial [Choose 1] Konstantinos Hourdakis, PhD Uncertainty in Instrumentation Measurement Claire-Louise. Chapple, PhD Uncertainty in Clinical Measurement

Activity Schedule

Day 2
Monday, 01 March 2010

LECTURE SESSIONS *(Venue: Research Centre Room # 304)*	
0800 – 0845	**Dosimetry in Interventional Radiology** Presenter: *Abdalla Al-Haj, PhD*
0845 – 0930	**Calibration at an SSDL Facility** Presenter: *Konstantinos Hourdakis, PhD*
0930 – 1000	**Coffee Break**
1000 – 1200	**ICRM** **Plenary Session 3**
1200 – 1330	**Lunch Break**
1330 – 1410	**Dosimetry for CT #1: Basic Dosimetry** Presenter: *Claire-Louise. Chapple, PhD*
1410 – 1450	**Calibration of KAP Meters and CT Chambers** Presenter: *Konstantinos Hourdakis, PhD*
1500 – 1530	**ICRM RRPO Lecture 4: Radiation Protection in Pediatric Radiology** Presenter: *Claire-Louise. Chapple, PhD*
1530 – 1600	**Coffee Break**
1600 – 1730	**ICRM** **Parallel Sessions** **Session 5 B:** **Innovative Approaches in Diagnostic Imaging**

Activity Schedule

Day 3
Tuesday, 02 March 2010

LECTURE SESSIONS *(Venue: Research Centre Room # 304)*	
0800 – 0845	**Dosimetry for CT #2: Practical Experiences** Presenter: *Claire-Louise Chapple, PhD*
0845 – 0930	**X ray Spectra and Beam Qualities** Presenter: *Ian Donald McLean, PhD*
0930 – 1000	**Coffee Break**
1000 – 1040	**Dosimetry for Mammography** Presenter: *Ian Donald McLean, PhD*
1040 – 1120	**Fetal Dose and Pregnancy Policy** Presenter: *Ian Donald McLean, PhD*
1120 – 1200	**ICRM** **Plenary Session 7**
1200 – 1330	**Lunch Break**
1330 – 1450	**ICRM DI Lecture 6: Assessment and Radiation Dose Reduction in Pediatric CT** Presenter: *Claire-Louise Chapple, PhD*
1450 – 1530	**Dosimetry for Dental Radiography** Presenter: *Konstantinos Hourdakis, PhD*
1530 – 1600	**Coffee Break**
1600 – 1640	**Tutorial 2** **GafChromic Film Dosimetry in Diagnostic Radiology** Presenter: *Slobodan Devic, PhD*
1640—1720	**ICRM** **Parallel Abstracts** **Session 9B**

Activity Schedule

Day 4
Wednesday, 03 March 2010

	LECTURE SESSIONS *(Venue: Research Centre Room # 304)*
0800 – 0845	**Effective Dose and its Limitations** Presenter: *Konstantinos Hourdakis, PhD*
0845 – 0915	**Optimization** Presenter: *Ian Donald McLean, PhD*
0915 – 1000	**Test**
1000 – 1200	**ICRM** **Plenary Session 11**
1200 – 1330	**Lunch Break**
1330 – 1720	**Practical Session 1** [Choose clinical or computer] **Clinical**: CT Dosimetry Practice; Calibration of KAP Meter; Mammography Dosimetry Practice **Computer**: Beam Qualities, Critical Organ Dose, CT Dose

Activity Schedule

Day 5 Thursday, 04 March 2010	
0800 – 1200	**Practical Session 2** [Choose clinical or computer] **Clinical:** CT Dosimetry Practice; Calibration of KAP Meter; Mammography Dosimetry Practice **Computer:** Beam Qualities, Critical Organ Dose, CT Dose
1200 – 1330	**Lunch Break**
1330 – 1410	**Concluding Remarks** **Test Results** **Closing Ceremony**

International Participants

Mr. Ahmed A.H. NASIR
Ministry of Health
Radiotherapy and Nuclear Medicine Hospital
Baghdad, Iraq
Tel.: 00964 790 280 1253
Email: ahmedali10ee@yahoo.com

Mr. Riyad ALAMI
Ministry of Health
Radiotherapy and Nuclear Medicine Hospital
Baghdad, Iraq
Email: riyad_alami@yahoo.com

Ms. Lamyaa L.T. ALI
Ministry of Health
Radiotherapy and Nuclear Medicine Hospital
Baghdad, Iraq
Tel.: 00964 1 7704559987
Email: lamya0physics@yahoo.com

Mr. Inad AL HADDADIN
King Hussein Cancer Center
Queen Rania Al Abdullah Street
Amman, Jordan
Tel.: 00962 6 5300460
Fax: 00962 6 5353001
Email: ihaddadin@khcc.jo

Mr. Zakaria Mahmoud HASAN
Al-Bashir Hospital
Al-Asrafeiah
Amman, Jordan
Tel.: 00962 6 4765115
Fax: 00962 6 4700416
Email: bashaman@yahoo.com

International Participants

Mr. Mohammad TAILAKH
Al-Bashir Hospital
Radiotherapy Department
Al-Asrafeiah
Amman, Jordan
Tel.: 00962 6 476 5115
Fax: 00962 6 470 0416
Email: moha79jo@yahoo.com

Ms. Mirella ELIAS
Lebanese Atomic Energy Commission (CNRS)
Beirut, Lebanon
Tel.: 009611450811
Fax: 00961 1450810
Email: m.elias@cnrs.edu.lb

Mr. Walid Bachir ISKANDARANI
Lebanese Atomic Energy Commission (CNRS)
Beirut, Lebanon
Tel.: 00961 1 450811214
Fax: 00961 1 450810
Email: walido01@hotmail.com

Mr. Mohammad KHEDR
Atomic Energy Commission of Syria (AECS)
Damascus
Syrian Arab Republic
Tel.: 00963 11 6111927
Fax: 00963 11 6112289
Email: atomic@aec.org.sy

Mr. Amir RMIEH
Al Bassel Heart Institute
Damascus
Syrian Arab Republic
Tel.: 00963 11 3121471
Fax: 00963 11 312 1477
Email: bhi-syr@net.sy

International Participants

Mr. Khaled WALI
Atomic Energy Commission of Syria (AECS)
Department of Radiation Protection and Nuclear Safety
Damascus, Syrian Arab Republic
Tel.: 00963 11 6111926
Fax: 00963 11 6112289
Email: kh_wali@scs-org

Ms. Ameinah Saif Saeed AL ABDOULI
Ministry of Health
Dubai, United Arab Emirates
Tel.: 00971 439 65150
Fax: 00971 439 68749
Email: amoon_mp@hotmail.com

Ms. Maryam Abdul Majeed AL HAJRI
Ministry of Health
Department of Radiation Protection
Dubai, United Arab Emirates
Tel.: 00971 434 94391
Fax: 00971 43 44 9581
Email: meemoo_moon@hotmail.com

Ms. Fatima AL KAABI
Tawam Hospital
Al Ain, United Arab Emirates
Tel.: 00971 3 7072752
Fax: 00971 3 7075308
Email: Pkaabi@tawam_hosp.gov.ae

Ms. Fatima Sulaiman Rashed Kharboush AL NOAMANI
Dubai Hospital
Medical Physics Section
Dubai, United Arab Emirates
Tel.: 0097 1 421 95491
Fax: 0097 1 04 271 9340
Email: fsalnoamani@dha.gov.ae

International Participants

Mr. Mohamed Malek AL SHEHHI
Ministry of Health
Central Laboratory for Radiological Protection
Dubai, United Arab Emirates
Tel.: 00971 4 3965150
Fax: 00971 4 3449581
Email: malekrkak@yahoo.com

Ms. Jamila AL SUWAIDI
Department of Health and Medical Services
Dubai, United Arab Emirates
Tel.: 00971 4 219 5574
Fax: 00971 4 271 9340
Email: jsalsuwaidi@dha.gov.ae
Mobile: 00971 506246877

Ms. Ayeda Essa Abdulla BAHRI
Ministry of Health
Department of Radiation Protection
Dubai, United Arab Emirates
Tel.: 00971 439 65150
Fax: 00971 439 66 333
Email: ayood_84@hotmail.com

Mr. Mogib AL-MAKDAD
Ministry of Public Health
Al-Gamhouri Teaching Hospital
Sana'a, Yemen
Tel.: 00967711655715
Fax: 00967 1 259460
Email: almakdadan@yahoo.com

Mr. Abdo Abdulla Ali AL-QUBATI
Ministry of Public Health
Al-Gamhouri Teaching Hospital
Sana'a, Yemen
Tel.: 00967 71 1715663
Fax: 00967 1 259460
Email: abdoradman@yahoo.com

National Participants

Mr. Ali AAMRI
Ministry of Health
Riyadh, Saudi Arabia
Tel.: 00966 14765716144
Fax: 00966 14735219
Email: A3MMM@HOTMAIL.COM

Mr. Abdulaziz AL FOZAN
Ministry of Health
Riyadh, Saudi Arabia
Tel.: 00966 1 476 5716 144
Fax: 00966 1 4473 5219
Email: spishalist_aziz@hotmail.com

Mr. Ibrahim ALGAIN
King Faisal Specialist Hospital and Research Centre
Riyadh, Saudi Arabia
Tel.: 09661 4424857
Fax: 09661 442 4777
Email: igain@kfshre.edu.sa

Ms. Heba AL-HUMIDAN
King Faisal Specialist Hospital and Research Centre
Riyadh, Saudi Arabia
Tel.: 00966 1 464 7272
Fax: 00966 1 442 4777
Email: HHumidan@kfshre.edu.sa

Mr. Musaed ALMALKI
Ministry of Health
Riyadh, Saudi Arabia
Tel.: 00966 1 4791073
Fax: 00966 1 4785751
Email: malkimusaed@hotmail.com

Acknowledgement

We are thankful for the continued support from the King Faisal Specialist Hospital & Research Centre management especially for providing all the necessary resources for this training activity:

- Dr. Qasim Al-Qasabi, Chief Executive Director, KFSH&RC
- Dr. Othman Bin Ahmed, Deputy Chief Executive Director, KFSH&RC
- Dr. Sultan Al-Sedairy, Executive Director, Research Centre
- Dr. Futwan Al-Mohanna, Deputy Executive Director, Research Centre

Our sincere appreciation also goes to our co-organizers of this event for their encouragement and assistance:

- International Atomic Energy Agency (IAEA)
- King Abdulaziz City for Science and Technology (KACST)

Appreciation

Also, we are grateful to the following departments of the King Faisal Specialist Hospital & Research Centre in Riyadh for their valuable support:

Academic and Training Affairs
Administrative Affairs
Audiovisual Services
Chairman of the Board of Directors (KFSH&RC)
Chief Executive Director (KFSH&RC)
Contracts Management
Employee Social Club
Financial Affairs
Housekeeping Services (Environmental Services)
Information and Technology Affairs
Manpower Services
Media Affairs
Medical Affairs
Medical Imaging Services
Neurosciences Department
Oncology Center
Personnel Department
Photographics Department
Projects Management
Public Relations Department (Community Services)
Radiation Oncology
Radiation Therapy Department
Reprographics - Print Shop
Research Centre - Administration
Research Centre - Biomedical Physics Department
Research Centre - Cyclotron & Radiopharmaceuticals Dept.
Research Centre - Executive Director
Research Centre - Deputy Executive Director
Research Centre - Logistics and Facilities Management Office
Research Centre - Scientific Information Office
Research Centre - Training and Education Office
Safety, Security & Communications Department
Transportation Services
Travel Section
Visa Section
Utilities and Maintenance Department

On-site Registration

All participants are requested to sign in and pick up training course material at the Registration/Information Desk located at the Prince Salman Auditorium Foyer, Research Centre Building, KFSH&RC.

Accreditation

This training course activity is accredited by the International Atomic Energy Agency (IAEA), Vienna, Austria. In addition, the KFSH&RC will seek approval by the Saudi Commission for Health Specialties and the American Academy of Continuing Medical Education for Continuing Medical Education (CME) credit hours.

Certificate and Attendance

Certificates of Attendance will be provided by IAEA. These will be awarded to participants during the training course closing ceremony.

Accommodation and Transportation

Hotel reservations will be arranged by the Biomedical Physics Department of the King Faisal Specialist Hospital & Research Centre for non-local speakers and participants. The Department will advise of hotel and transportation details.

Visa Processing

Non-local lecturers and participants will require a visa to visit the Kingdom of Saudi Arabia. In such cases, the King Abdulaziz City for Science and Technology and King Faisal Specialist Hospital and Research Centre will assist IAEA approved lecturers and participants respectively in the visa issuance process.

Course Organizers

مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre
Gen. Org. مؤسسة عامة

King Faisal Specialist Hospital and Research Centre, (KFSH&RC), Riyadh, Saudi Arabia

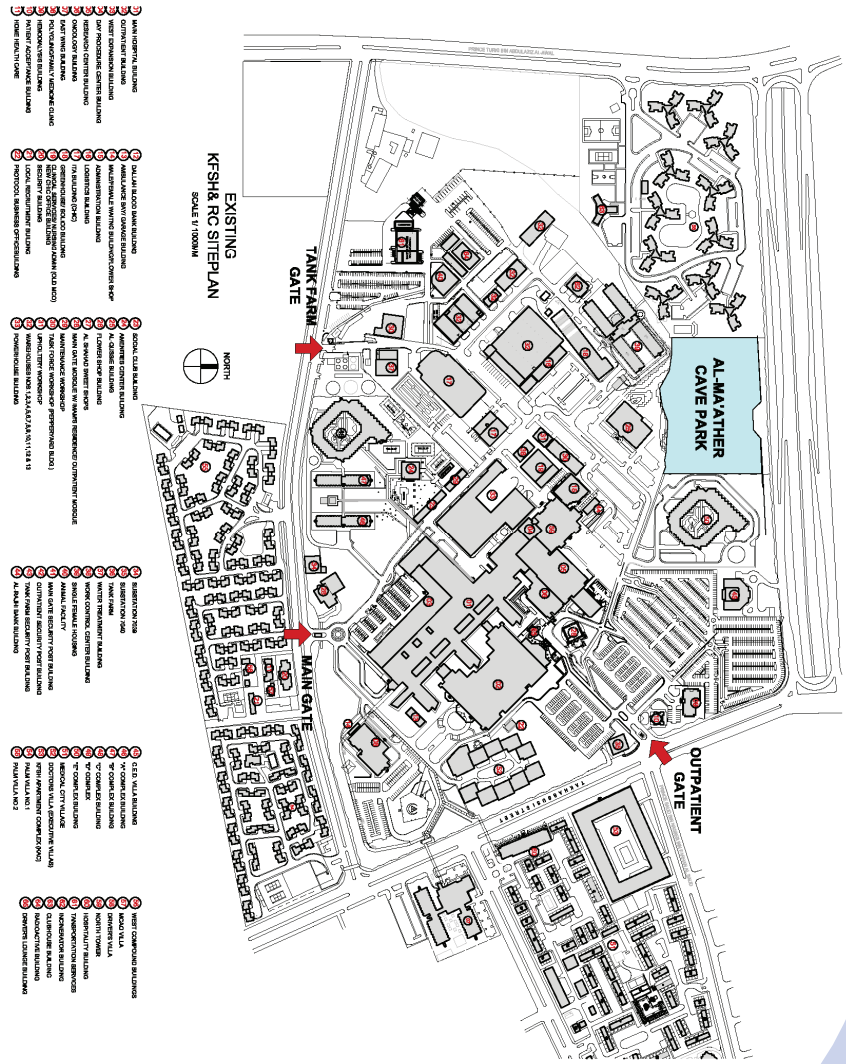
IAEA

International Atomic Energy Agency (IAEA) Vienna, Austria

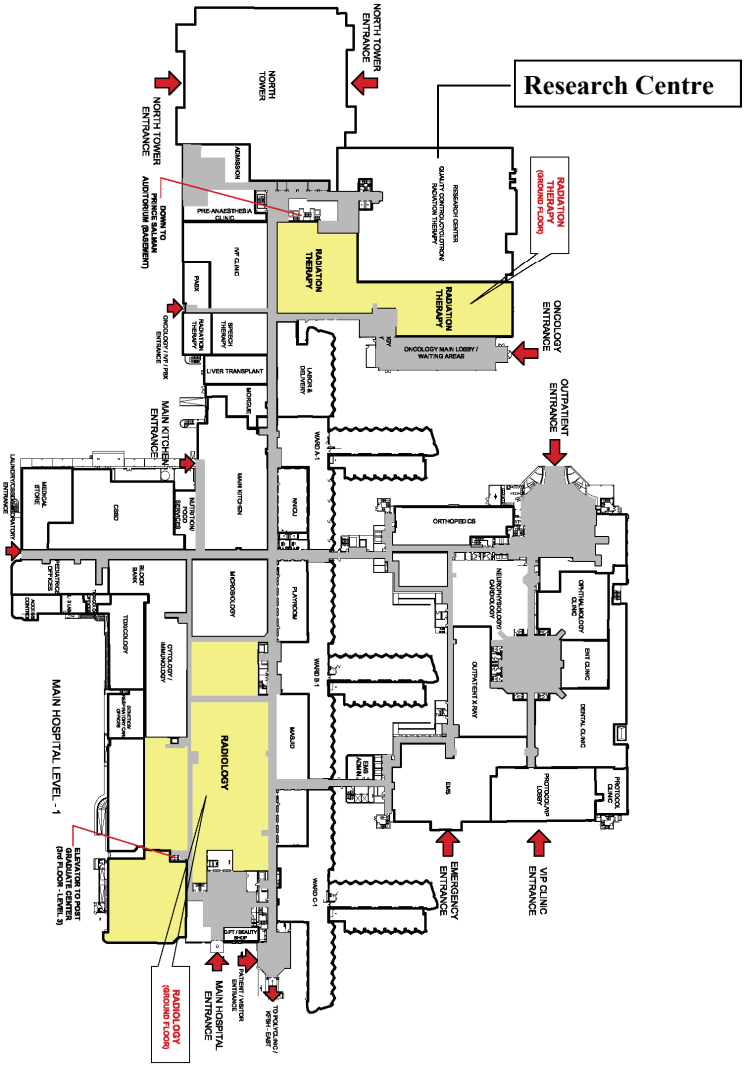
مدينة الملك عبدالعزيز
للعلوم والتقنية KACST

King Abulaziz City for Science and Technology Riyadh, Saudi Arabia

Venue Maps


EXISTING
KFSH& RC SITEPLAN
SCALE 1/ 1500M
NORTH
TANK FARM
GATE
MAIN GATE
AL-MA'ATHER
CAVE PARK
OUTPATIENT
GATE

Venue Maps


Research Centre
NORTH TOWER ENTRANCE
NORTH TOWER
NORTH TOWER ENTRANCE
DOWN TO PRINCE SALMAN AUDITORIUM (BASEMENT)
ADMISSION
PRE-ANAESTHESIA CLINIC
IVF CLINIC
PMDX
RADIATION THERAPY
RESEARCH CENTER
RADIATION THERAPY
RADIATION THERAPY (GROUND FLOOR)
ONCOLOGY ENTRANCE
ONCOLOGY MAIN LOBBY / WAITING AREAS
ONCOLOGY / VIP / PMX ENTRANCE
SURGICAL THERAPY
LIVER TRANSPLANT
LINDER & DELIVERY
MORGUE
WARD A-1
OUTPATIENT ENTRANCE
MAIN KITCHEN ENTRANCE
MAIN KITCHEN
NUTRITION FOOD SERVICE
MEDICAL STORE
CSSD
LAUNDRY/LINEN ENTRANCE
NICU
ORTHOPEDIC OB
MICROBIOLOGY
PLAYROOM
WARD B-1
BLOOD BANK
TOXICOLOGY
CYTOLOGY / HEMATOLOGY
MAIN HOSPITAL LEVEL - 1
RADIOLOGY
MASUD
NEUROPHYSIOLOGY / ONCOLOGY
OPHTHALMOLOGY CLINIC
ENT CLINIC
OUTPATIENT X-RAY
DENTAL CLINIC
EMS
EMS LOBBY
PROTOCOL LOBBY
PROTOCOL CLINIC
ELEVATOR TO POST GRADUATE CENTER (3rd FLOOR - LEVEL 3)
GIFT / BEAUTY SHOP
WARD C-1
EMERGENCY ENTRANCE
VIP CLINIC ENTRANCE
RADIOLOGY (GROUND FLOOR)
MAIN HOSPITAL ENTRANCE
PATIENT TRANSPORTATION
TO POLYCLINIC / OPBH - EAST

CONTACT INFORMATION

Biomedical Physics Department, MBC #03
King Faisal Specialist Hospital & Research Centre
P.O. Box 3354
Riyadh, 11211, Kingdom of Saudi Arabia
Tel: +966 (1) 4427879 (direct line)
Fax: +966 (1) 4424777
E-mail: josfin@kfshrc.edu.sa