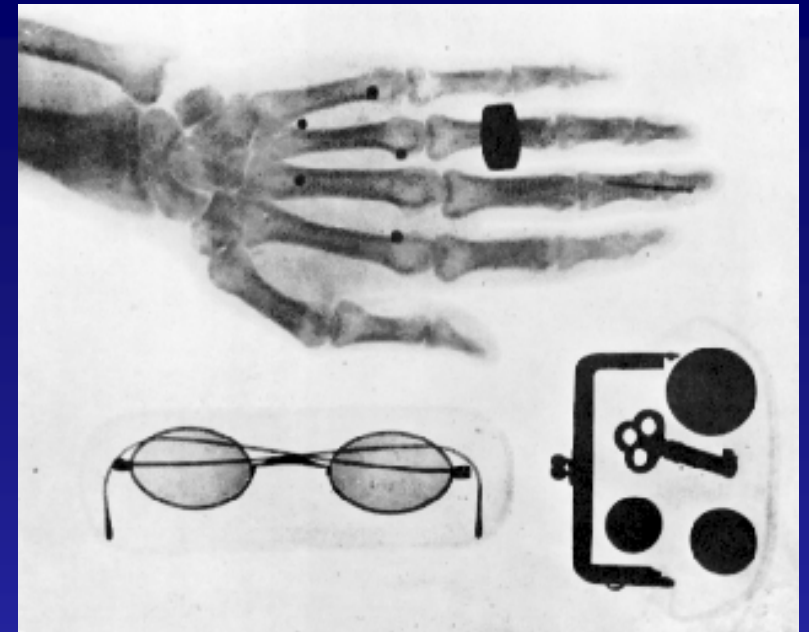
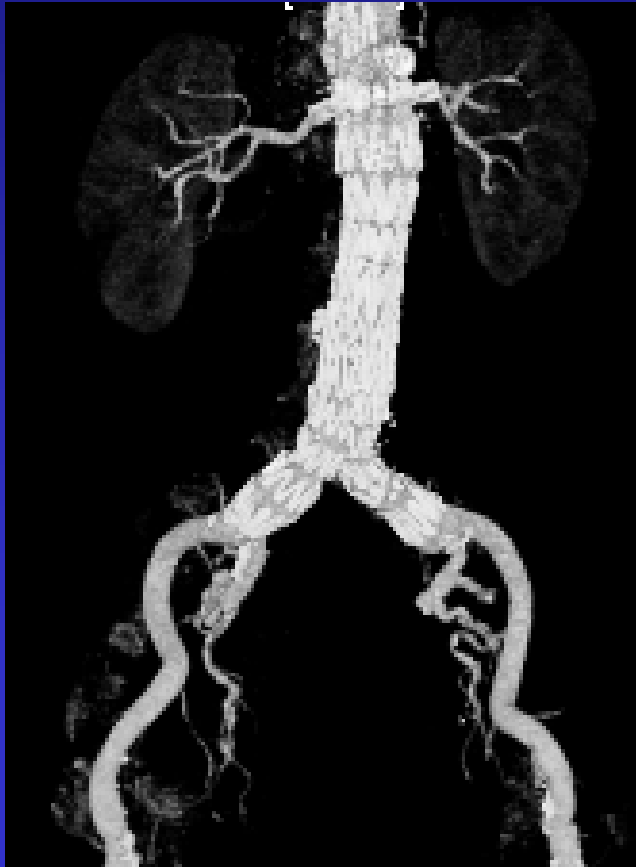


ICRP & Radiological Protection of Patients



Dr. Claire Cousins

**Consultant Vascular & Interventional Radiologist
Addenbrooke's Hospital, Cambridge UK &
Chair of ICRP Committee 3**

**ICRP Committee 3
& Radiological
Protection in
Medicine**

Committee 3 Mission Statement

- C3 is concerned with the **protection of persons and unborn children** when ionising radiation is used for medical diagnosis, therapy or for biomedical research
- C3 is also concerned with the assessment of the medical consequences of **accidental exposures**

RP in Medicine - Fundamentals

Medical exposures include:

- **Patients i.e. exposure of individuals for diagnostic, fluoroscopically guided interventional and therapeutic purposes**
- **Non-medical comforters and carers of patients**
- **Volunteers involved in biomedical research**

RP in Medicine - Fundamentals

Medical exposures are:

- **Deliberate**
- **Voluntary**

And should....

- **Do more good than harm**



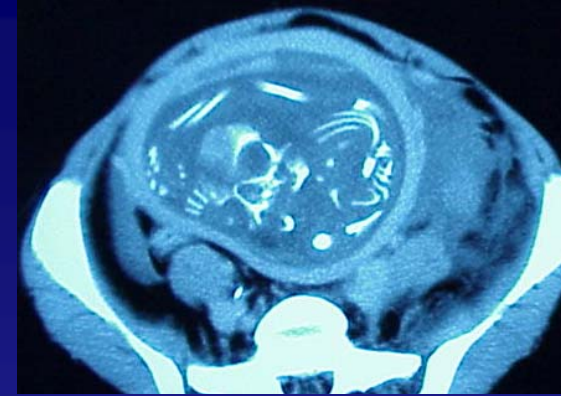
**Committee 3
Publications &
Future Work**

Committee 3 Publications

Since 2000, Committee 3 has

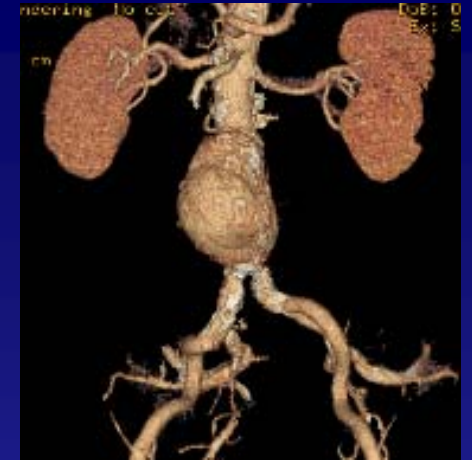
- **11 ICRP Publications (out of a total 22)**
- **Aimed at producing**
 - **Focussed publications**
 - **Relevant to medical and allied health professionals**

General Guidance



- **Pregnancy and medical radiation (Publ 84)**
- **Radiation and your patient: A guide for medical practitioners + Diagnostic reference levels in medical imaging – review and additional advice (Supporting Guidance 2)**
- **Radiological protection in medicine (Publ 105)**

Diagnostic & interventional



- Avoidance of radiation injuries from medical interventional procedures (Publ 85)
- Managing patient dose in computed tomography (Publ 87)
- Managing patient dose in digital radiology (Publ 93)
- Managing patient dose in multidetector computed tomography (MDCT) (Publ 102)

Radiotherapy & Nuclear Medicine



- **Prevention of accidental exposures to patients undergoing radiation therapy (Publ 86)**
- **Release of patients after therapy with unsealed radionuclides (Publ 94)**
- **Prevention of HDR brachytherapy accidents (Publ 97)**
- **Radiation safety aspects of brachytherapy for prostate cancer using permanently implanted sources (Publ 98)**

Work In Progress

Final editing before publication:

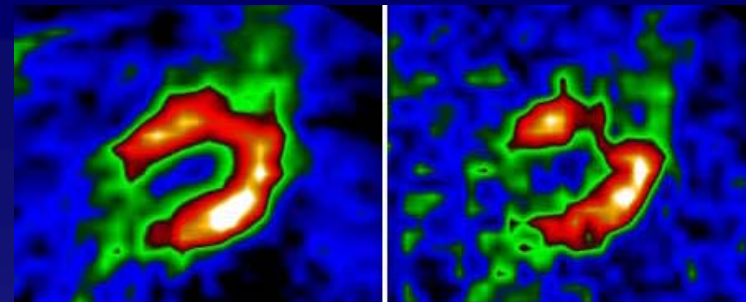
Radiation dose to patients from
radiopharmaceuticals

Publication 106

Prof. S. Mattsson

Includes: Radiation exposure of hands in radiopharmacies;
monitoring the doses and optimisation of protection

Prof. J. Liniecki



Work In Progress

Advanced documents:

Minimizing the risk of unintended exposures
from new radiation therapy technologies

Dr. P. Ortiz-Lopez



Work In Progress

Advanced documents:



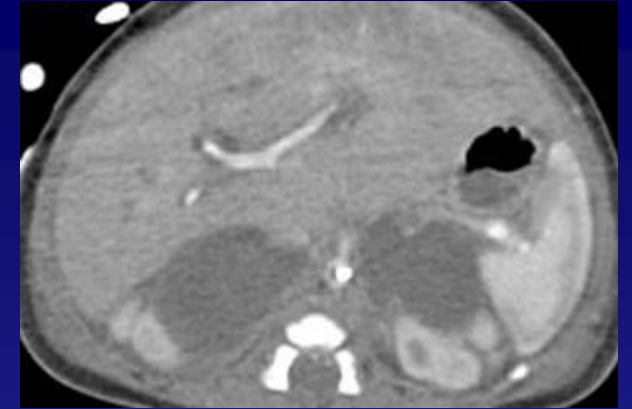
Radiation protection in cardiology

Dr. C. Cousins

Evaluation and management of secondary cancer risk in radiation therapy (with special reference to modern techniques)

Prof. JM. Cosset

Work In Progress



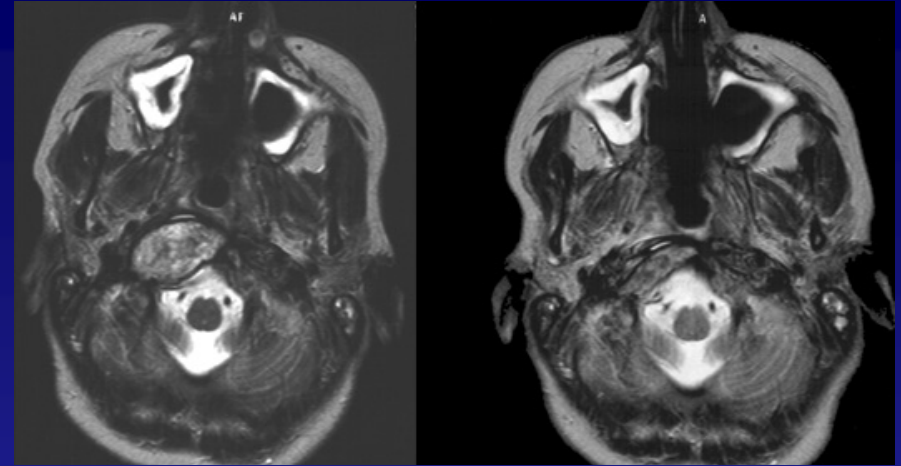
- **Protecting children: diagnostic techniques involving ionising radiation**
- **RP training for medical professionals performing diagnostic and interventional procedures and for medical students**
- **Avoiding adverse radiation effects to doctors performing fluoroscopy guided procedures**
- **Effective dose (joint WP C2/C3/C4)**

Future Work

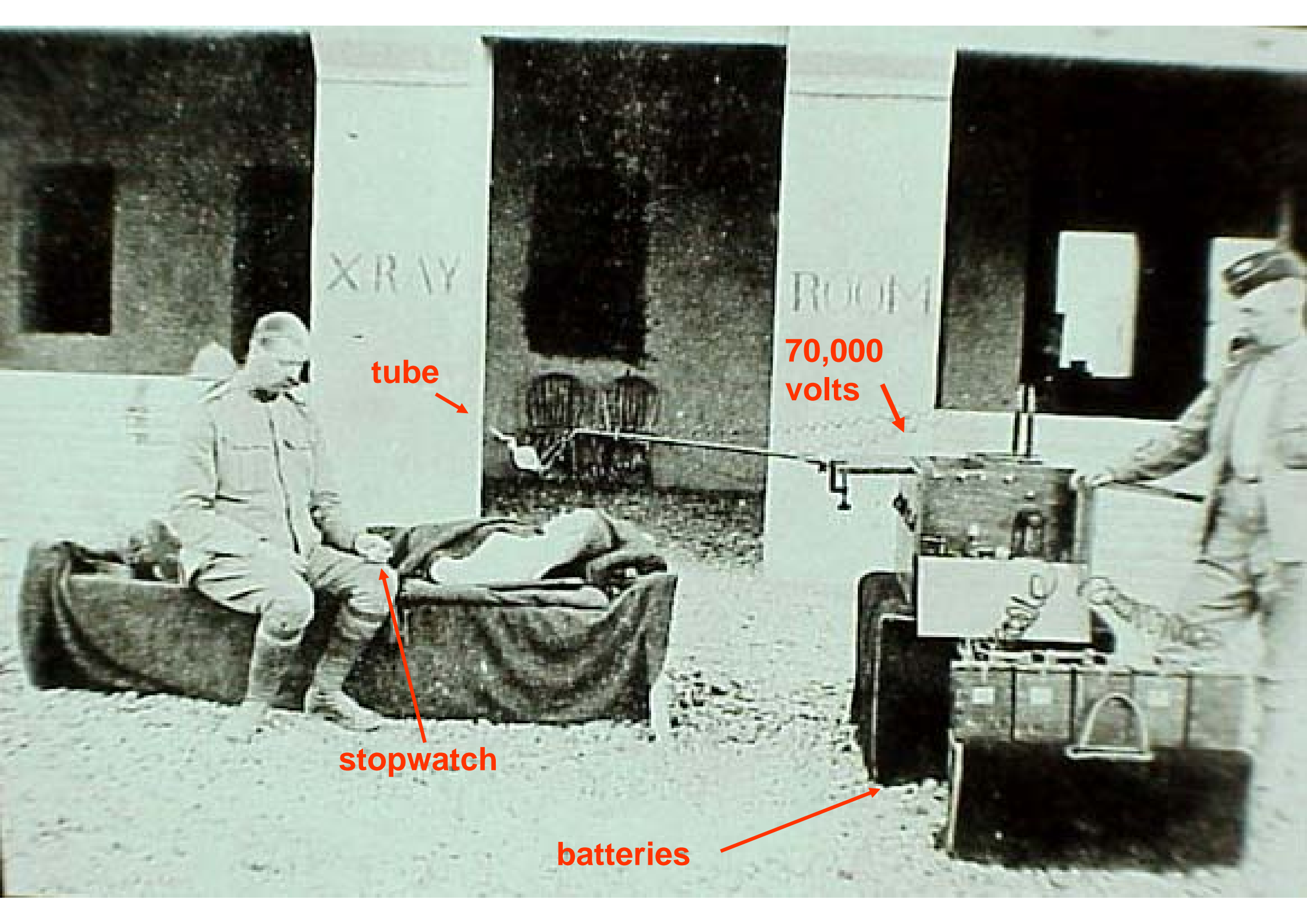
- **Screening with ionizing radiation in asymptomatic individuals**
- **Widening the use of reference levels for interventional and digital radiology**
- **Follow-up of persons accidentally exposed**



Future Work



- Occupational protection in brachytherapy
- Radiation protection in charged particle radiotherapy
- Dose reduction resulting from new imaging technology



XRAY ROOM

70,000 volts

tube

70,000 volts

stopwatch

batteries