

**Christian Richter, \* 1981**

**PI of Program Cancer Research, Topic Imaging and Radiooncology**



**Publications & Patents**

Number of publications: 115  
thereof ISI: 115  
h-Index (ISI/WoS): 22  
h-Index (Scholar): 26  
Number of Patents: 1

**Current Position:** **Head of the department Medical Radiation Physics** at Institute of Radiooncology – OncoRay (HZDR), at OncoRay and at Department of Radiotherapy and Radiation Oncology, University Hospital Dresden; **Research Group Leader** at Institute of Radiooncology – OncoRay (HZDR) and OncoRay; **Dean of studies Medical Radiation Sciences** at Faculty of Medicine C.G. Carus, TU Dresden

**Previous positions:** Head of High Precision Radiotherapy Group at OncoRay - National Center for Radiation Research in Oncology (since 2013); Post-Doctoral Research Follow at HZDR, Institute of Radiation Physics, Dresden, Germany (2012-13); Research Fellow at Massachusetts General Hospital, Department for Radiation Oncology, Boston, USA (2011-12), Guest scientist at Ontario Cancer Institute, Princess Margret Hospital, Biophysics and Bioimaging, Toronto, Canada (2005)

**Scientific degrees:** Prof., Technische Universität Dresden, 2020  
Dr. rer. medic., Technische Universität Dresden, 2013  
Dipl. Phys., Technische Universität Dresden, 2007

**Research topics:**

**Proton Therapy:** Stopping power prediction using dual energy CT, in vivo treatment verification with prompt gamma imaging, (real-time) adaptive proton therapy, moving targets, patient selection;  
**Machine learning:** Radiomics, patient individualization, imaging biomarkers

**Publications (5 most relevant)**

- Wohlfahrt, **Richter**. Status and innovations in pre-treatment CT imaging for proton therapy. BJR 93 (2020), 20190590
- Wohlfahrt, Möhler, Hietschold, Menkel, Greilich, Krause, Baumann, Enghardt, **Richter**. Clinical implementation of dual-energy CT for proton treatment planning on pseudo-monoenergetic CT scans. IJROBP 97 (2017), 427
- **Richter**, Pausch, Barczyk, Priegnitz, Keitz, Thiele, Smeets, Vander Stappen, Bombelli, Fiorini, Hotoiu, Perali, Prieels, Enghardt, Baumann. First clinical application of a prompt gamma based in vivo proton range verification system. Radiother Oncol 118 (1016), 232
- Baumann, Krause, Overgaard, Debus, Bentzen, Daartz, **Richter**, Zips, Bortfeld. Radiation oncology in the era of precision medicine. Nature Review Cancer 16 (2016), 234
- Jakobi, Bandurska-Luque, Stützer, Haase, Löck, Wack, Mönnich, Thorwarth, Perez, Lühr, Zips, Krause, Baumann, Perrin, **Richter**. Identification of patient benefit from proton therapy for advanced head and neck cancer patients based on individual and subgroup NTCP analysis. IJROBP 92 (2015), 1165

**Activities in the Scientific Community (selected)**

Member of the advisory board at German society for Medical Physics (DGMP); Representative of DGMP at ESTRO; Member of the DKTK Local steering committee in Dresden, Peer-Reviewer for 12 journals, Member of the Editorial Board of phiRO

**Scientific Honors and Awards (selected)**

2018 Dr. Emil Salzer Prize  
2018 HZDR Technology and Innovation Award  
2014 ESTRO Best Young Scientist Poster Award (Physics)  
2013 Behnken-Berger-Prize (2nd), Behnken-Berger-Fundation