The Center for Oncological Research (CORE) is a joint oncology research platform of the University of Antwerp, gathering research lines and experts in the field of basic, translational and clinical cancer research, headed by Prof. Dr. Filip Lardon and Prof. Dr. Evelien Smits. Our mission is to advance cancer treatment and to improve patient quality of life through development of more efficient detection methods and new revolutionary therapies.

**Solid Tumor Immunology Group**

**STIG**

We focus on developing novel combination therapies for different tumor types by coupling immune stimulation to inhibition of immune suppression.

**Research lines**
- Immune checkpoints
- Natural killer cell-based immunotherapy
- Cold atmospheric plasma and oxidative stress

**Tumoroid Screening lab**

**TUSC**

We focus on growing cancer cells from patients with high efficiency as 3D cellular structures or tumoroids in the lab. Using advanced technology, we can perform high-throughput and in-depth screening of these patient-derived tumoroids.

**Technologies and expertise**
- Development of patient-derived tumoroids – incorporation of tumor microenvironment.
- Establishing a patient-derived tumoroid biobank.
- Access to our advanced AI image analysis software Orbits (www.orbits-oncology.com).
- High-throughput live-cell imaging-based drug screening for preclinical and clinical applications.

**Targeted and Combination Therapy Team**

**TACTT**

We focus on the development of new therapeutic strategies to treat cancer, more specifically on targeted therapy and combination strategies. We study the induction of cellular senescence and the influence of the hypoxic tumor microenvironment on therapeutic outcome and we put efforts in the identification of biomarkers for personalized medicine.

**Tumor types**
- different solid tumor types, such as lung and head & neck cancer.

**Antwerp Research in Radiation Oncology**

**AREO**

We focus on developing innovative techniques and treatments and increase the therapeutic window of radiation therapy, the irradiation workflow and efficacy, to ultimately improve cancer cure and patient’s quality of life.

**Oncogenetics**

We focus on the identification of genetic susceptibility factors contributing to tumor initiation. A common central theme is the study and identification of biomarkers leading to therapeutic resistance.

**University Center for Clinical Research Antwerp**

**UNICCRA**

CORE works closely together with the clinical trial experts of the University Hospital Antwerp. Within UNICCRA, clinical phase I and II studies are performed, with the aim to evaluate new potential cancer treatments in patients.