



MEDICAL PHYSICIST

Full-time, permanent position

Avignon, France

The **Institut du Cancer Avignon-Provence (ICAP) - Sainte Catherine**, affiliated with **UNICANCER**, was founded in 1946. Recognized as a national reference center for cancer prevention, screening, and treatment, ICAP provides comprehensive and high-quality care, including medical oncology, radiotherapy, and supportive care.

Its outpatient clinic, inaugurated in 2019, is one of the largest in France, with 59 treatment stations, reflecting its commitment to meeting the growing needs of patients. ICAP maintains a strong "family spirit" and upholds its core values: humanity, kindness, and solidarity.

On June 19, 2024, ICAP received the "**High Quality of Care**" certification from the **French High Authority for Health (HAS)**—the highest possible rating for a healthcare institution. This recognition highlights the dedication, professionalism, and dynamism of our teams in ensuring the quality and safety of patient care.

Location & Accessibility

ICAP is located in Avignon, the capital of the Vaucluse region, and is easily accessible via highways (A7/A9), airport, buses, trams, and train stations. It is conveniently located : 30 minutes from Marseille, 1 hour from Lyon, 2 hours 40 minutes from Paris by TGV.

Job Opportunity: Medical Physicist (Full-time, Permanent position)

We are looking for a **Medical Physicist** with **strong programming skills**.

Under the direct supervision of the Head of Medical Physics, you will join a team of:

- **11 Medical physicists,**
- **2 assistant-physicists,**
- **8 dosimetrists,**
- **1 biomedical manager,**
- **5 biomedical technicians,**
- **1 department administrative assistant.**

The **Medical Physics Unit** works closely with **radiotherapy, IT, medical oncology, medical imaging, and quality** teams. It is responsible for **radiotherapy and brachytherapy activities**.

Radiotherapy Department

The department consists of **8 treatment rooms**, housing **7 operational Varian linacs**, with the 8th room used for machine replacements:

- **2 Novalis TrueBeam STX (MLC 120HD),**
- **2 TrueBeam (MLC 120 Millennium)**
- **2 Halcyon (v3)**
- **1 Ethos**

Operating hours for radiotherapy treatments: **8:00 AM – 6:30 PM**.

The department is also equipped with:

- **RGSC** system (radiotherapy CT scanner), 4 **RPM** systems (TrueBeam linacs), 7 **Dyn'R** systems (radiotherapy CT scanner, preparation room, linacs) for **respiratory gating** or **breath-hold management**,
- **Varian Identify surface-guided positioning system** (on Halcyon accelerators).

Available Equipment & Software

- **1 HDR brachytherapy unit** with Oncentra Elekta console and quality control equipment
- **Siemens Somatom Go Open Pro CT scanner**
- **Varian Aria v18 Record&Verify** system
- **Eclipse Treatment Planning System (v18)** for 3D and VMAT treatments
- **Mobius (Varian) 3D secondary dose calculation software**
- **DosimetryCheck** in vivo dosimetry system (being replaced by **SunCheck** from **Sun Nuclear**)
- Various quality control equipment (2D & 3D explorer phantoms, anthropomorphic phantoms, 2D & SRS arrays, Delta4 phantom, and associated softwares)

Advanced Treatment Techniques & Development Projects

- **VMAT, IMRT, intracranial & extracranial stereotactic treatments, and respiratory-gated treatments** have been routine for years.
- **Adaptive Radiotherapy (ART) with Ethos** has been used for prostate and bladder cancer treatment since April 2023. ICAP was the first center in France to establish a cooperation protocol delegating oncologist and physicist tasks.
- Future developments include:
 - **New ART treatment sites**
 - **Expanded use of Varian Identify SGRT**
 - **Prostate stereotactic treatment with fiducial marker tracking**
 - **Respiratory-gated stereotactic liver metastases treatment**

Programming & Research Focus

- **Script development for automation in treatment planning, data extraction, and research projects**
- **MRI-based simulation.**
- **All physicists participate in or lead projects**, coordinated by the Head of Research & Development.

Key Responsibilities

You will contribute to all Medical Physics Unit activities, including:

- ✓ **Characterization & metrology of radiation beams**
- ✓ **Treatment planning, verification & validation (3DCRT, IMRT, VMAT, ART, brachytherapy)**
- ✓ **Equipment quality control, monitoring & validation**
- ✓ **Patient Specific QA**
- ✓ **Assistance during simulations & treatments**
- ✓ **Risk management and quality assurance**
- ✓ **Teaching & Training**
- ✓ **R&D projects**
- ✓ **Scripts development (automation, data analysis, research support)**

Training & Professional Development

- **Regular trainings sessions** for physicists
- **C# programming training available if needed.**

Candidate Profile

- ✓ **MSc or PhD in Medical Physics**
- ✓ **Medical Physicist Expert degree (French DQPRM) or equivalent**
- ✓ **Strong interest in programming** (ideally proficient in **C, C++ or C#** preferred)
- ✓ Experience with **Varian linear accelerators, Eclipse Treatment Planning System, and ARIA** oncology information system is a plus
- ✓ French language skills : basic proficiency or higher
- ✓ Demonstrates a strong sense of **responsibility**, ability to work **autonomously** and **collaboratively**, and **excellent interpersonal skills**

If programming is a key strength of yours, we'd love to meet you!

ICAP promotes diversity, inclusion, and equal opportunities for juniors, seniors, and people with disabilities. All applications will be considered on an equal skills basis.

Qualified candidates are encouraged to apply by sending their resume and cover letter to:

- Véronique Bodez, Medical Physicist PhD, Head of Medical Physics Department : v.bodez@isc84.org
- Catherine Khamphan, Medical Physicist PhD, Head of Research & Development : c.khamphan@isc84.org