

# Towards Safe, Optimized and persoNalized radiOlogy and RAdiotherapy procedures for pregnant patients

**SONORA**

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# Context

- A considerable number of pregnant patients are **exposed** to ionizing radiation each year
  - Diagnostic and interventional radiology (DIR)
  - Radiation therapy (RT)
- There is a need for **dedicated tools, phantoms, detectors** and **well-established** protocols for fetal dosimetry.
- EURADOS
  - **WG9** - Radiation dosimetry in radiotherapy
  - **WG12** - Dosimetry in medical imaging



# Aims and expected project benefits

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## AIMS

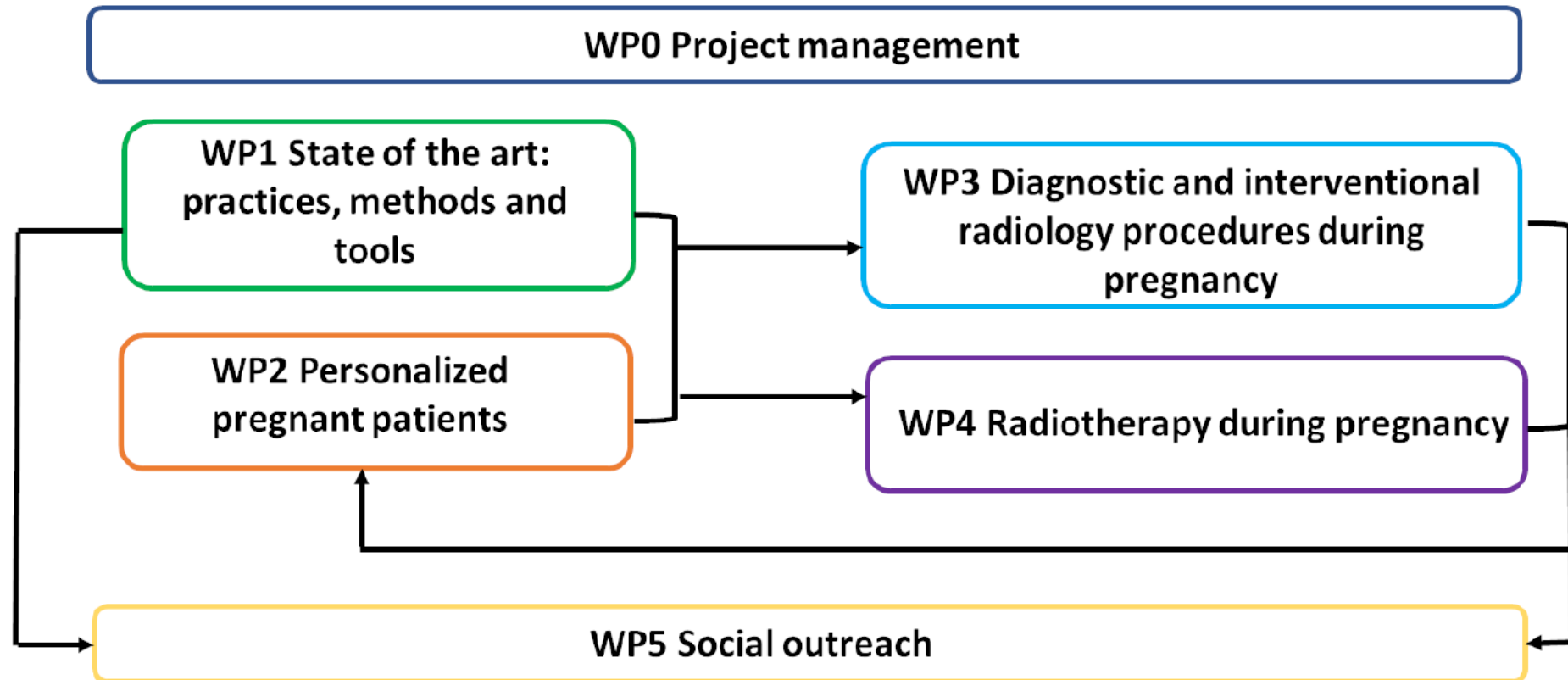
- Identification of the **factors** that affect the **fetal dose** estimations in methods used in clinical practice
- **optimization** of radiological imaging techniques of pregnant patient
  - Computational phantoms
  - Physical phantoms
- Investigation of fetal doses and dosimetry methods for different **DIR** procedures, **RT** techniques and **patient anatomies**
  - Imaging in RT process
- providing **good practice guide** of the dosimetry in both DIR and RT

## BENEFITS

- development of personalized medicine and improvement of radiation protection of pregnant patients,
- quality of risk-benefit communication with the patient,
- harmonization of practices for pregnant patients throughout Europe.

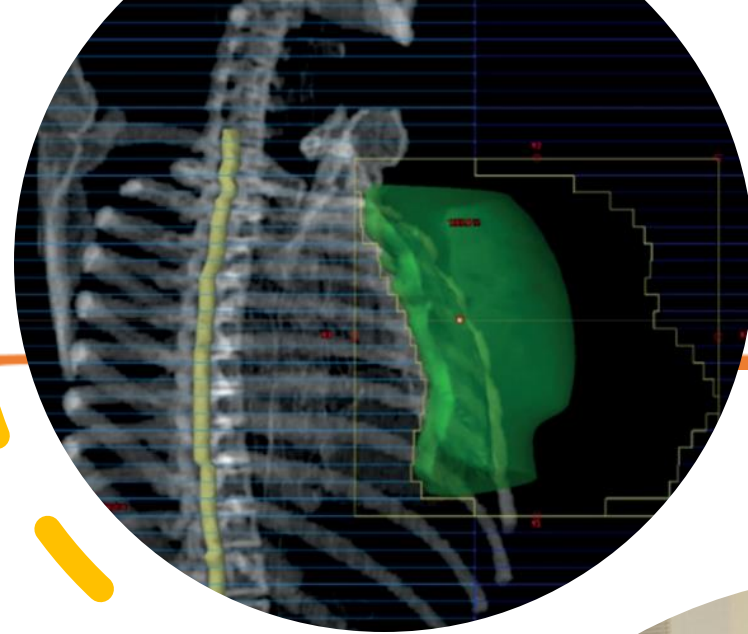
# Project organization

## LINKS BETWEEN WORK PACKAGES



# M&M

- 202 PMs
- 48 months
- Computational methods
- Physical phantom development
- Experimental campaigns
- Software development
- Workshops with target audience



# The team – 17 institutions 12 countries

sck cen



**IRSN**  
INSTITUT DE RADIOPROTECTION  
ET DE SÛRETÉ NUCLÉAIRE



ΕΛΛΗΝΙΚΗ ΕΠΙΤΡΟΠΗ ΑΤΟΜΙΚΗΣ ΕΝΕΡΓΕΙΑΣ  
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PIANOFORTE Open Call - SONORA

