CV Jelle Barentsz, September 2024

**Basic details**

Titles, Name: Prof. Dr. Jelle Barentsz (Male)

Born: 19-April-1956, Place: Renkum (NL)

Married, 3 children.



Radboudumc,

Department of Radiology and Nuclear Medicine

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| Z/U number: | Z035106 |
| Name: | J.O. Barentsz |
| Department: | Radiology and Nuclear Medicine |
| Medical specialist:  | Yes | Practicing as physician: | Yes, Radiologist |
| MD examination | University of Utrecht (average grade 8 of 10) 29-Feb-1980 |
| Date of PhD defense: | 11-Jan-1990: “MRI of Urinary Bladder cancer” |
| Researcher ID (obligatory) | D-3515-2009  |
| Orchid account: 0000-0003-0366-2184 | <div itemscope itemtype="https://schema.org/Person"><a itemprop="sameAs" content="https://orcid.org/0000-0003-0366-2184" href="https://orcid.org/0000-0003-0366-2184" target="orcid.widget" rel="me noopener noreferrer" style="vertical-align:top;"><img src="https://orcid.org/sites/default/files/images/orcid\_16x16.png" style="width:1em;margin-right:.5em;" alt="ORCID iD icon">https://orcid.org/0000-0003-0366-2184</a></div> |
| H-index (Scopus): | 84 |
| Man-years of research | 40 |
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| **Narrative** |
| **Biography**Professor Jelle Barentsz is a world-renowned radiologist who has made groundbreaking contributions to prostate cancer imaging and diagnosis. He earned his MD in 1980 and completed his PhD in 1990, focusing on MRI of urinary bladder cancer. Since 1998, he has been a Professor of Radiology at Radboud University Medical Center in Nijmegen, Netherlands, and retired from academia in 2023. Now working at the Andros Clinics, to combine non-academic and academic patient care.Professor Barentsz' work has significantly improved prostate cancer diagnosis and treatment. By his innovations and work, over 1,000,000 men are yearly saved from unnecessary invasive biopsy and reduce overdiagnosis and overtreatment rates by 50%.**Key achievements and contributions**- Pioneered the use of MRI technology for non-neurological diseases, particularly in urogenital imaging- Introduced PI-RADS (Prostate Imaging - Reporting and Data System) in 2012, which became the global standard for prostate MRI- Led research that resulted in changes to European and Dutch prostate cancer guidelines, recommending prostate MRI before biopsy- Revived the use of ferumoxtran-10 MRI (nano MRI) for detecting small lymph node metastases- Established the Prostate MR Reference-Expert Center (PMRC)- Published 352 papers with a h-index of 84 and 30,913 citations (Scopus Sept 2024)- Serves as imaging editor for the European Urology journal- Mentored over 40 PhD candidates.**Current research focus:**1. Implementing AI-assisted prostate cancer screening using PSA and MRI2. Expanding the use of nano-MRI for detecting lymph node metastases and other applications3. Developing international education programs for radiologists and urologists; improving imaging and reporting quality of Prostate-MRI. He recently was the organizer of the 12th ESUR Prostate Teaching Course.4. Developing a nano-bio-battery that can selectively kill cancer cells.**Awards and recognition:**- Received the EAU Innovators in Urology Award, becoming the first non-urologist to win this prestigious honour. He received this Award, for his groundbreaking achievements in functional and molecular imaging related to prostate cancer MRI. Specifically:1. He and his team were responsible for developing and introducing the Prostate Imaging - Reporting and Data System (PI-RADS), which has become the global standard for prostate MRI.
2. PI-RADS has been incorporated into clinical guidelines worldwide, including the EAU Guidelines.
3. His work has led to significant improvements in prostate cancer detection and diagnosis:
	* It has enabled a 50% reduction in unnecessary biopsies, this is a global reduction of 1,000,000 biopsies annually.
	* It allows for more targeted and accurate biopsies when abnormalities are detected on MRI.
4. Barentsz' innovations have had a major impact on patient care, decreasing side effects and increasing chances of cure through improved imaging techniques.
5. As the first non-urologist to receive this award, it represents a significant recognition of the importance of imaging in urology from the clinical community.

The EAU Innovators in Urology Award is presented "in recognition of the importance of inventions and clinical contributions with a major impact on the treatment and/or diagnosis of a urological disease". Barentsz's work in standardizing and advancing prostate MRI clearly meets these criteria, revolutionizing how prostate cancer is detected and diagnosed worldwide.- Knighted: received the Royal Decoration of Knight in the Order of the Lion of the Netherlands- Recipient of the Dutch Radiology Wertheim-Salomonson Medal and SAR Lifetime Achievement Award. This is granted at the maximum once in 10 years. - Honorary member of the Japanese Radiological Society and Polish Medical Radiological SocietyKnown for his persistence and innovative thinking, Professor Barentsz has overcome skepticism to revolutionize prostate cancer imaging. He remains active in research, education, and patient advocacy, leveraging social media to share knowledge and inspire the next generation of radiologists. He is giving interactive prostate-MRI workshops all over the world. After retiring from academia in 2022, Professor Barentsz now leads the Division of Medical Imaging at Andros Clinics, and the Prostate MRI Reference Center, continuing his mission to improve prostate cancer diagnosis and treatment worldwide.**CV download:**https://mri-prostate-barentsz.nl/ |

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| **International esteem** |
| 1.Board member of scientific (inter)national committee/organisation |
| Sci. committee | Guideline Committee Prostate Cancer |
| Other | Advisory Board Prostaat Kanker Stichting |
| 2. Member of editorial board or editor of international journal with an IF > 4 (>2 for junior PI) or in subject category Q1 |
| Editorial board | European Urology |
| Editor | Imaging Editor |
| 3. Invited lecture at international top meeting |
| Many (>10/yearly) | RSNA, AUA, EAU, ESUR, ICIS, SAR, SCBTMR(SABI) |
| 4. (Personal) prize or award of distinction |
| By science community | EAU 2020 Innovators in Urology AwardBest Scientific Paper European Urology 2017Wertheim Salomonson Medal |
| By public sector | 2014 Knighted: Knight in the Order of the Dutch Lion |
| Honorary doctorate / visiting professor-ship abroad | Honorary Member Japanese Radiological SocietyHonorary Member Polish Medical Radiological SocietyHonorary Member Belgium Radiological Society |

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| **Societal impact** |
| 1. Public outreach, as expert in media, accessible to a large audience
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| Newspaper | De Telegraaf |
| Magazine | Various medical papers |
| Radio/TV | 30/1/2020 Radio NOS (6:30 uur); 30/1/2020 NOS Journaal: entire day |
| Website  | Kanker.nl (specialist); www.<http://www.mri-prostate-barentsz.nl/> |
| Other | Linkedin (>500 followers), Twitter (>1000 expert-followers)  |
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| 1. Author of manual for professionals, of policy formulated document, of policy instrument relating to healthcare or of guideline or quotation in guideline
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| Clinical guideline | Module diagnostiek locale prostaat van de NVU Multidisciplinaire Richtlijn Prostaatkanker |
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| 1. Board member of important public (societal) organization
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| Public org. | Advisory Board Prostaat Kanker Stichting |
| Societal (paid) ancillary position |  |
| Other |  |
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| 1. Wide and established implementation of product in health care and health care market
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| Patent  |  |
| License |  |
| Spin-off | Ferrotran (nano-MRI contrast agent), MR-manipulator (biopsy-robot)  |
| Contract with private partners | Advisor SPL MedicalAdvisor Soteria Medical |
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| 1. Teaching activities
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| For BSc or MSc curricula |  |
| For professionals or general public | Yearly >10 (Inter)national interactive workshops and key-note lecturesMost challenging: PI-RADS Workshop @ RSNA 2019 (interactive hands-on-workshop with Cloud-based workstation for >500 attendees) |

**Publications: (2024-09-09)**

**# 352; h-factor: 87 (Scopus)**

[**All Papers (Pub Med)**](https://pubmed.ncbi.nlm.nih.gov/?term=Barentsz+J+%5BAU%5D&sort=date&size=200)

**Book(chapters)**

Book:

Magnetic Resonance Imaging of Carcinoma of the Urinary Bladder. Barentsz JO, Debruyne F, and Ruijs JHJ edts. Kluwer Academic Publishers 1st edition 1990.

Book chapters:

Grainger & Allison Diagnostic Radiology. Adam, Dixon, Gillard, Schaefer-Prokop edts. Chuchill Livingstone, 5th Edition 2008. Ch 39: p 931. Bomers, Bittencourt, Villeirs, Barentsz.

Oncologie. Van der Velde, van der Graaf, van Krieken, Marijnen, Vermorken edts. Bohn Stafleu van Loghum, Houten. 8th Edition. 2011. Ch 4: p103. Diagnostiek in de oncologie. Vermorken, Schrijvers, Weyler, Moreels, Carp, Barentsz, Heijmink.

Nanoparticles in Biomedical Imaging: Emerging Technologies and Applications. Bulte, Modo, Edts. Springer. 1st Edition. 2008. Ch 3: p25 Use of USPIO’s for Clinical Lymph Node Imaging. Barentsz and Tekkis.

Nuclear Oncology. C Aktolun an SJ Goldsmith edts. Wolters. 1st edition. 2015. Ch 27: p399. Assessment of Lymph Node Detection and Imaging in Oncology. AS Fortuin, TC Kwee, S Bassu, et al (JO Barentsz before last author).

Clinical Urography. HM Pollack and BL McClennan edts. Saunders. 2nd ed. 2000. Ch 48: p1642 Bladder Cancer. JO Barentsz.

**Personal obtained funding**

Concerning the period January 1st, 2015 –December 31st, 2019

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| --- | --- | --- | --- | --- | --- |
| Title project (abbreviated) | Role:Main applicant/Co-applicant/ WP leader/other | Year granted | Funding body | K €total grant | K €Radboud-umc part |
| 1. MAGNIFI | Main Applicant | 2016-ongoing | Wesly Medical Research Institute (Brisbane) and Garvan Research Institute (Sydney) | 126.8 | 126.8 |
| 2.ROF 1835 VALINODE | Main Applicant | 2019 | Radbopud Oncologie Fonds (KWF) | 149.5 | 149.5 |
| 3. ROF 1906 AI | Co-appliocant | 2019 | Radbopud Oncologie Fonds (KWF) | 40 | 40 |
| 4. ROF 2003 THERANOSTICS | Co-applicant | 2019 | Radbopud Oncologie Fonds (KWF) | 50 | 50 |

**Personal obtained funding**

Concerning the period January 1st, 2012 –December 31st, 2016

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Title project (abbreviated) | Co-applicant research leader(s) | Year granted | Funding body | K € (total grant) |
| 1. Value of Multi-parametric MRI and MR-guided biopsies the detection ofsignificant prostate cancer in men with an elevated PSA 2016-2018. | J.O. Barentsz (PI)J. WitjesM. RoversC Hulsbergen-vd Kaa | 2015 | KWF2015-6707 | 1.241 |
| 2. ZON-MW: Value of CT versus MRI using USPIO in the detection of lymph node metastases in prostate cancer3. KWF: Detection of prostate cancer based on contrast enhanced imaging of hemodynamic changes in the prostate. 4. KWF: Vascular effects of VEGF mutations: implications for MRI of human tumors. R. De Waal 5. KWF: Contrast enhanced MRI and US of prostate cancer6. KWF: Computer assisted diagnoses of prostate cancer combining high resolution, dynamic contrast enhanced and spectroscopic MR 7. KWF Queen Wilhelmina Program Award - Exploring the clinical value of novel high resolution anatomic, molecular and functional MR imaging in prostate cancer  | J.O. BarentszJ O BarentszA. HeerschapJ.O. BarentszJ.O. BarentszHJ HuismanJO BarentsJA WitjesJO BarentszA Heerschap | 2002-20052003-20072000-20041998-20042004-20082008-2014 | ZON-MWDoelmatigheidKWFKWFKWFKWFKWF | 1.2002502502502502.000  |

**PhD theses supervised as (co-)promotor: 36 (+8 “to go”)**

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| --- | --- | --- | --- | --- |
| PhD student  | Title thesis | Promotor (yes/no) | Co-promotor (yes/no) | Date of PhD defense |
| W. Morshuis | Surgical treatment of pectus excavatum. Indications and results | N | Y | 1994 |
| PEJM Sallevelt | De substitutiewaarde van MRI inzake de preoperatieve diagnostiek van het Abdominale Arteriosclerotische Aneurysma. | N | Y | 1994 |
| C Boetes | MR imaging in breast cancer, a clinical study | N | Y | 1995 |
| D Franssen-Franken | Homocysteinaemie, treatment with vitamine D and folowup with MRI / MRA.  | N | Y | 1996 |
| PBJ van Vierzen | Fast Dynamic MRI of Gynecological Tumors | N | Y | 1997 |
| AE Holland | Clinical and Experimental Cardiovascular MRA | Y | N | 2000 |
| JW Goldfarb | Gd-enhanced MRI: Technical developments and Clinical Testing | Y | N | 2000 |
| E Bos | Clinical Value of Analytes in Cyst Fluid from Ovarian Tumors | Y | N | 2003 |
| M Engelbrecht | Local Staging of PCa using MRI | Y | N | 2003 |
| JJ Futterer | Advanced MRI Techniques in Localising and Local Staging of PCa. | Y | N | 08-02-06 |
| A Hovels | The Value of MR-Lymphography in the Detection of Lymph Nodal Metastasis in Patients with PCa. | Y | N | 10-02-08 |
| S Broekhuis | Dynamic MRI in Female Pelvic Floor Disorders | Y | N | 10-03-2010 |
| WMLLG Deserno | New Horizons in Lymph Node Imaging in Oncology | Y | N | 22-12-2010 |
| J Veltman | Dynamic Contrast Enhanced MRI in the Classification of Breast Lesions | Y | N | 11-10-2010 |
| RM Mann | The Effectiveness of Breast MRI in Invasive Lobular Carcinoma | Y | N | 24-11-2010 |
| H Meijer | Magnetic resonance lymphography and lymph node irradiation in prostate cancer | Y | N |  |
| MJ Stoutjesdijk | Automated Analysis of Contrast Enhancement in MRI of the Breast | Y | N | 16-11-2011 |
| PC Vos | Computer-aided Diagnosis of PCa with MRI | Y | N | 08-12-2011 |
| C Meeuwis | Computer Aided Detection and Guided Biopsies using 3T MRI | Y | N | 27-09-2011 |
| R Heesakkers | MR-lymphography in Prostate cancer | Y | N | 25-01-2012 |
| T Hambrock | The value of 3T MRI for the Diagnosis and Aggressiveness Assessment of prostate cancer | YCum Laude | N | 04-12-2012 |
| D. Yakar | MRI in localizing prostate Cancer (recurrence) and guided interventions | Y | N | 04-12-2012 |
| D. Somford | Challenges in the diagnosis, grading and staging of prostate cancer | Y | N | 26-09-2013 |
| C. Hoeks | Multiparametric MR imaging and MR guided biopsy: prostate cancer diagnosis and risk-stratification | Y | N | 04-10-2013 |
| G Litjens | Computerized detection of cancer in multi-parametric prostate MRI | Y | N | 23-01-2015 |
| S Heijmink | MR Imaging of Prostate Cancer at 3T: the Pros and Cons of Scanning with Endorectal Coil | Y | N | 24-06-2015 |

**PhD theses supervised as (co-)promotor: 36 + 6 Candidates**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PhD student  | Title thesis | Promotor (yes/no) | Co-promotor (yes/no) | Date of PhD defense |
| W. Morshuis | Surgical treatment of pectus excavatum. Indications and results | N | Y | 1994 |
| PEJM Sallevelt | De substitutiewaarde van MRI inzake de preoperatieve diagnostiek van het Abdominale Arteriosclerotische Aneurysma. | N | Y | 1994 |
| C Boetes | MR imaging in breast cancer, a clinical study | N | Y | 1995 |
| D Franssen-Franken | Homocysteinaemie, treatment with vitamine D and folowup with MRI / MRA.  | N | Y | 1996 |
| PBJ van Vierzen | Fast Dynamic MRI of Gynecological Tumors | N | Y | 1997 |
| AE Holland | Clinical and Experimental Cardiovascular MRA | Y | N | 2000 |
| JW Goldfarb | Gd-enhanced MRI: Technical developments and Clinical Testing | Y | N | 2000 |
| E Bos | Clinical Value of Analytes in Cyst Fluid from Ovarian Tumors | Y | N | 2003 |
| M Engelbrecht | Local Staging of PCa using MRI | Y | N | 2003 |
| JJ Futterer | Advanced MRI Techniques in Localising and Local Staging of PCa. | Y | N | 08-02-06 |
| A Hovels | The Value of MR-Lymphography in the Detection of Lymph Nodal Metastasis in Patients with PCa. | Y | N | 10-02-08 |
| S Broekhuis | Dynamic MRI in Female Pelvic Floor Disorders | Y | N | 10-03-2010 |
| WMLLG Deserno | New Horizons in Lymph Node Imaging in Oncology | Y | N | 22-12-2010 |
| J Veltman | Dynamic Contrast Enhanced MRI in the Classification of Breast Lesions | Y | N | 11-10-2010 |
| RM Mann | The Effectiveness of Breast MRI in Invasive Lobular Carcinoma | Y | N | 24-11-2010 |
| H Meijer | Magnetic resonance lymphography and lymph node irradiation in prostate cancer | Y | N |  |
| MJ Stoutjesdijk | Automated Analysis of Contrast Enhancement in MRI of the Breast | Y | N | 16-11-2011 |
| PC Vos | Computer-aided Diagnosis of PCa with MRI | Y | N | 08-12-2011 |
| C Meeuwis | Computer Aided Detection and Guided Biopsies using 3T MRI | Y | N | 27-09-2011 |
| R Heesakkers | MR-lymphography in Prostate cancer | Y | N | 25-01-2012 |
| T Hambrock | The value of 3T MRI for the Diagnosis and Aggressiveness Assessment of prostate cancer | YCum Laude | N | 04-12-2012 |
| D. Yakar | MRI in localizing prostate Cancer (recurrence) and guided interventions | Y | N | 04-12-2012 |
| D. Somford | Challenges in the diagnosis, grading and staging of prostate cancer | Y | N | 26-09-2013 |
| C. Hoeks | Multiparametric MR imaging and MR guided biopsy: prostate cancer diagnosis and risk-stratification | Y | N | 04-10-2013 |
| G Litjens | Computerized detection of cancer in multi-parametric prostate MRI | Y | N | 23-01-2015 |
| S Heijmink | MR Imaging of Prostate Cancer at 3T: the Pros and Cons of Scanning with Endorectal Coil | Y | N | 24-06-2015 |
| E Vos | Magnetic resonance imaging of prostate cancer: assessment of aggressiveness and pre-clinical developments | Y | N | 01-05-2016 |
| W van de Ven | MRI guided TRUS prostate biopsy - a viable alternative? | Y | N | 04-07-2016 |
| M Hoogenboom | MRI guided HiFu | Y | N | 07-03-2017 |
| J Bomers | MR-guided focal therapy in patients with localized recurrent prostate cancer | Y | N | 06-06-2017 |
| M. Schouten | MRI-guided prostate biopsy: which direction? | Y | N | 19-07-2017 |
| K. Overduin | MRI-guided interventions for fast diagnosis and focal treatment of (recurrent) prostate cancer | Y | N | 18-12-2017 |
| M de Rooij | Multiparametric MRI in prostate cancer | Y | N | 06-07-2017 |
| W. Venderink | MRI and MRI-targeted biopsy of the prostate. The role of direct in-bore and MRI US fusion guided biospy | Y |  | 11-12-2018 |
| Oscar Debats | Magnetic Resonance Lymphography | Y | N | 01-10-2020 |
| Bart Philips | Methodological development of multiparametric, multimetabolic and USPIO-enhanced MRI at 7 Tesla for characterizing and staging prostate cancer | Y | N | 27-10-2020 |
| **Candidates** |  |  |  |  |
| Patrik Zamecnik |  | Y | N | 2022 |
| Marloes van der Leest |  | Y | N | 2022 |
| Bas Israel |  | Y | N | 2023 |
| Linda Thijssen |  | Y | N | 2025 |
| Ansje Fortuin |  | Y | N | 2023 |
| Esther Hamoen |  | Y | N | 2023 |