

## Department of Medical Physics [1]

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The Department of Medical Physics of the Holy Cross Cancer centre has been granted accreditation to conduct specialist courses in medical physics as one of the first departments in Poland. Until the end of 2015, 31 people obtained the title of specialist in medical physics. The Holy Cross cancer Centre is currently implementing the techniques of 3D conformal radiotherapy, IMRT techniques, stereotactic radiotherapy using the intracavity and intratissue applications (brachytherapy).

The Department of Medical Physics focuses on:

- preparing the patient for radiation therapy,
- immobilization of patients,
- performing CT scans for treatment planning,
- preparation and verification of computer treatment plans,
- initial and checking simulation,
- performing irradiation with the use of medical accelerators,
- quality control of performed irradiation,
- quality control of radiotherapy,
- performing tests and dosimetric measurements of accelerators and medical devices for brachytherapy,
- preparation of treatment performing brachytherapy,
- control of specialist radiological equipment,
- supervision of the exploitation control of radiological equipment.

We render services for the Department of Radiotherapy, Brachytherapy Department, the Department of Diagnostic Imaging and other units of the Holy Cross Cancer Centre, where devices emitting ionizing radiation are used.

The tasks are performed with the help of:

- 4 medical accelerators (SIEMENS),
- CT simulator (Siemens) (virtual simulation),
- classic simulator (Varian),
- treatment planning systems: Pinnacle, XIO, BrainLab, Prowess Panther,
- verification and management system Mosaicq,
- verification systems IBA, Compass, Diamond,
- dosimetry systems including radiation field analyzers,
- systems for immobilizing patients,
- systems for verifying patient positioning during irradiation.

We cooperate with the Polish Society of Medical Physics Warsaw [www.ptfm.pl](http://www.ptfm.pl). [2]

AGH University of Science and Technology in Krakow [www.agh.edu.pl](http://www.agh.edu.pl) [3],

Jan Kochanowski University in Kielce [www.ujk.edu.pl](http://www.ujk.edu.pl) [4],

Institute of Nuclear Physics [www.ifj.edu.pl](http://www.ifj.edu.pl) [5].

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