

Statement

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Member of the scientific jury appointed by order of the Rector of MU–Varna
R-109-515 / 16.12.2025 and Minutes of the Faculty Council No. 1 / 22.12.2025
Regarding: competition for acquisition of the scientific degree “Doctor” of Dr. Rumina
Plamenova Shaleva

Dr. Rumina Plamenova Shaleva was born on 16.09.1993 in the city of Varna. She completed her secondary education at the Mathematics High School in 2012. In 2019 she graduated in Medicine at MU “Paraskev Stoyanov” Varna.

Professional and academic development

- In 2020 she was enrolled in the specialty “Nephrology” at the “Clinic of Nephrology and Dialysis”, UMHAT “St. Marina”.
- In 2020, after a competition, she was appointed Assistant at the Second Department of Internal Diseases at MU Varna.

Articles and reports related to the dissertation – total 4.

Participation in scientific congresses, conferences, symposia:

- Total participations – 12, of which 2 are related to the dissertation topic.

Membership in professional organizations:

- Bulgarian Medical Association;
- Bulgarian Society of Nephrology.

Languages for communication:

- Bulgarian;
- English;
- German.

Dissertation topic of Dr. Rumina Plamenova Shaleva for awarding the educational and scientific degree “Doctor”:

Predictive factors and prognosis of patients with acute kidney injury in COVID-19

The doctoral candidate addresses a current problem of the 21st century—the complications caused by the COVID-19 pandemic, specifically with renal involvement. Its significance is determined by the severity of kidney damage. Initially, COVID-19 was regarded as an acute respiratory disease, but subsequently a multisystem nature affecting a number of organs and systems was proven. In addition to pulmonary manifestations of the infection, involvement of the heart, vascular endothelium, gastrointestinal tract, as well as the kidneys, was established. The latter most often presented with acute kidney injury (20%), which in many cases led to a fatal outcome (44%), especially after the age of 75.

The dissertation contains 210 pages and is illustrated with 10 tables and 73 figures. The literature review, aim and objectives, material, methods, results and discussion, conclusion, findings, and contributions are properly structured. A total of 327 literature sources in Latin script were used.

The literature review focuses on the pandemic caused by the novel coronavirus SARS-CoV-2. Statistics show that by the end of 2022 more than 600 million people worldwide had been diagnosed with COVID-19, and over 6.5 million had died.

The aim of the dissertation is precisely and clearly formulated—to determine the incidence and independent predictors of acute kidney injury (AKI) in patients hospitalized with

laboratory-confirmed COVID-19, as well as its impact on the clinical outcome of hospitalization.

Seven tasks are set. Of particular importance is Task 3, which aims to compare patients with AKI to those without renal impairment using early laboratory markers. Task No. 4 makes it possible to identify independent predictors of AKI. The role of the subsequent Tasks 5, 6, and 7 is to assess the prognostic value of selected biomarkers, evaluate the effect of AKI on in-hospital mortality and length of hospitalization, and propose a compact risk profile for early stratification of the risk of developing AKI.

Material

The study was approved by the Ethics Committee at MU Varna with Protocol No. 119 / 21.07.2022.

The present work represents a retrospective single-center clinical study including patients with laboratory-confirmed COVID-19. The inclusion period covers January 2020 – December 2023. Out of a total of 3980 patients with COVID-19 during the studied period, 436 were included. Of them, 94 (21.6%) developed AKI. The two patient groups were compared by demographic, clinical, and laboratory parameters, as well as by the primary outcome of the disease. The inclusion and exclusion criteria were precisely defined. The following were evaluated: demographic data, comorbidity, clinical signs at admission, laboratory parameters, clinical condition at admission, as well as the main observed event—the development of AKI.

Methods

Statistical methods were used for data processing. The obtained results are presented through tables and graphs comparing the data and highlighting the main relationships and trends.

Results and Discussion

- From the demographic indicators, the role of male sex in the development of AKI as a complication of COVID-19 is emphasized. Increasing age is a risk factor for this severe complication of the infection.
- From the comorbid factors, indicators for severe course of COVID-19 complicated by AKI are diabetes mellitus and arterial hypertension.
- From the laboratory indicators, leading are changes in urea combined with leukocytosis, lymphopenia, increased ferritin, D-dimer, fibrinogen, and CRP.
- Several multifactor analyses of the different indicators were developed in view of their prognostic value.
- The study of the obtained results proved the relationship between AKI and the respective complications: pulmonary thromboembolism, acute myocardial infarction, acute cerebrovascular incidents, and the need for mechanical ventilation.
- The development of AKI as a complication of COVID-19 is a prognostic factor for disease outcome, leading to fatal result.
- Based on the analysis of the obtained results, a prognostic score for AKI risk at hospitalization was developed.

Findings

- AKI is a common complication in patients with COVID-19 with a clear association with age and the presence of comorbidities.
- The severity of COVID-19 is also determined by the presence of diabetes mellitus and arterial hypertension.
- Among laboratory indicators with the most unfavorable profile in patients with AKI is urea.
- The development of AKI in COVID-19 aggravates the clinical course of the disease.
- An extremely important factor in the course of COVID-19 is multiorgan involvement.

The contributions are summarized in two groups:

• Contributions of theoretical nature:

- The first nationally systematized study on the incidence, predictors, and clinical outcomes of AKI in patients with COVID-19 in a Bulgarian hospital cohort was conducted.
- It was confirmed that AKI is an independent prognostic factor for fatal outcome in COVID-19.

• Contributions of practical-applied nature:

- A point-based score for early risk stratification and rapid identification of patients with increased probability of developing AKI was created;
- Of exceptional importance is the developed management algorithm in relation to the degree of risk for AKI development.

In her dissertation, Dr. Rumina Plamenova Shaleva develops an extremely relevant and at the same time insufficiently studied problem. COVID-19 was a serious challenge for humanity, which mobilized all medical workers with one main goal—the fight against something unknown, with many complications and in most cases an unfavorable outcome. Theoretical knowledge on this topic is not abundant. We all learned how to recognize the symptoms and how to treat. The materials presented for the competition by Dr. Rumina Plamenova Shaleva reflect her in-depth work, her scientific search, and theoretical preparation.

The doctoral candidate has made a detailed literature review, which is evident from the discussion of the obtained results.

We all hope that such a pandemic will not occur again, but confronting it gave us the opportunity to assess the risks it causes.

And perhaps here we return to a phrase by Julius Caesar: “Practice is the teacher of all things.” The struggle and what humanity experienced during 2020–2022 provided an opportunity for targeted research and deciphering of the complications of this severe and cruel pandemic.

My acquaintance with the submitted materials gives me grounds to give a positive evaluation of the dissertation of Dr. Rumina Plamenova Shaleva.

15.02.2026

Prс

Shaleva
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