

Research Project

Name of Institution and department: University Clinical Centre of Serbia

Link to website: <http://www.kcs.ac.rs/>

City and Country of Institution: Belgrade, Serbia

RESEARCH GROUP

Our research group is consisted of a young team of radiology specialists and sub-specialists with special interest in digestive, vascular and interventional radiology, all engaged in clinical and scientific work, as a part of their PhD studies. We are a young, growing group of enthusiastic colleagues willing to use the privilege of working in an environment in which we are able to easily connect with other clinical branches and give multidisciplinary approach in our daily practice and science. We are willing to share our knowledge and improve together, and we would be proud if we had an opportunity to help someone in their professional development.

TITLE OF PROPOSED RESEARCH PROJECT

Optimization of Emergency Computed Tomography Protocols and its Diagnostic Accuracy in Acute Abdominal Radiology

OBJECTIVES

- To review and optimize emergency CT acquisition protocols for acute abdominal pathologies (e.g., acute appendicitis, bowel ischemia, perforated viscus, and active hemorrhage), thereby reducing the time from patient admission to definitive surgical or medical intervention.
- To implement and assess low-dose iterative reconstruction algorithms and dual-energy CT (DECT) techniques to balance diagnostic image quality against radiation dose
- To evaluate the diagnostic accuracy of emergency abdominal CT for the most common acute conditions (acute appendicitis, bowel obstruction, mesenteric ischaemia, perforation, diverticulitis, acute pancreatitis), using surgical, endoscopic, or clinical follow-up as the reference standard.

APPLICANT'S DUTIES

- To participate in daily emergency CT reporting under supervision, progressively building competence in the interpretation of acute abdominal pathology.
- To collect, anonymize, and analyze clinical and imaging data for the study cohort, and maintain the research database.
- To participate in multidisciplinary emergency case reviews and record clinical outcomes for imaging correlation.

APPLICANT'S BENEFITS

- Participation on scientific outcomes of the project i.e. presentations to congresses or publications of papers
- Hands-on training in emergency abdominal CT interpretation in a high-volume centre, supervised by experienced abdominal and emergency radiologists.
- Acquisition of core research-methodology skills — study design, statistical analysis, and manuscript preparation — within a mentored pathway toward more independent research.
- Project Leader: Dragan Vasin
- Members: Tijana Tomić, Aleksandar Pavlović, Bojana Maričić, Stefan Milošević, Miona Jevtović