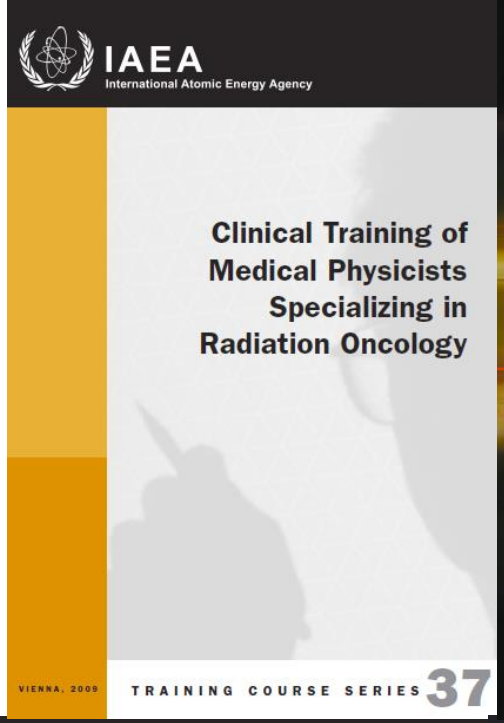
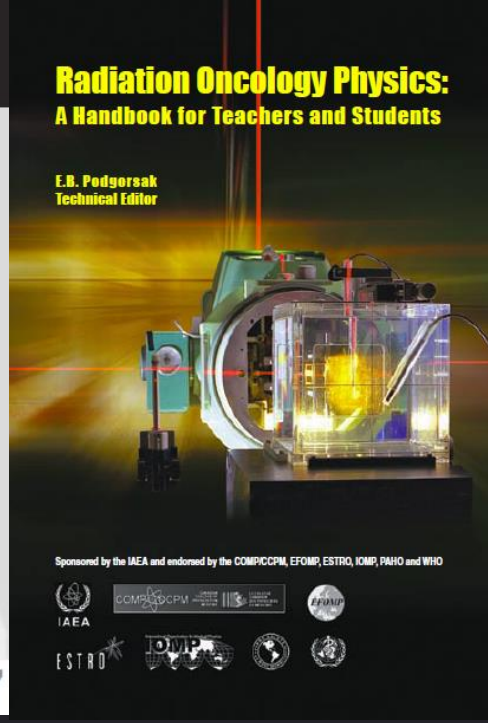
# Using modern technology to share medical knowledge worldwide

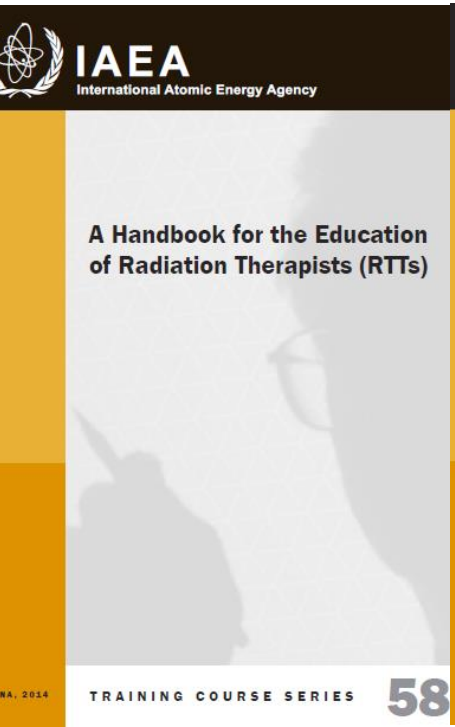
zubi-IAEA

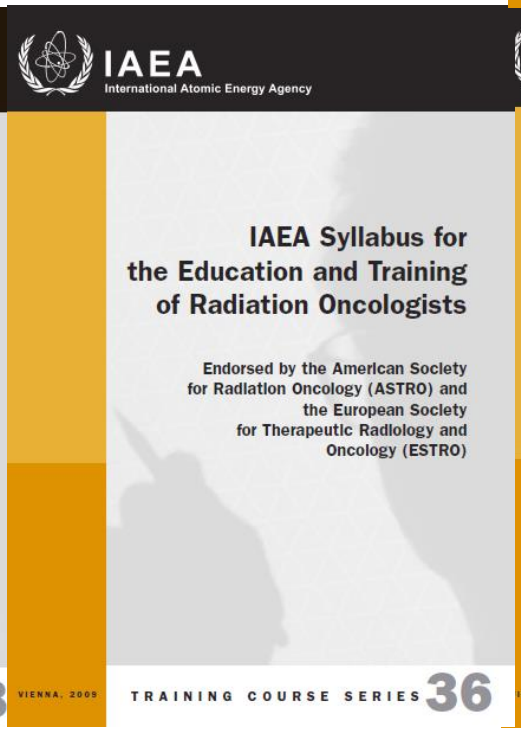
# IAEA - our role

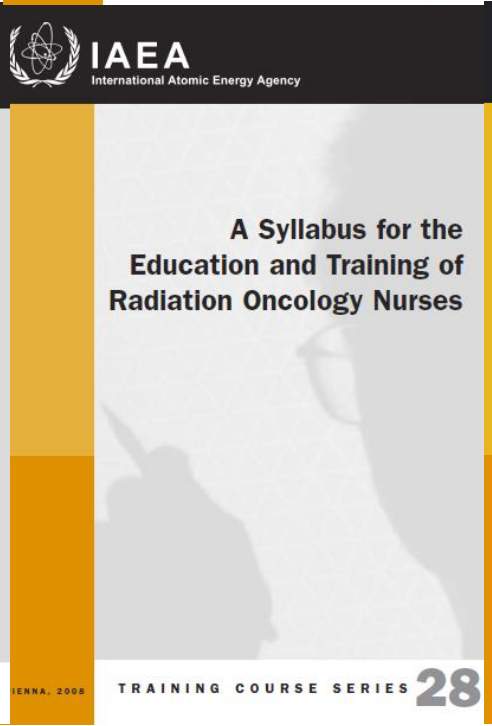
To educate and train…

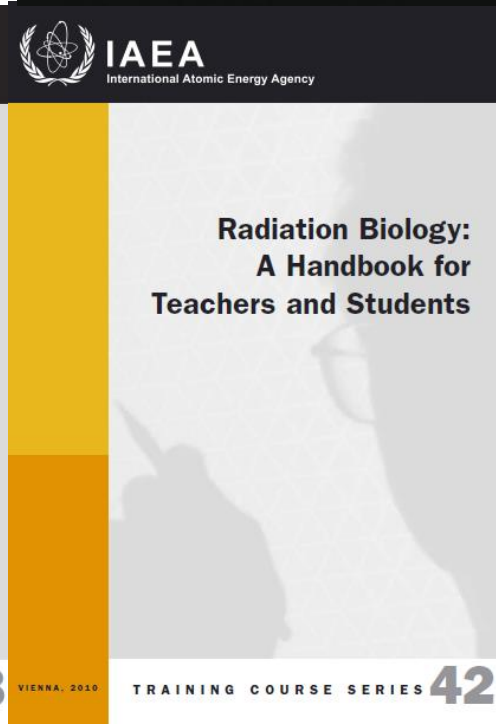


الوكالة الدولية للطاقة الذرية

IAEA

مخطط دراسي
لتعليم وتدريب أخصائيّي
العلاج الإشعاعي/أخصائيّي
التصوير الإشعاعي العلاجي

25

سلسلة الدورات التدريبية رقم ٢٥

فيينا، ٢٠٠٧

IA, 2014

IAEA
Organismo Internacional de Energía Atómica

Programa de estudios y capacitación del OIEA para la formación de radiooncólogos

Aprobado por la Sociedad Americana de Radioterapia y Oncología (ASTRO) y la Sociedad Europea de Radioterapia y Oncología (ESTRO)

COLECCIÓN CURSOS DE CAPACITACIÓN N° 36

IAEA
International Atomic Energy Agency

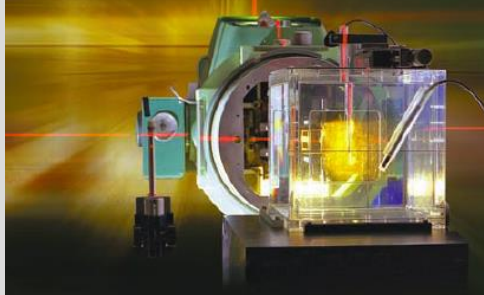
Clinical Training of Medical Physicists Specializing in Radiation Oncology

VIENNA, 2009

TRAINING COURSE SERIES 37

# Radiation Oncology Physics:
## A Handbook for Teachers and Students

E.B. Podgorsak
Technical Editor



Sponsored by the IAEA and endorsed by the COMP/CCPM, EFOMP, ESTRO, IOMP, PAHO and WHO

IAEA

ESTRO

IAEA
International Atomic Energy Agency

A Handbook for the Education of Radiation Therapists (RTTs)

NA, 2014

TRAINING COURSE SERIES 58

IAEA
International Atomic Energy Agency

IAEA Syllabus for the Education and Training of Radiation Oncologists

Endorsed by the American Society for Radiation Oncology (ASTRO) and the European Society for Therapeutic Radiology and Oncology (ESTRO)

VIENNA, 2009

TRAINING COURSE SERIES 36

IAEA
International Atomic Energy Agency

A Syllabus for the Education and Training of Radiation Oncology Nurses

IENNA, 2008

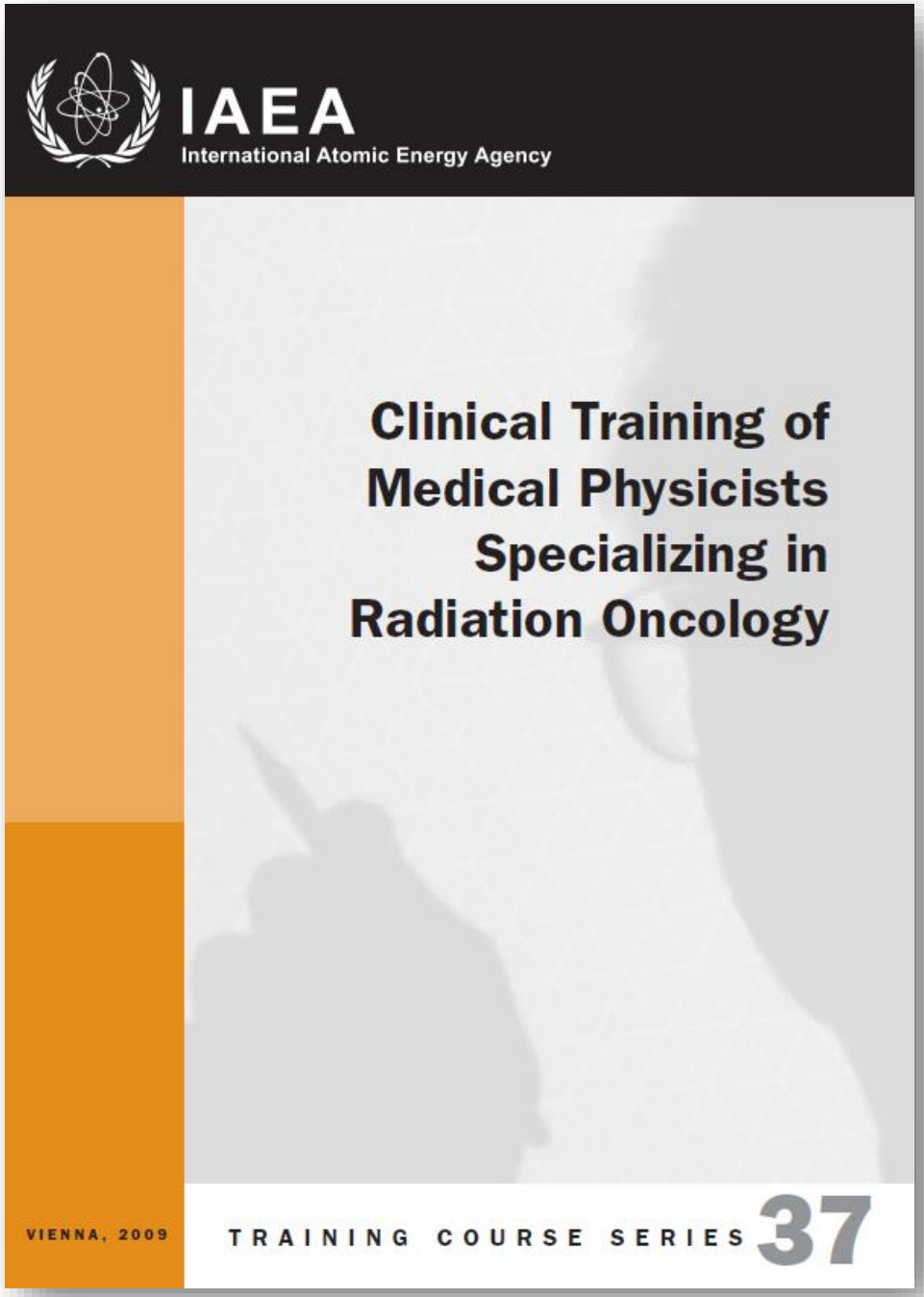
TRAINING COURSE SERIES 28

IAEA
International Atomic Energy Agency

Radiation Biology: A Handbook for Teachers and Students

VIENNA, 2010

TRAINING COURSE SERIES 42


IAEA
International Atomic Energy Agency
Clinical Training of Medical Physicists Specializing in Radiation Oncology
VIENNA, 2009
TRAINING COURSE SERIES 37

# Education – training

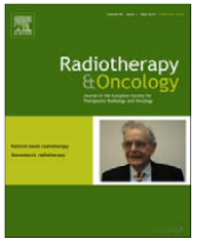
- Abroad in many countries
- Cost € 50-68k/professional/year
- Basic RT team € 1.8-2.5 million
- Essential to begin local training ASAP

Radiotherapy and Oncology 95 (2010) 129–132

Contents lists available at ScienceDirect

Radiotherapy and Oncology

journal homepage: www.thegreenjournal.com




Short communication

# Distance learning in the Applied Sciences of Oncology

Michael B. Barton *, Richard J. Thode

*CCORE and the South Western Clinical School, Liverpool Hospital, University of NSW, Australia*

ARTICLE INFO

*Article history:*
Received 15 September 2009
Received in revised form 21 December 2009
Accepted 14 February 2010
Available online 10 March 2010

*Keywords:*
Oncology education
Distance learning

ABSTRACT

*Background:* The major impediment to the expansion of oncology services is a shortage of personnel.
*Purpose:* To develop a distance learning course for radiation oncology trainees.
*Materials:* Under the sponsorship of the Asia Pacific Regional Cooperative Agreement administered by the International Atomic Energy Agency (IAEA), a CD ROM-based Applied Sciences of Oncology (ASOC) distance learning course of 71 modules was created. The course covers communications, critical appraisal, functional anatomy, molecular biology, pathology. The materials include interactive text and illustrations that require students to answer questions before they can progress.

*Materials:* The course aims to supplement existing oncology curricula and does not provide a qualification. It aims to assist students in acquiring their own profession's qualification. The course was piloted in seven countries in Asia, Africa and Latin America during 2004. After feedback from the pilot course, a further nine modules were added to cover imaging physics (three modules), informed consent, burnout and coping with death and dying, Economic analysis and cancer care, Nutrition, cachexia and fatigue, radiation-induced second cancers and mathematical tools and background for radiation oncology. The course was widely distributed and can be downloaded from http://www.iaea.org/Publications/Training/Aso/register.html. ASOC has been downloaded over 1100 times in the first year after it was posted. There is a huge demand for educational materials but the interactive approach is labour-intensive and expensive to compile. The course must be maintained to remain relevant.

IAEA

# Applied Sciences of Oncology
## Distance Learning Course

For technical questions contact medi+WORLD International on:

Phone: +61 (3) 9819 1224
Fax : +61 (3) 9819 3269
Email: admin@mediworld.com.au

Frequently Asked Questions (FAQs)
www.mediworld.com.au/ASOCD2006and2008.htm

Recommended System Requirements
PC with Sound Card
Min 6x speed CD Drive

Colour Display 800 x 600 pixels
Windows 98/NT/ME/XP
Pentium 2 Processor and above



Suggested citation: Applied Sciences of Oncology (CD-I), Version v3.0
Vienna: International Atomic Energy Agency 2008

ISBN: 978-92-0-155308-9

### Installation of ASO Courseware

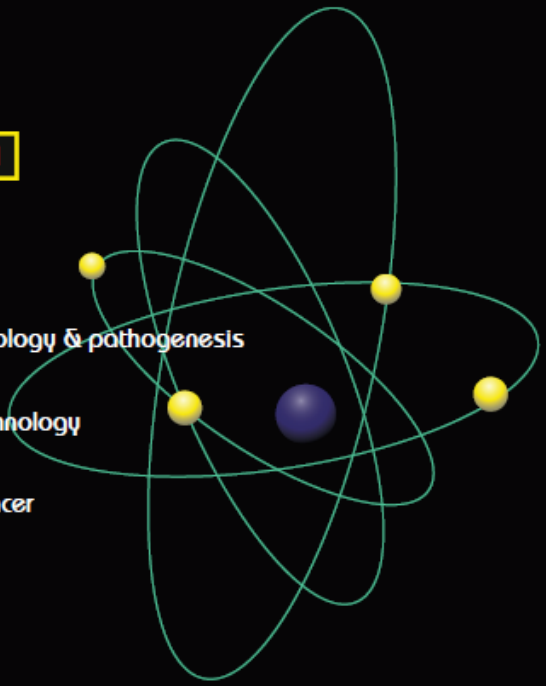
1. Insert either disc. Most computers will auto-run and install the courseware. If it does not auto-run, go to the CD drive and click on **install.exe**.
2. You will be asked to enter a user name when you install the program. The name you enter will appear on your Certificate of Completion.
3. Enter a user name and confirm by re-entering it.
4. Once installed, a shortcut will appear on your desktop and the program will close. To run the program for the first time, click on the shortcut.

Applied Sciences of Oncology Version v 3.0 2 CD Set

# Applied Sciences of Oncology
## Distance Learning Course

**SECOND EDITION**

- Communication
- Critical appraisal
- Functional anatomy
- Molecular biology, pathology & pathogenesis
- Patient care
- Physics & Radiation technology
- Radiobiology
- Systemic therapy for cancer



Version v3.0

2 CD Set

# IAEA on-line resources https://humanhealth.iaea.org/

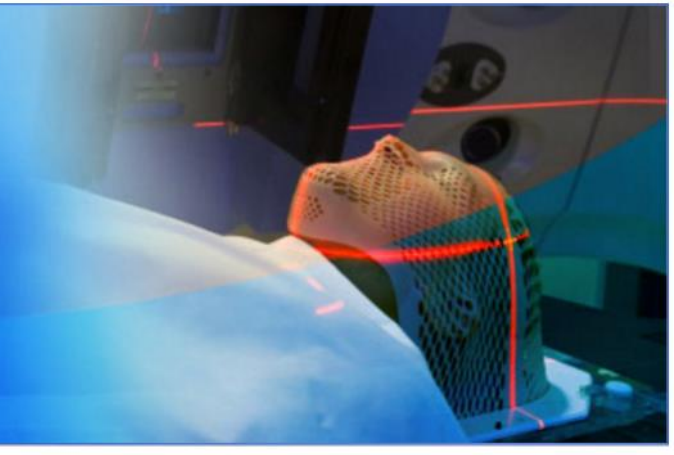
IAEA | Human Health Campus

Search Human Health

Home | Nuclear Medicine | Radiopharmacy | Radiation Oncology | Medical Physics | Technologists | Nutrition

## Resources and Learning for Health Professionals

The IAEA online information resource for health professionals working in nuclear medicine, radiation oncology, medical physics, and nutrition, providing insight into the different aspects of modern clinical practice.
more »



### Shortcuts

- Latest
- Events
- Links
- General Public Information
- Databases & Statistics
- IAEA Publications

### In the Spotlight

Health in Disasters

A Science and Technology Studies Practicum for Medical Students and Healthcare Professionals

### What's New

International Conference on Integrated Medical Imaging in Cardiovascular Diseases (IMIC 2016), 10 - 14 October 2016

Assessing Vitamin A Safety in Large-Scale Nutrition Intervention Programmes:Setting the Research Agenda

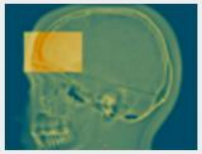
**Radiation Oncology**

- Making the Case for Radiotherapy in Your Country
- Setting up a Radiotherapy Department
- Treating patients
- Training
- Radiation Biology
- Improving the Quality of Service
- Radiation Oncology Research
- Radiation Oncology Library
- Collection of Recorded Radiotherapy Seminars

## Shortcuts

- Latest
- Events
- Links
- General Public Information
- Databases & Statistics
- IAEA Publications

# Radiation Oncology

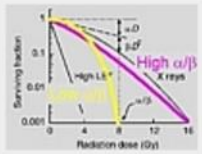


**Making the Case for Radiotherapy in Your Country**

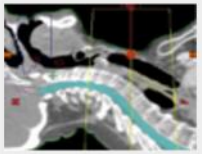
**Setting up a Radiotherapy Department**

**Treating patients**

**Training**

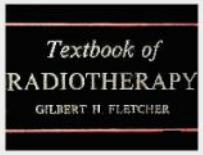



**Radiation Biology**



**Improving the Quality of Service**

**Radiation Oncology Research**




**Radiation Oncology Library**


**Collection of Recorded Radiotherapy Seminars**

**Medical Physics**

- Radiotherapy
- Diagnostic Radiology
- Nuclear Medicine
- The Medical Physicist
- Training Events
- E-learning

## Shortcuts

- Latest
- Events
- Links
- General Public Information
- Databases & Statistics
- IAEA Publications

# Medical Radiation Physics

**Radiotherapy**

**Diagnostic Radiology**

**Nuclear Medicine**

**The Medical Physicist**

**Training Events**

**E-learning**

Early this year, thanks to the initiative of the King Faisal Specialist Hospital and Research Centre and the Saudi Oncology Society in Saudi Arabia, an international Radiotherapy Plan Competition was initiated. The Radiotherapy Plan Competition is held remotely and interested participants can take part for free upon registration. ***More information***

Visit the dedicated YouTube Channel to be able to watch all the live-webinar videos.

IAEA

Programme of Action for Cancer Therapy

IAEA PACT

Return to IAEA.org | Search PACT

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# VUCCnet

There is a drastic shortage of accessible, up-to-date knowledge and quality training programmes for comprehensive cancer control. In some regions, local capacity to train and mentor health professionals is often insufficient, threatening the sustainability of cancer control programmes and the motivation of qualified staff to remain in their countries.

**imPACT:** Assessing Cancer Burden

**PMDS:** Developing Global Partnerships

**VUCCnet:** Promoting

# ESTRO SCHOOL OF RADIOTHERAPY AND ONCOLOGY

WWW.ESTRO.ORG

2016

ESTRO School

## POSTGRADUATE COURSES IN EUROPE

**BASIC CLINICAL RADIOBIOLOGY**
27 February - 2 March 2016 | Budapest, Hungary

**DOSE MODELLLING AND VERIFICATION FOR EXTERNAL BEAM RADIOTHERAPY**
6 - 10 March 2016 | Utrecht, The Netherlands

**MODERN BRACHYTHERAPY TECHNIQUES**
13 - 16 March 2016 | Florence, Italy

**PARTICLE THERAPY**
14 - 18 March 2016 | Krakow, Poland

**IMRT AND OTHER CONFORMAL TECHNIQUES IN PRACTICE**
3 - 7 April 2016 | London, UK

**TARGET VOLUME DETERMINATION - FROM IMAGING TO MARGINS**
10 - 13 April 2016 | Barcelona, Spain

**ESTRO 35 PRE-MEETING COURSES**
29 April 2016 | Turin, Italy

**ESNM/ESTRO COURSE ON MOLECULAR IMAGING AND RADIATION ONCOLOGY**
19 - 22 May 2016 | Lisbon, Portugal

**MULTIDISCIPLINARY MANAGEMENT OF PROSTATE CANCER**
22 - 26 May 2016 | Istanbul, Turkey

**LOWER GI: TECHNICAL AND CLINICAL CHALLENGES FOR RADIATION ONCOLOGISTS** NEW
25 - 27 May 2016 | Brussels, Belgium

**UPPER GI: TECHNICAL AND CLINICAL CHALLENGES FOR RADIATION ONCOLOGISTS** NEW
28 - 31 May 2016 | Brussels, Belgium

**ADVANCED BRACHYTHERAPY PHYSICS**
29 May - 1 June 2016 | Vienna, Austria

**BRACHYTHERAPY FOR PROSTATE CANCER**
5 - 7 June 2016 | Brussels, Belgium

**CLINICAL PRACTICE AND IMPLEMENTATION OF IMAGE-GUIDED STEREOTACTIC BODY RADIOTHERAPY**
5 - 9 June 2016 | Athens, Greece

**EVIDENCE BASED RADIATION ONCOLOGY**
***How to evaluate the scientific evidence and apply it to daily practice***
12 - 17 June 2016 | Porto, Portugal

**ADVANCED SKILLS IN MODERN RADIOTHERAPY**
19 - 23 June 2016 | Dublin, Ireland

**MULTIDISCIPLINARY MANAGEMENT OF HEAD AND NECK ONCOLOGY**
26 - 29 June 2016 | Florence, Italy

**HAEMATOLOGICAL MALIGNANCIES**
***In collaboration with ILROG***
1 - 3 September 2016 | Vienna, Austria

**PALLIATIVE CARE AND RADIOTHERAPY** NEW
***A course on prognosis, symptom control, re-irradiation, oligometastases***
8 - 10 September 2016 | Brussels, Belgium

**PHYSICS FOR MODERN RADIOTHERAPY**
***A joint course for clinicians and physicists***
11 - 15 September 2016 | Athens, Greece

**BASIC TREATMENT PLANNING**
9 - 13 September 2016 | Cambridge, UK

**ADVANCED TREATMENT PLANNING**
14 - 18 September 2016 | Cambridge, UK

**IMAGING FOR PHYSICISTS**
18 - 22 September 2016 | Florence, Italy

**COMPREHENSIVE QUALITY MANAGEMENT IN RADIOTHERAPY - RISK MANAGEMENT AND PATIENT SAFETY**
1 - 4 October 2016 | Avignon, France

**BIOLOGICAL BASIS OF PERSONALISED RADIATION ONCOLOGY**
17 - 20 October 2016 | Montpellier, France

**IMAGE-GUIDED AND ADAPTIVE RADIOTHERAPY IN CLINICAL PRACTICE**
23 - 27 October 2016 | Madrid, Spain

**BEST PRACTICE IN RADIATION ONCOLOGY – A WORKSHOP TO TRAIN RTT TRAINERS**
***In collaboration with the IAEA***
***Part I - Train the RTT (Radiation Therapists) trainers***
24 - 28 October 2016 | Vienna, Austria

**ESOR/ESTRO MULTIDISCIPLINARY APPROACH OF CANCER IMAGING**
10 - 12 November 2016 | Amsterdam, The Netherlands

**ACCELERATED PARTIAL BREAST IRRADIATION**
13 - 16 November 2016 | Paris, France

**4TH ESO-ESTRO MASTERCLASS IN RADIATION ONCOLOGY**
19 - 23 November 2016 | Prague, Czech Republic

## POSTGRADUATE COURSES OUTSIDE EUROPE

**IMAGE-GUIDED CERVIX CANCER RADIOTHERAPY - WITH A SPECIAL FOCUS ON ADAPTIVE BRACHYTHERAPY**
4 - 6 April 2016 | Toronto, Canada

**MULTIDISCIPLINARY MANAGEMENT OF BREAST CANCER**
20 - 22 May 2016 | Tokyo, Japan

**MULTIDISCIPLINARY MANAGEMENT OF LUNG CANCER**
26 - 28 June 2016 | Moscow, Russia

**BASIC CLINICAL RADIOBIOLOGY**
6 - 10 July 2016 | Chengdu, China

**EVIDENCE BASED RADIATION ONCOLOGY**
***How to evaluate the scientific evidence and apply it to daily practice***
20 - 25 November 2016 | Sydney, Australia

**PAEDIATRIC RADIATION ONCOLOGY**
3 - 5 December 2016 | Bangkok, Thailand

**ADVANCED TECHNOLOGIES**
6 - 10 December 2016 | Pune, India

## UNDERGRADUATE COURSES

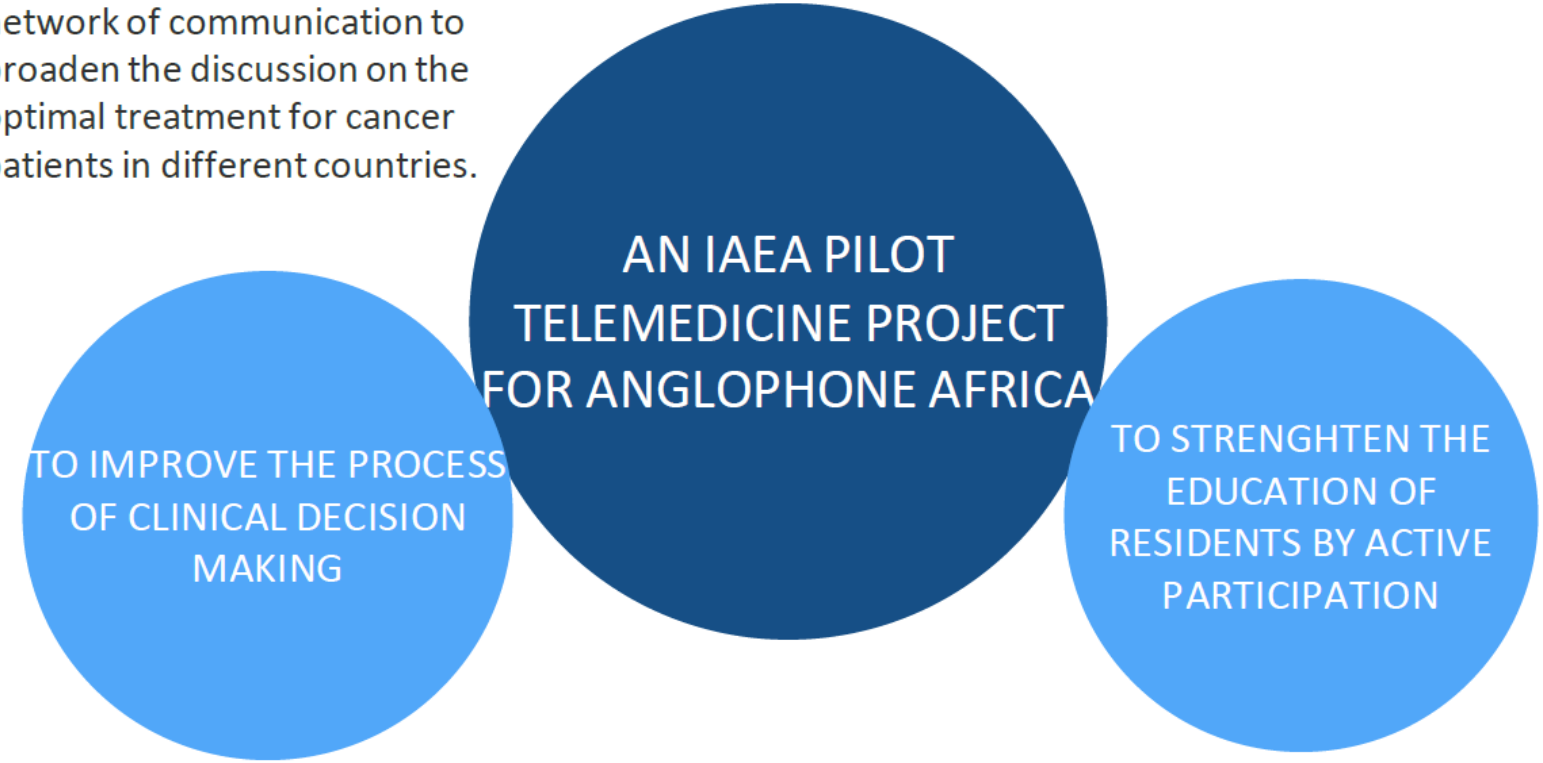
**MEDICAL SCIENCE SUMMER SCHOOL ONCOLOGY FOR MEDICAL STUDENTS** NEW
4 - 15 July 2016 | Groningen, The Netherlands

**ESO-ESSO-ESTRO MULTIDISCIPLINARY COURSE IN ONCOLOGY FOR MEDICAL STUDENTS** NEW
29 August - 9 September 2016 | Poznan, Poland

- MULTIMODAL CANCER TREATMENT
- RADIOTHERAPY TREATMENT PLANNING AND DELIVERY
- BIOLOGY
- IMAGING
- BEST PRACTICE

# AFRONET: AN INITIATIVE BY IAEA TO IMPROVE CLINICAL PRACTICE

The IAEA is facilitating a network of communication to broaden the discussion on the optimal treatment for cancer patients in different countries.

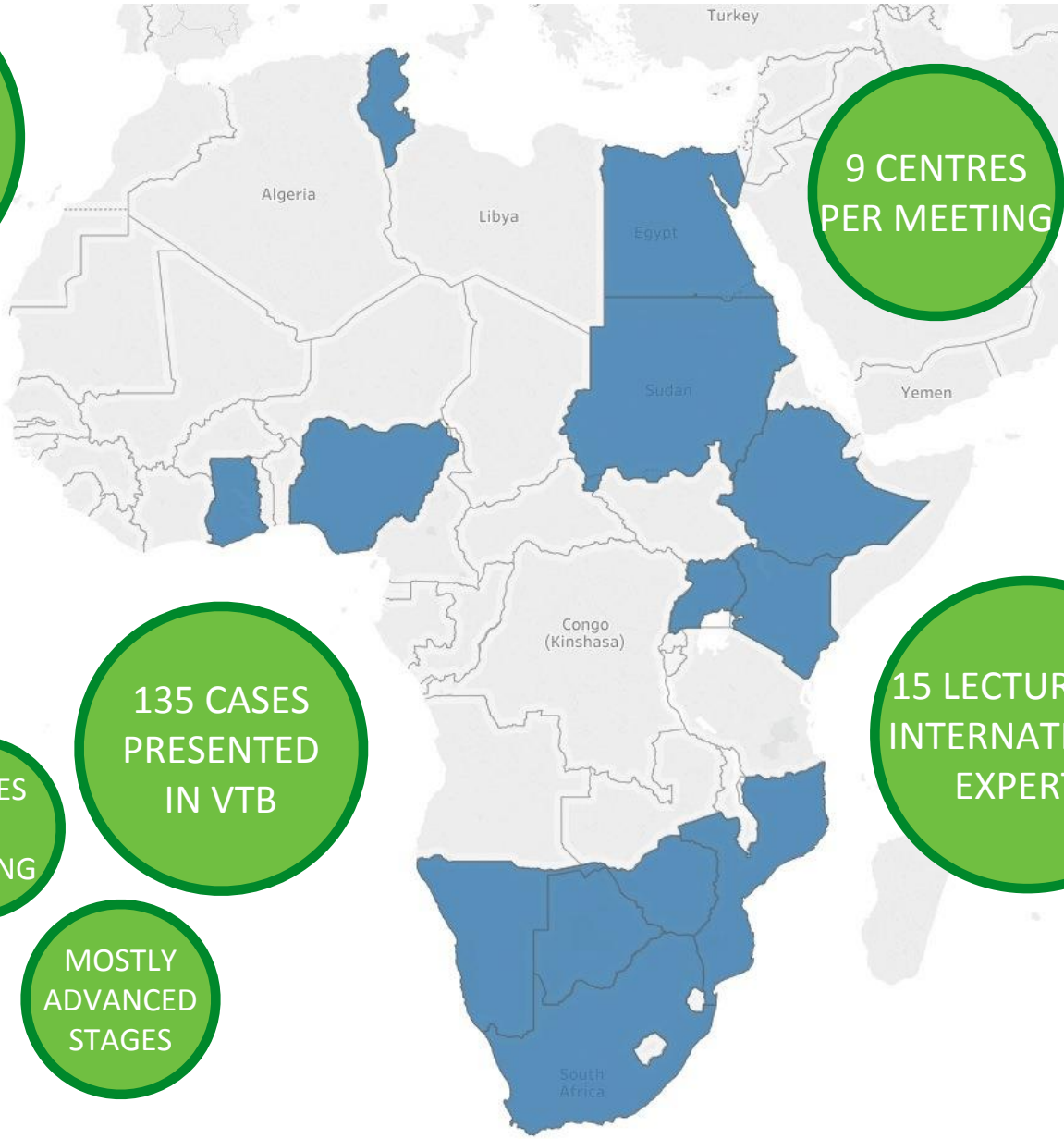


# AFRONET: some results from the pilot phase

50 AFRONET MEETINGS

SOME RESULTS

- Started in June 2012
- Mean age: 34y.
- 2/3 of cases are locally advanced
- GYN represented the most frequent site
- HIV+ patients: 7%




9 CENTRES PER MEETING

135 CASES PRESENTED IN VTB

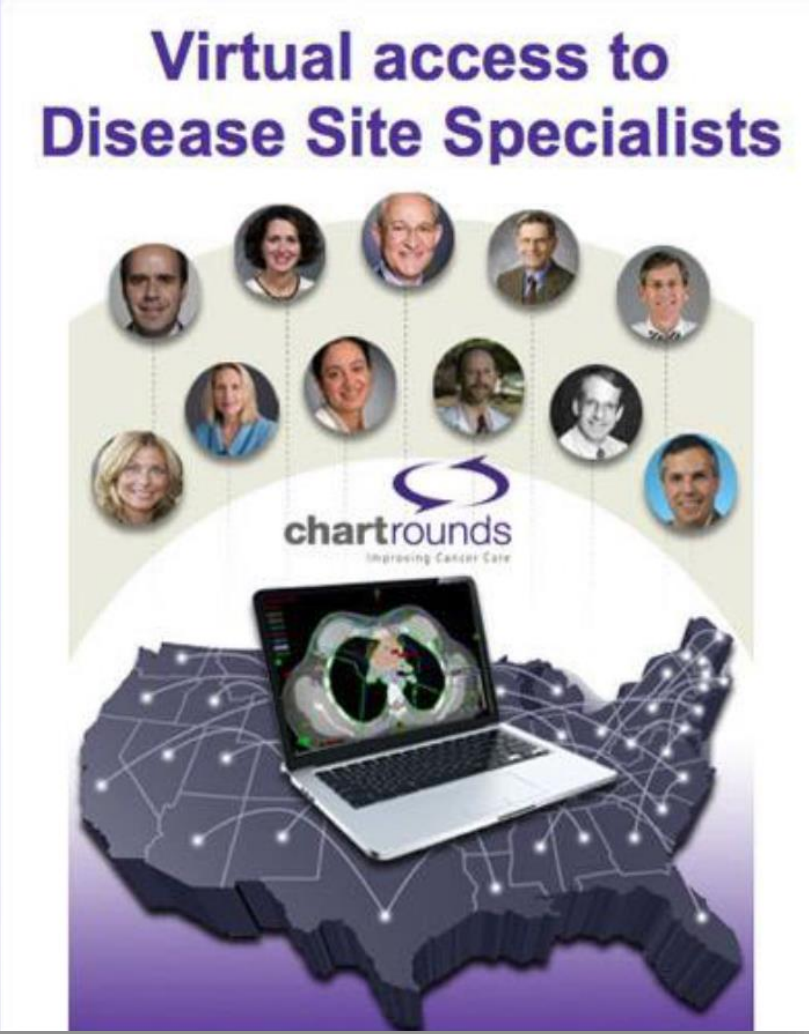
3 CASES PER MEETING

MOSTLY ADVANCED STAGES

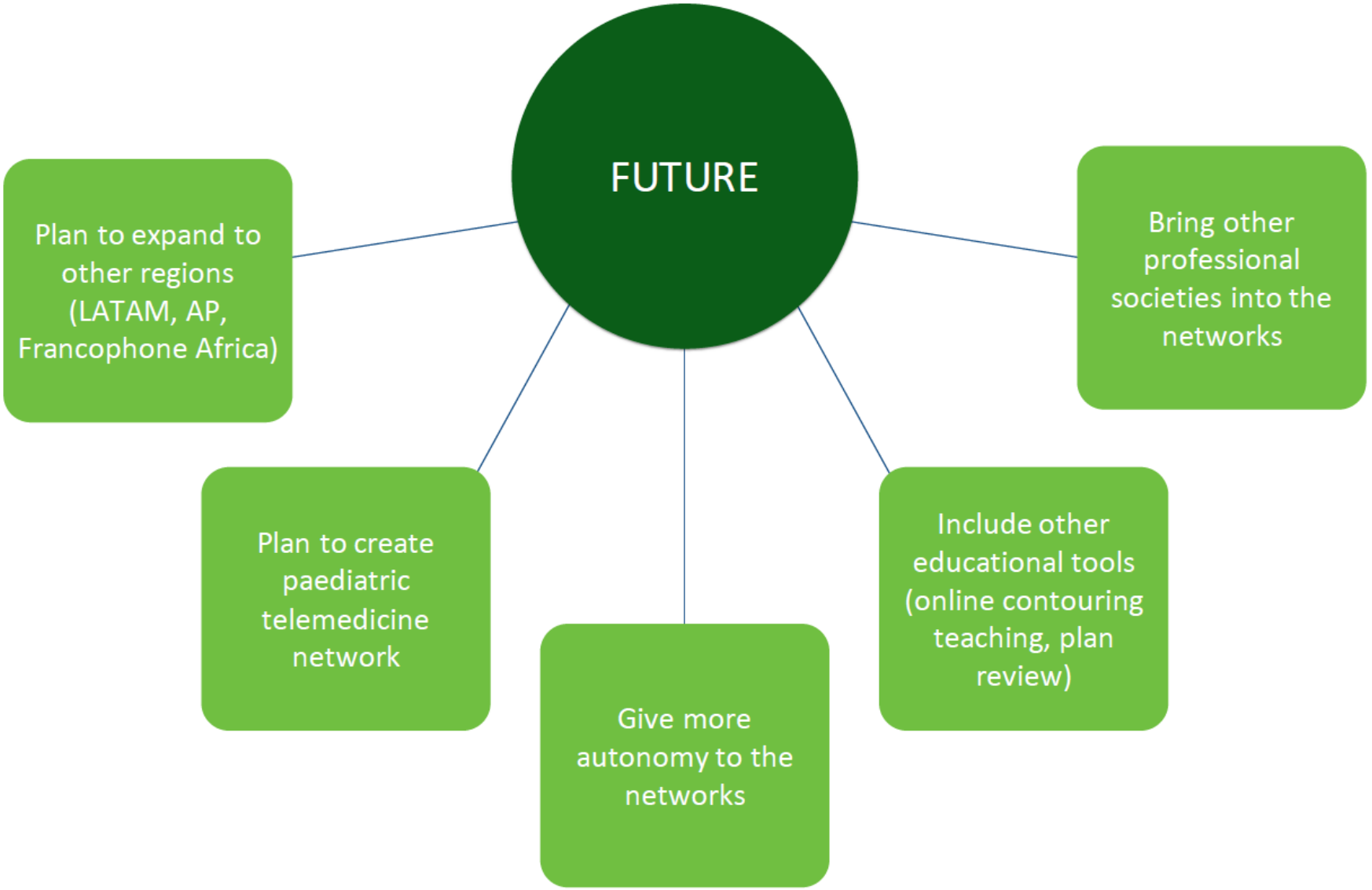
15 LECTURES BY INTERNATIONAL EXPERTS

## Chartrounds.com

- Virtual Meeting Website to review cases
- Using familiar RT department format of chart rounds
- Membership is free
- Specialists host on a volunteer basis
- Breast Cancer 2010, then 10 other disease sites, and Medical Physics in 2013



# AFRONET



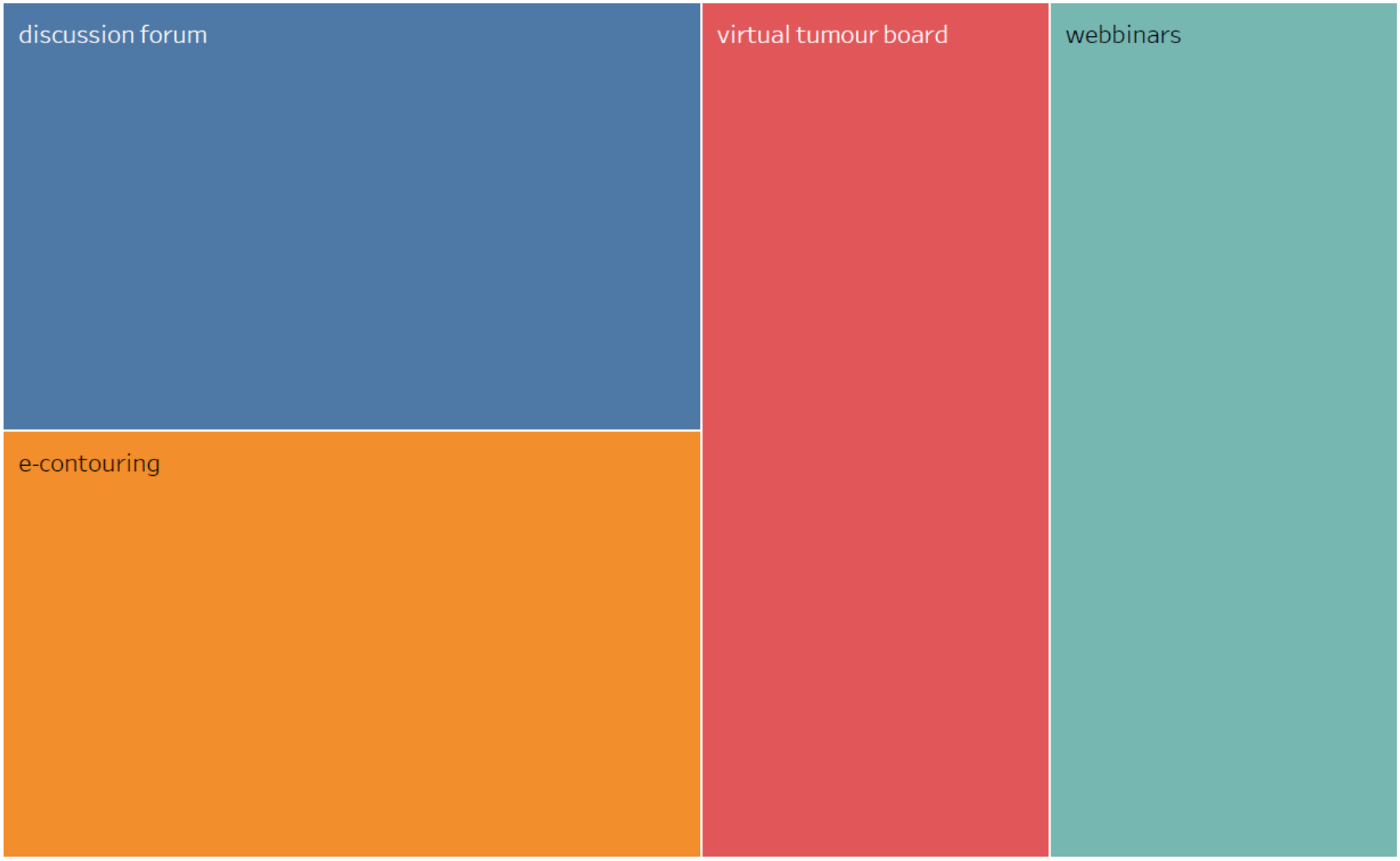

AFRICA RADIATION ONCOLOGY NETWORK (AFRONET): AN IAEA PILOT TELEMEDICINE PROJECT FOR ANGLOPHONE AFRICA

R.R. Prasad, E. Rosenblatt, A. Polo, N. Ndlovu, K. Hopkins, M.S. Zaghloul, G. Paris, V. Sharma, E. Zubizarreta, M. Abdel-Wahab

# Web-based educational networks

- Based on the AFRONET experience
- Monthly webinars, discussion of clinical cases, contouring sessions, discussion forums, etc.
- Should function as a virtual prof. society, enabling interaction between participants
- Coordinated by IAEA and the regions
- Possible partnership with regional prof. societies

# IAEA RT edu-nets - Latin America



- 4 regional networks
  - Africa
  - Latin America
  - SE Asia
  - Post-Soviet countries
- 1 network in paediatric radiotherapy