

Funded Projects

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End-to-end testing for dosimetry audit at light ion beam therapy facilities (part of IPACS collaboration)

Principal Investigator:

Prof. Markus Stock, PhD (scientific coordinator at MedAustron, Austria)

Participating Institutions:

EBG MedAustron GmbH, Wiener Neustadt, Austria

PTC, Prague, Czech Republic

IFJ-COI, Krakow, Poland

Skandion Clinic, Uppsala, Sweden

Proton Therapy Center, Trento, Italy

Status:

Project completed;

Publication: Acta Oncologica, ISSN: 0284-186X (Print) 1651-226X (Online), [Harmonization of proton treatment planning for head and neck cancer using pencil beam scanning: first report of the IPACS collaboration group](#)

Heavy ion minibeam radiation therapy: dosimetry and a first proof of concept

Principal Investigator (Spokesperson):

Yolanda Prezado, PhD (scientific coordinator at IMNC, France)

Participating Institutions:

QST, National Institute of Radiological Science, Chiba , Japan

Charité Universitätsmedizin, Berlin, Germany

IMNC, Centre National de la Recherche Scientifique, France

ALBA synchrotron, Cells, Spain

Orsay, Proton Therapy Center, Institute Curie, France

Status:

Project completed;

Publication: Cancers (Basel). 2021 Mar; 13(6): 1356. [A Potential Renewed Use of Very Heavy Ions for Therapy: Neon Minibeam Radiation Therapy](#)

Proof of Concept Evaluation of Helium Imaging for Range Uncertainty Reduction in Particle Therapy

Principal Investigators:

Prof. Reinhard Schulte, Prof. Joao Seco

Participating Institutions:

DKFZ, German Cancer Research Center, Heidelberg, Germany

U.S. pCT collaboration (Loma Linda University, University of California Santa Cruz, CA. and Baylor University, USA

Status:

Project completed;

Publication: Journal of Medical Physics, Experimental comparison of photon versus particle computed tomography to predict tissue relative stopping powers, <https://aapm.onlinelibrary.wiley.com/doi/full/10.1002/mp.15283>

Individualizing and Optimizing Proton Therapy Consolidation in the Management of Lymphoma

Principal Investigator:

Dr. Raymond B. Mailhot Vega, Univ. of Florida, Jacksonville, FL., USA

Status:

Project ongoing

MECT-based SPR estimation in NN framework and calculation of range shift in the first carbon ion radiotherapy center in South Korea (part of IPACS collaboration)

Principal Investigator:

YeJin Kim, PhD

Status:

Project ongoing;

RADGESS: In silico study for RADioresistance GENomic Signatures in Sinonasal cancers (SNCs) experimental models after particle therapy

Principal Investigator:

Barbara Vischioni, MD
CNAO, Italy

Status:

Project ongoing;

A workshop to showcase prediction models in patient selection and health economic evaluation for proton therapy among patients with head and neck cancer and discuss diversities in decision-making policies across Europe

Principal Investigator:

Lifang Liu, MD
European Organisation for Research and Treatment of Cancer (EORTC)

Status:

Project ongoing;

Principal Investigator:

Prof. Markus Stock, PhD (scientific coordinator at MedAustron, Austria)

Participating Institutions:

EBG MedAustron GmbH, Wiener Neustadt, Austria
PTC, Prague, Czech Republic
IFJ-COI, Krakow, Poland
Skandion Clinic, Uppsala, Sweden
Proton Therapy Center, Trento, Italy

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Publication: Acta Oncologica, ISSN: 0284-186X (Print) 1651-226X (Online), [Harmonization of proton treatment planning for head and neck cancer using pencil beam scanning: first report of the IPACS collaboration group](#)

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[mp.15283](#)

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Status:

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