



Call for Papers

Special Issue on
Magnetic Resonance Imaging Biomarkers of Renal Disease

MAGMA Special Issue, planned publication 1/2020

The past few years have seen a rapid growth in the interest in functional MRI of the kidney. The first international meetings were organized in Bordeaux 2015 [1] and Berlin 2017 [2], and a third is planned in Nottingham 2019 [3]. A European network in renal MRI (PARENCHIMA) was funded in 2016 for 4 years [4] and a 3-year national infrastructure grant was awarded to the UK Renal Imaging Network in 2018 [5]. In the same year, the NIDDK launched a new national initiative in renal MRI [6].

The current interest in renal MRI is strongly driven by clinical demand [7]. Renal diseases pose a significant and escalating socio-economic burden on healthcare systems worldwide, and the development of better diagnostics and prognostics is well-recognized as a key strategy to resolve these challenges. Functional MRI is promising in this respect due to its non-invasive nature and potential for early detection of parenchymal changes.

Since morphological changes in renal disease tend to be subtle, the ultimate utility of MRI in nephrology will depend on the ability to derive reliable MRI biomarkers. The power of this approach is illustrated by the FDA qualification of Total Kidney Volume as a prognostic biomarker for ADPKD – only one of three clinical biomarkers approved so far [8]. Other renal MRI biomarkers are on the same trajectory, but are lacking stronger evidence of biological, technical and/or clinical validation.

Our aim with this special issue is to help fill these gaps by promoting research in renal MRI biomarker validation, but also to provide a vehicle for novel developments in this field, and to highlight research in novel areas such as health economy modeling. We invite submissions of original research in any area of renal MRI biomarker research, including:

- Biological validation: clarifying the link to biology and physiology, use in disease models.
- Technical validation: demonstrating accuracy & precision, quality assurance.

- Clinical validation: demonstrating added value in drug development or patient management.
- Discovery: novel renal MR imaging biomarkers or measurement approaches.
- Scalability, automation, cost-efficiency, and health economy modeling.

Apart from original research, this special issue will contain commissioned review papers, as well as technical recommendations developed by Working Group 1 of the COST Action PARENCHIMA [4].

In order to meet the time line, papers should be submitted as soon as possible, and not later than **1st July 2019**. Papers should be submitted through the normal submission procedures on the web (<http://www.editorialmanager.com/mrmp>). Authors should indicate in their cover letter that the manuscript is submitted "**For inclusion in the Special Issue on Renal MRI**".

The special issues of MAGMA reach a wide audience, and are highly cited. This special issue on Renal MRI is an excellent opportunity to showcase your work in a high profile format. We look forward to receiving your manuscripts.

Editor-in-Chief David G. Norris

Guest editors Steven Sourbron (MR physics – clinical), University of Leeds, UK
 Christoffer Laustsen (MR physics – preclinical), Univ. of Aarhus, Denmark
 Jaap Joles (Physiology), Univ. Medical Center, Utrecht, the Netherlands
 Paul Hockings (Drug development), Antaros Medical, Sweden.
 Patrick Mark (Nephrology), University of Glasgow, UK.

Advisors Peter Boor (Histopathology), Aachen University, Germany
 Jean-Paul Vallee (Radiology), University of Geneva, Sweden.

Links

- [1] <https://sites.google.com/site/renalmriworkshop>
- [2] www.mdc-berlin.de/renal
- [3] <https://www.nottingham.ac.uk/research/groups/spmic/research/uk-renal-imaging-network/3rd-international-symposium-on-functional-renal-imaging.aspx>
- [4] www.renalmri.org
- [5] www.kidneyresearchuk.org/research/uk-renal-imaging-network
- [6] www.niddk.nih.gov/news/meetings-workshops/2018/renal-imaging-workshop
- [7] https://academic.oup.com/ndt/issue/33/suppl_2
- [8] www.fda.gov/Drugs/DevelopmentApprovalProcess/DrugDevelopmentToolsQualificationProgram/BiomarkerQualificationProgram/ucm535383.htm



<http://www.springer.com/journal/10334>

Magnetic Resonance Materials in Physics, Biology and
Medicine

Official Journal of the European Society for Magnetic
Resonance in Medicine and Biology

Editor-in-Chief: Norris, D.G.

ISSN: 0968-5243 (print version)

ISSN: 1352-8661 (electronic version)

Journal no. 10334