# Special Issue

# Deformable Image Registration and Image Segmentation for Radiation Therapy

## Message from the Guest Editors

Deformable image registration and image segmentation are two imperative techniques that enable current state-of-the-art radiation therapy with improved accuracy and precision in treatment planning. In radiation therapy, deformable image registration is commonly used for contour propagation and dose accumulation to power up efficient adaptive radiation therapy. This allows for more precise targeting of the tumor and better sparing of normal tissue in radiation treatment. On the other hand, image segmentation plays a crucial role in treatment planning by automatically identifying and outlining the tumor and surrounding organs at risk for modern radiation treatment planning techniques. Automatic image segmentation also facilitates the management of radiation-induced toxicity and the evaluation of potential risks and benefits of different treatment options.

This Special Issue aims to disseminate recent state-of-the-art artificial-intelligence-based deformable image registration and image segmentation techniques in the application of radiation therapy.

## Guest Editors


Dr. Jinzhong Yang

Department of Radiation Physics, Division of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA

Dr. Kristy K. Brock

Department of Imaging Physics, Division of Diagnostic Imaging, The University of Texas MD Anderson Cancer Center, Houston, TX 77030, USA


## Deadline for manuscript submissions

closed (29 February 2024)


# Diagnostics

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 5.9
Indexed in PubMed

mdpi.com/si/161360

*Diagnostics*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
diagnostics@mdpi.com

mdpi.com/journal/diagnostics

# Diagnostics

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 5.9
Indexed in PubMed

mdpi.com/journal/diagnostics

# About the Journal

## 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.

## 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

## Author Benefits

**High Visibility:**

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

**Journal Rank:**

JCR - Q1 (Medicine, General and Internal) / CiteScore - Q2 (Internal Medicine)

**Rapid Publication:**

manuscripts are peer-reviewed and a first decision is provided to authors approximately 21.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).

MDPI