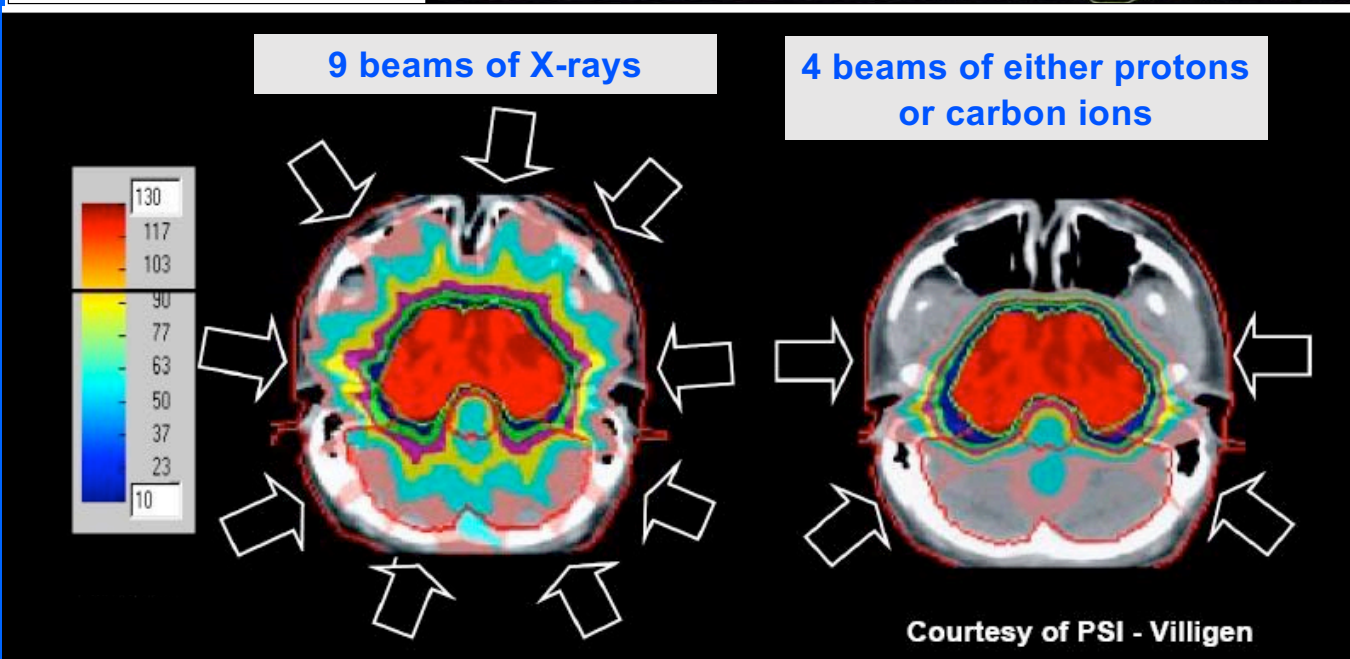
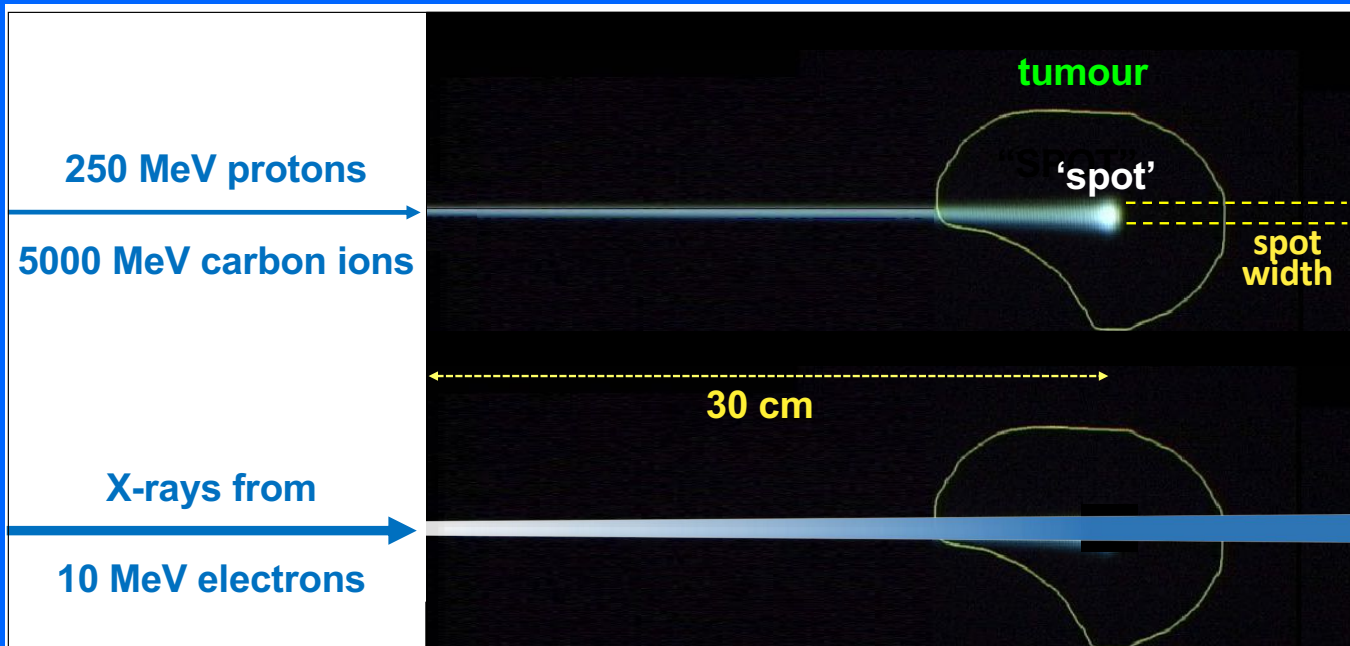


# PREMIO ALDO MENZIONE

**Ugo Amaldi**

Fondazione TERA e Fondazione CNAO

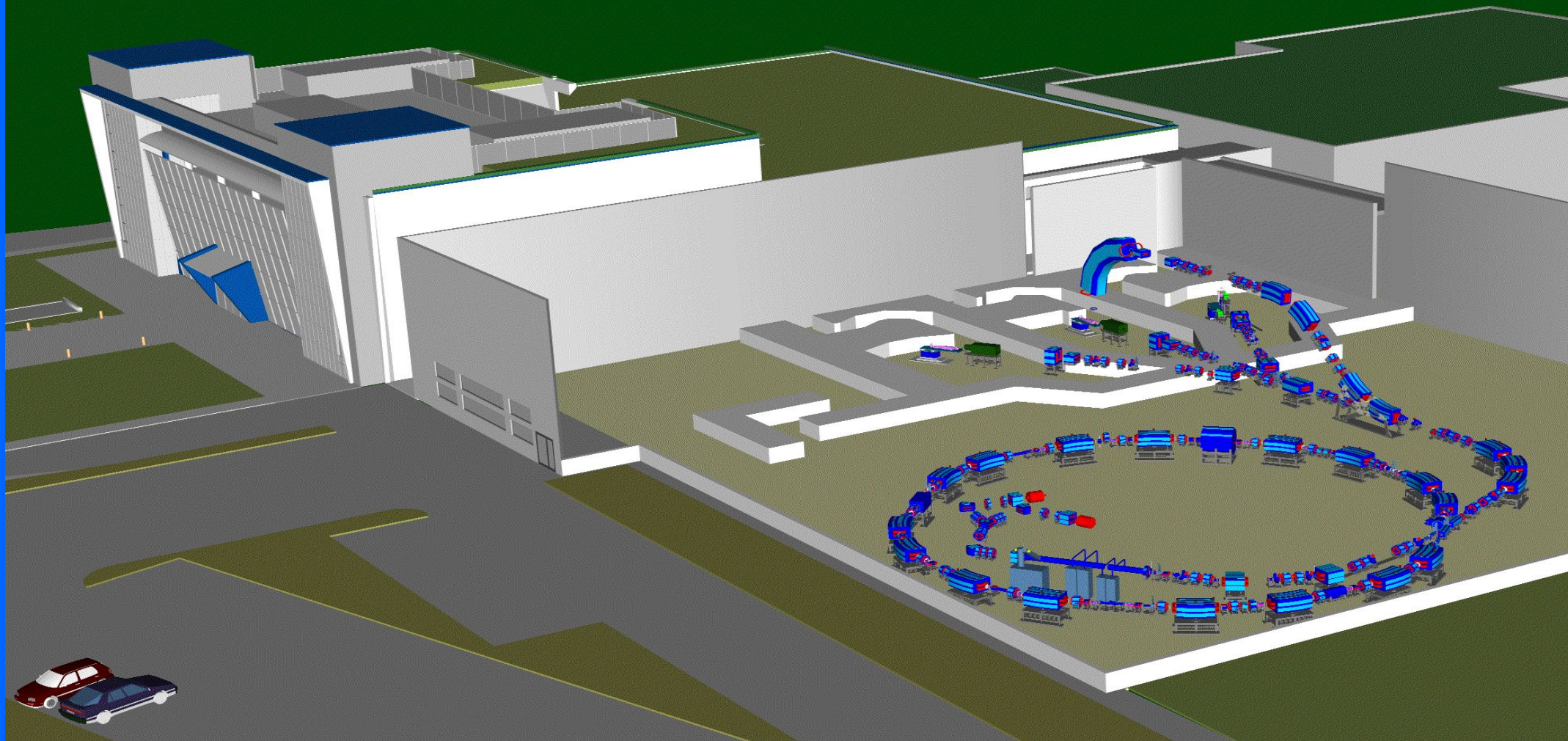
# X-rays and protons have the same biological effects



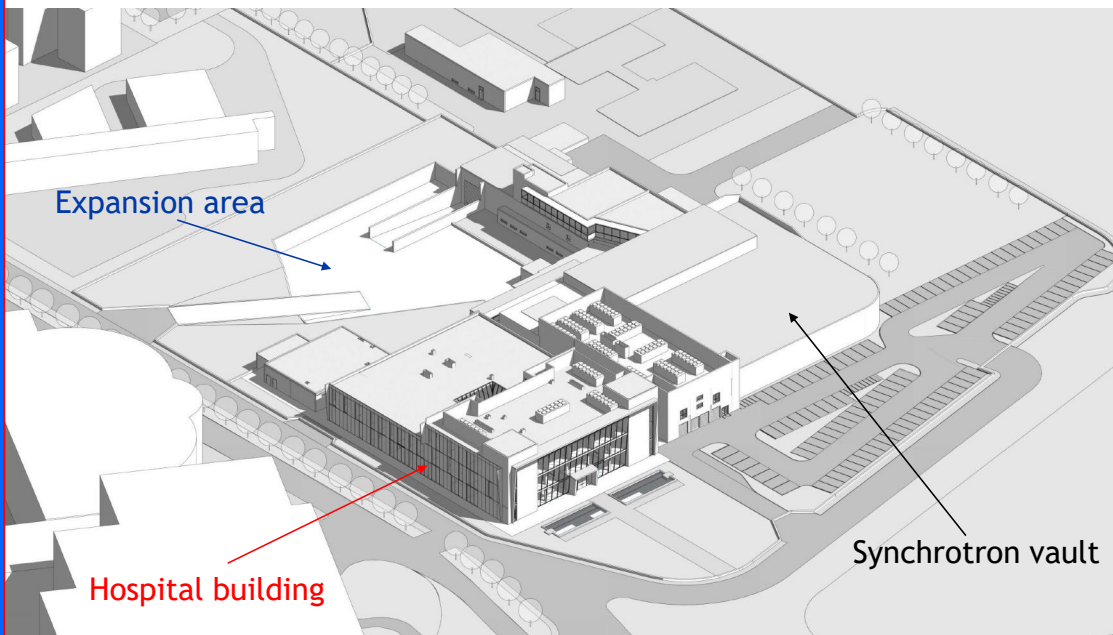
Carbon ions are a different radiation and can cure 'radioresistant' tumours

***5000 patients have been irradiated (20-30 sessions)***

**CNAO has 3 treating rooms**



## Present layout

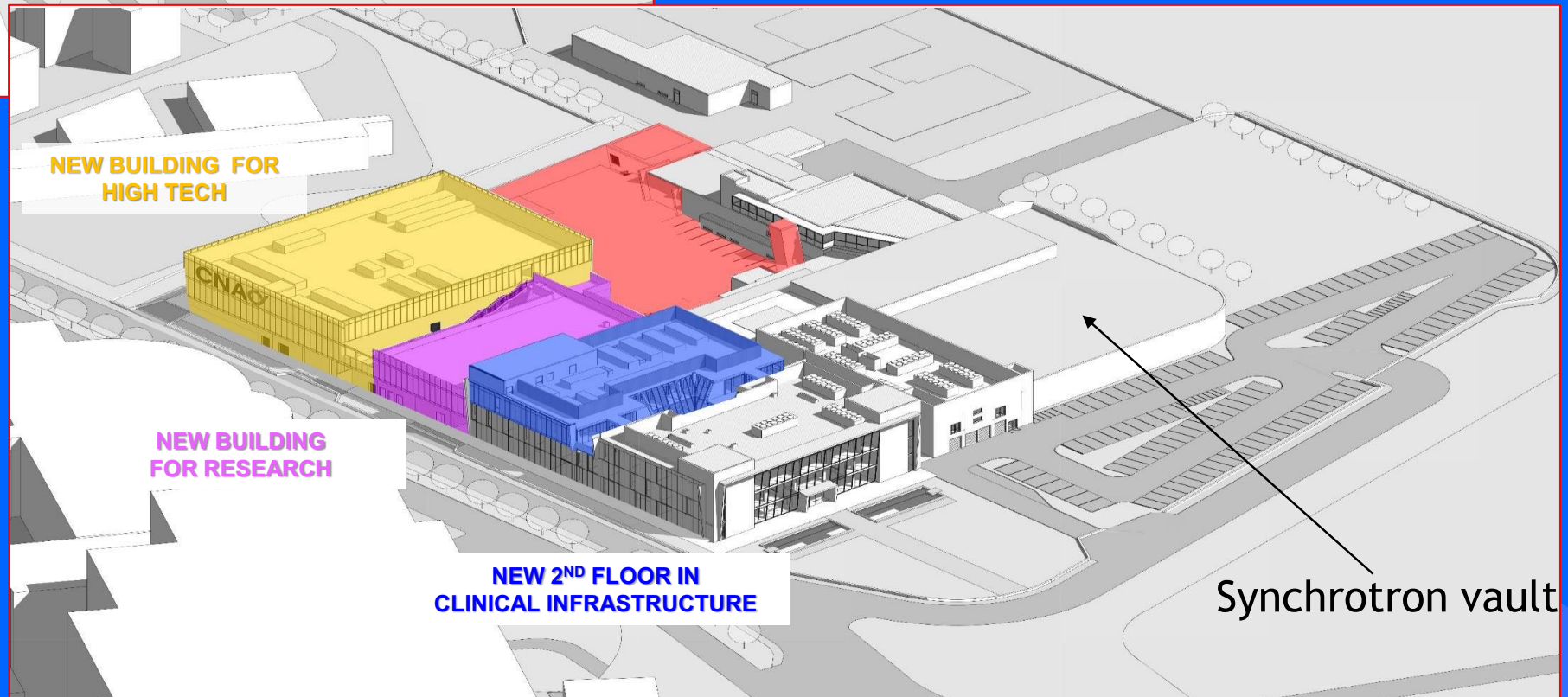


## ***2 main upgrading programs***

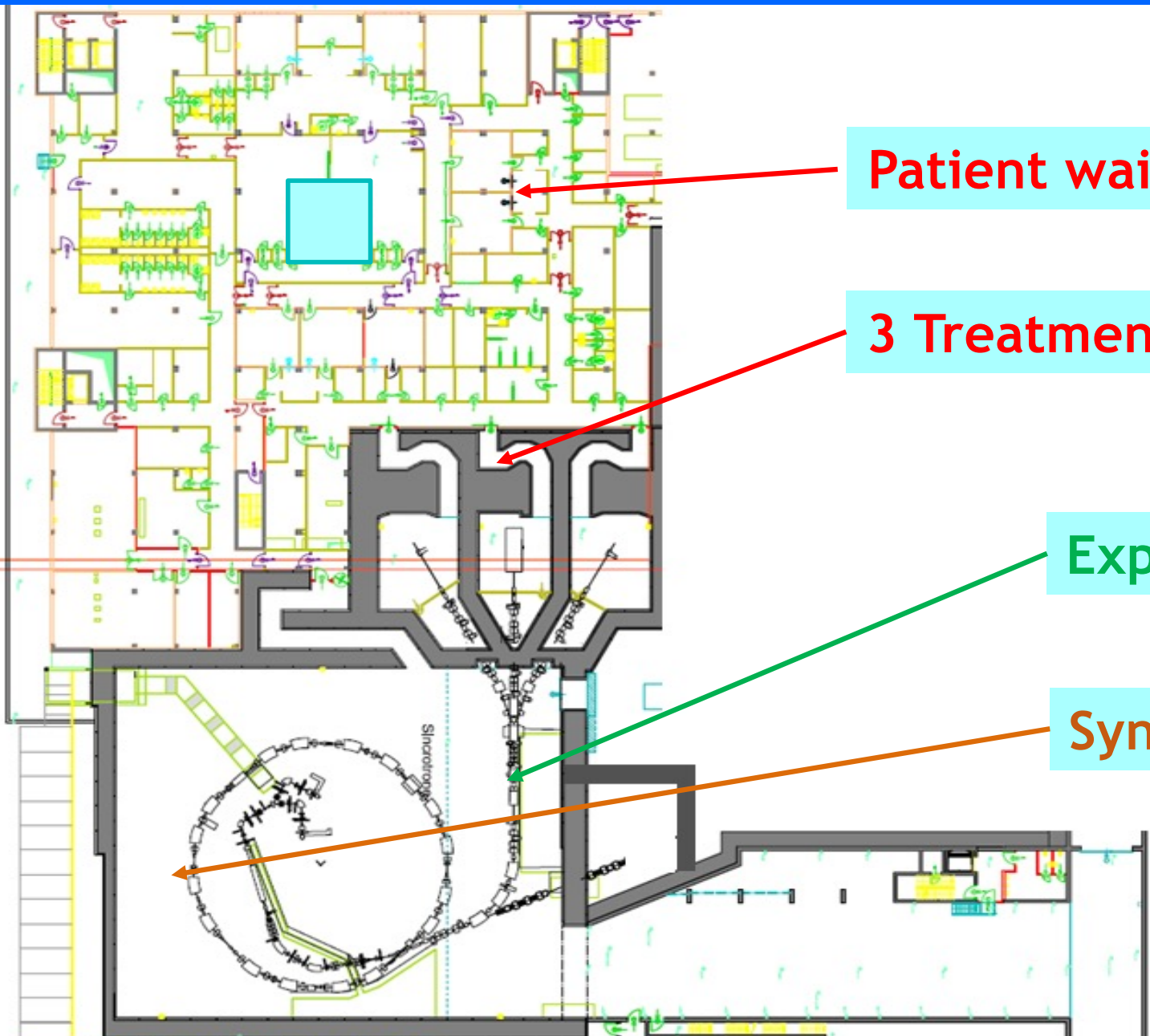
(1) A gantry proton treatment room  
(Hitachi 250 MeV synchrotron)

(2) 2 rooms for Boron Neutron  
Captate Theray (BNCT)

(2.5 MeV 10 mA proton accelerator  
built by Tae Life Sciences)



# Treatment area, experimental area and technical facilities



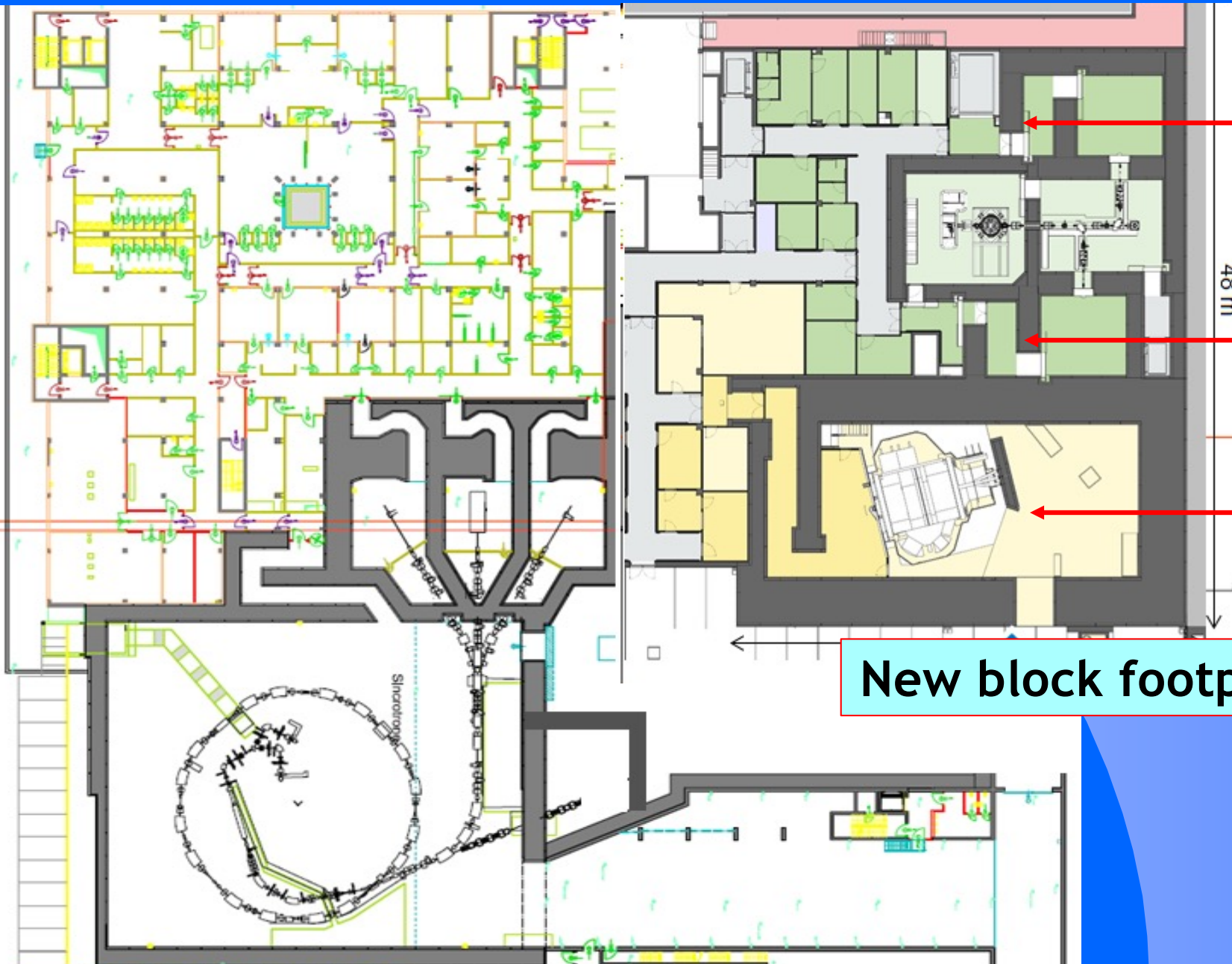
Patient waiting area and services

3 Treatment rooms: 3H + 1V

Experimental room

Synchrotron vault

# Treatment area, experimental area and technical facilities



Research BNCT

Clinical BNCT

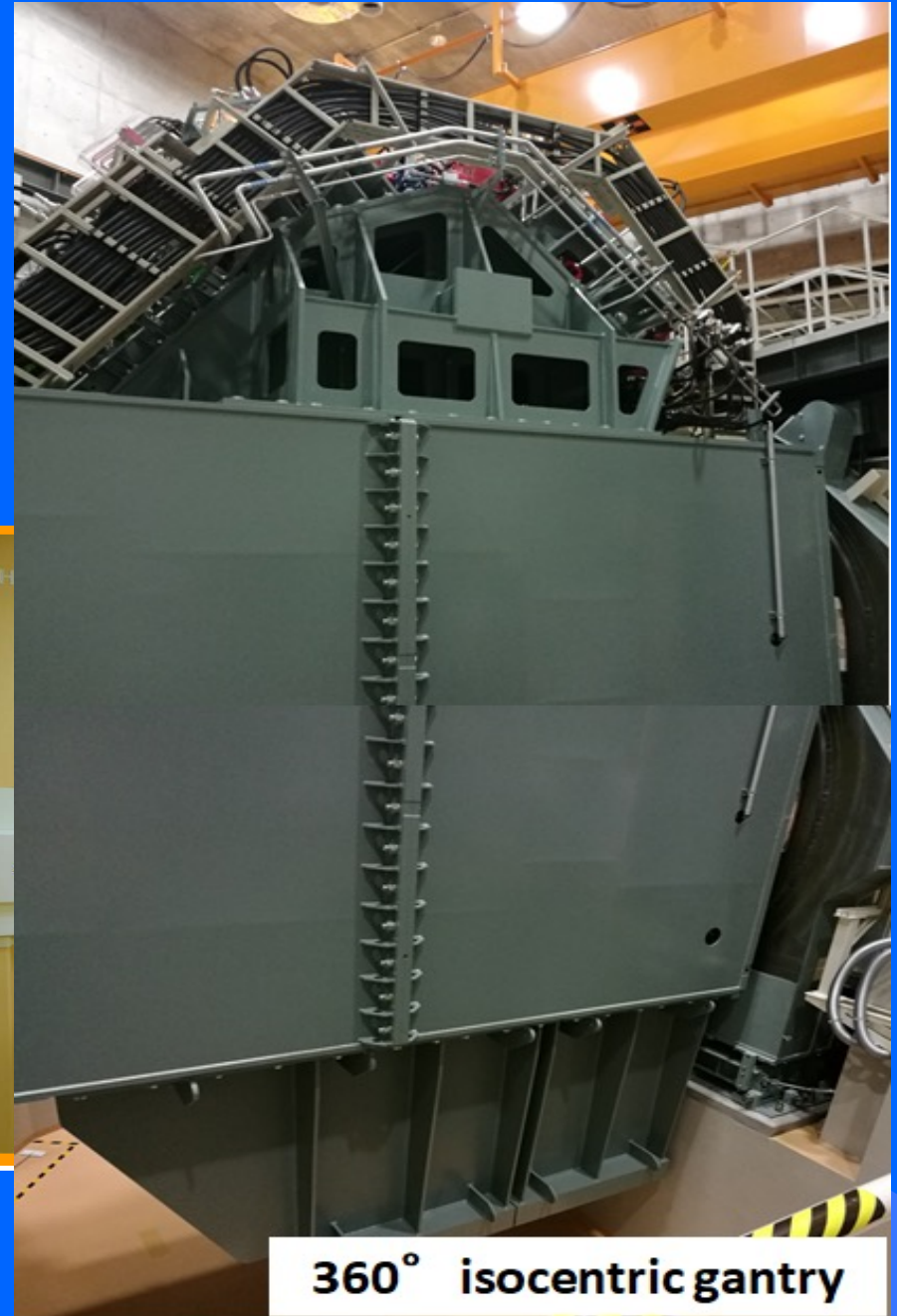
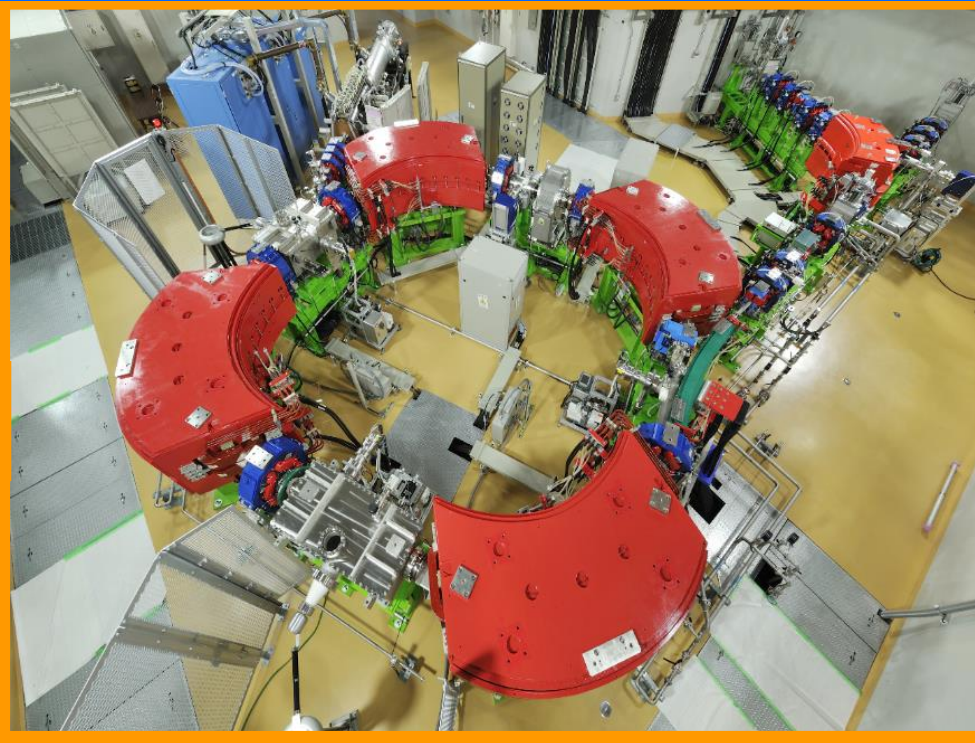
Protontherapy

New block footprint ~1800 m<sup>2</sup>

# Boron Neutron Capture Therapy and proton therapy with a gantry



tae LIFE SCIENCES



360° isocentric gantry

## Milestones:

- ✓ Protontherapy installation starts middle 2024
  - ✓ Building completed fall 2024
  - ✓ BNCT installation starts fall 2024
- ✓ New technologies ready by fall 2025

