

# Strengthening the Effectiveness and Extent of Medical Physics Education and Training (RAS/6/077)

- 2014 – 2017
- LCC: Dr Donald McLean,  
Canberra Hospital
- 18 participating Member States

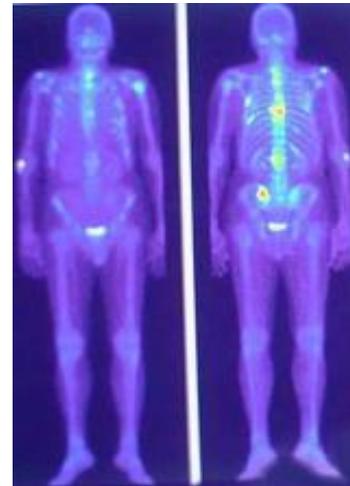
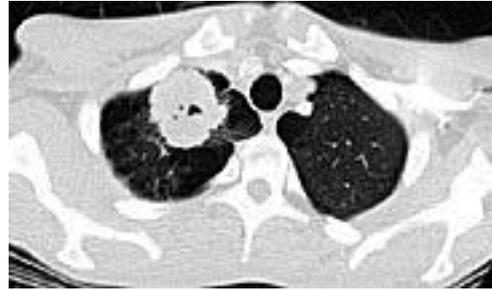


# Background

- The need for well-trained clinical physicists is critical for effective and safe applications of radiation medicine
- Rate of growth of radiation medicine in the region is much greater than the number of new MPs available
- Despite success of RAS/6/038, only resulted in an additional 70 to 80 qualified MPs. Deficit >>500!
- Some GPs are either in isolated situations or have a lack of experienced staff to be involved in supervision or both – and need access to MP education and training.
- RAS 6077 - training programs and their needed resources to be distributed electronically.

# Applications of medical physics

- Radiation Oncology
- Medical Imaging
- Nuclear Medicine
- Others (e.g. Pathology, Haematology)



# Project Objective

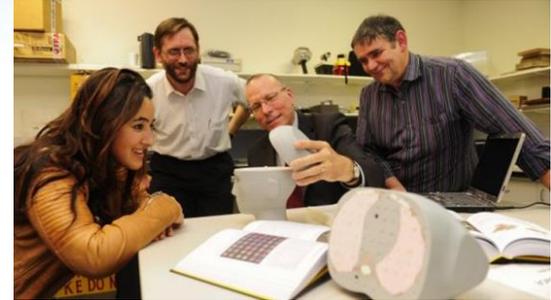
The development of an e-learning platform to allow regionally remote MPs and training residents to have access to online resources and to participate in supervised training programs (utilising programs developed in RAS6038).



# Project activities in 2015 (1)

## Technical Meeting

Moodle website development to support medical physics clinical training – *AUL*,  
*25-28 May 2015*



Courtesy *Canberra Times*  
June 4, 2015

## Summary/ Outcomes

- *AMPLE (Advanced Medical Physics Learning Environment):*
  - significant improvements in admin and resources delivery
  - areas of assessment and supervision supported
  - communication enhanced through forums, discussion boards etc
- IT support to help to make more engaging
- For remote sites – on-line orientation programs

# Project activities in 2015 (2)

## Expert Missions

Development a set of minimum standards and recommendations for education and clinical training centres with the collaboration of relevant regional professional bodies - *MAL, 21-23 Jan*



Development of e-learning structure in clinical training of medical physicists in nuclear medicine - *THA, 23-25 Feb*

Develop guidelines for assessment and certification of medical physics trainees - *NEP, 30 Nov -3 Dec*



## **Project activities in 2015 (3)**

### **Home-based assignment**

Further development of the AMPLE Moodle learning environment – Caroline IRLE (*AUL*), *9-13 Mar 2015*

### **Home-based assignment**

Enhancements to AMPLE e-learning environment – Anne PERKINS (*AUL*), *22-26 Jun 2015*

# Progress during 2015

- Building on the work of RAS6038
- e-learning platform created - AMPLE: **A**dvanced **M**edical **P**hysics **L**earning **E**nvironment – many GPs applied to use
- Position paper on accreditation of Medical Physics MSc and clinical training programs
- Certification processes for individual medical physics professionals (meetings in MAL/ NEP)
- Needs and resources survey - completed
- Survey of training benchmarked against IAEA standards - completed



# Project surveys – outcome highlights

While there is expected great variety between GPs, generally:

- Number of external beam units << the number required
- ROMP workforce << current equipment levels (benchmarked)
- On current training levels, many years before ROMP workforce adequate in many of the less developed GPs
- Mid-term coordination meeting – recommended publishing the results of the surveys (including GP results) as IAEA document
- How can RCA assist in dissemination of the results to maximise impact in the GPs to stimulate improvement of conditions?

# Planned activities for 2016

- Mid-term review meeting – IND, 21-15 March
- e-learning pilots will be launched in early 2016 - IND and THA; others (PHI, BGD, INS) in June/July
- Continued strengthening of AMPLE through added resources and structure review
- Position papers to be published and/or distributed on:
  - Accreditation of Medical Physics MSc and clinical training programs
  - Certification processes for medical physics professionals
  - Results of surveys
- Meeting to establish editorial board for AMPLE



# Constraints/ Issues

- 4 year term restricts the ability to properly pilot the effectiveness of the e-learning platform when considering:
  - There are 3 specialities in MP, all requiring attention
  - Each clinical training program takes a minimum of 2 years
  - Roll out for LDCs cannot start until 2016 (second last year) as the platform needs to be fully tested
  - LDCs most need this facility. Unlikely that the pilots would be completed within the life of the project
- Visibility of MPs in the proper and safe conduct of advanced radiation medicine
- Difficulties for remote locations (or locations with small numbers of experienced MPs, to be able to participate in clinical training)

# Recommendations

- That NRs promote the survey results regarding the status of MP activity in radiation medicine, and education opportunities, within the respective GPs.
- The longevity of the MP-themed projects is addressing :
  - The need for qualified clinical MPs and the time needed to do clinical training, especially for countries in developmental phases in radiation medicine
  - The impact the AMPLE platform is expected to have if fully tested for a range of environments

# Comments and Questions

