



## Confocal Microscopy: Clinical Impacts and Innovation

Guest Editors:

**Prof. Dr. Cleopatra  
Charalampaki**

Department of Neurosurgery,  
Cologne Medical Center,  
University Witten, Cologne,  
Germany

**Dr. Stamatia Giannarou**

Department of Electrical and  
Electronic Engineering, Imperial  
College London, London, UK

Deadline for manuscript  
submissions:

**closed (31 August 2023)**

### Message from the Guest Editors

The principle of confocal laser endomicroscopy (CLE), based on extreme miniaturization of the microscope imaging head, offers the possibility of *in vivo* microscopy with subcellular and subnuclear resolution. Clear visualization of the cytoarchitecture can be achieved with a 400-fold to 1000-fold magnification.

In oncological diagnosis and surgery, CLE would allow on one hand, intraoperative detection and differentiation of single tumor cells (without the need of fast biopsies) and on the other hand, the definition of borders between tumor and normal tissue on a cellular level, making surgical resection much more accurate than ever before. The application and implementation of CLE-assisted surgery in surgical oncology increases not only the diagnostic but also the therapeutic options by extending the resection borders of cancer on a cellular level and, more importantly, by protecting the functionality of normal tissues.

For this Special Issue, we would like to attract studies from authors working on implementing *in vivo* and *ex vivo* surgical and clinical concepts and techniques of confocal laser endomicroscopy in their treatments.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Andreas Kjaer

Department of Clinical  
Physiology, Nuclear Medicine &  
PET National University Hospital,  
Rigshospitalet, University of  
Copenhagen, Blegdamsvej 9, DK-  
2100 Copenhagen, Denmark

## Message from the Editor-in-Chief

You are cordially invited to submit research articles, short communications, comprehensive reviews, case reports or interesting images for consideration and publication in *Diagnostics* (ISSN 2075-4418). *Diagnostics* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. We would be pleased to welcome you as one of our authors.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Embase, Inspec, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (*Medicine, General & Internal*)

## Contact Us

---

*Diagnostics* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/diagnostics](http://mdpi.com/journal/diagnostics)  
[diagnostics@mdpi.com](mailto:diagnostics@mdpi.com)  
[X@diagnostic\\_mdpi](https://twitter.com/diagnostic_mdpi)