

# CREAL Radiation Programme

Elisabeth Cardis

**ISGlobal  
Alliance**



## BACKGROUND

- *Overall objective*
  - To provide answers to current questions in radiation protection and public health ...

### *Ionising and non-ionising*

- *Motivation*
  - ... To ensure **adequate protection** of members of the general public, workers and patients

*Experience as coordinator, WP leader, Task leader in numerous EC projects  
... since FP4*

# Radiation studies – strategy

- Study effects of generally low doses of radiation in relevant populations – **classical and molecular epidemiology**
  - ✓ *Radiation type*
  - ✓ *Exposure pattern*
  - ✓ *Factors (host and environmental) that may modify risks*
- Study determinants of exposures
  - ✓ *improve exposure assessment & estimate uncertainties*
- Conduct health impact assessments
- Participate in multinational & multidisciplinary efforts for
  - ✓ *Integrating radiation research*
  - ✓ *Identifying key research needs*
  - ✓ *Developing a European strategic research agenda*
  - ✓ *Input to risk management and communication*

# Overview – projects

- Medical exposures

- Epi-CT                      Prospective cohort studies of children with substantial diagnostic radiation exposure
- Spain-CCSS                Cohort study of paediatric cancer survivors
- PROCARDIO                Low dose radiations and risk of cardiovascular diseases
- GENE-RAD-RISK        Gene-radiation interactions: risk of breast cancer
- Other studies with a radiation component
  - MCC-Spain, birth/childhood cohorts, EPILYMPH...

- Occupational exposures

- Liquidators                Leukaemia and thyroid cancer in Chernobyl liquidators
- ALPHA-RISK                Lung cancer and leukaemia risk in U and Pu workers
- INWORKS                  Health effects of low doses of radiation among nuclear industry workers (follow-up of 15 country study)
- CURE                        Concerted Action for an Integrated (biology-dosimetry-epidemiology) Research project on Occupational Uranium
- Cataracts                  Doses and Risk of cataracts and brain tumours following occupational radiation exposures (interventional cardiologists, liquidators)

# Overview – projects

- Environmental exposures
  - INT-Thyr Integrating biomarkers into studies of thyroid cancer after Chernobyl
  - Thyroid cancer Case-control study in Belarus and Russia in young people following the Chernobyl accident
  - CHILD-THYR Meta analysis of studies of I-131 in children
  - Interest in 3 generation studies (Techa River, ..)
- Medical surveillance, sociological consequences and preparedness for nuclear accidents
  - OPERRA Lead subtask on lessons learned about health effects from radiation accidents
  - SHAMISEN Nuclear emergency situations: improvement of medical and health surveillance
- Integration / strategic planning / health impact assessment
  - DoReMiNet European low dose research network towards multidisciplinary integration
  - MELODI Multidisciplinary European Low Dose Initiative
  - OPERRA Open Project for European Research Area
  - CONCERT Part of MELODI SRA WG - LTP





# The people



Thank you for your attention!