



# Radiology Loading and Coverage Hours in Kazakhstan

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## Radiology Landscape in Kazakhstan

The Radiological Society of Kazakhstan (RSK) is a non profit, non governmental public organization founded in 1977 that incorporates all attending radiologists and radiologists in training in Kazakhstan while expanding the annual coverage of specialists (Fig. 1). Society is dedicated to promoting practice, education, and research in the field of radiology within Kazakhstan. Moreover, RSK also provides educational resources and supports professional networking among radiologists and other healthcare professionals in Kazakhstan.

Furthermore, RSK is increasingly being integrated into the international radiological community every year [1]. For instance, in 2013, the RSK became a national member of the European Society of Radiology. Additionally, RSK joined the Asian Oceanian Society of Radiology in 2018 [2] and the International Society of Radiology in 2020 as a full member. As an engaged participant, RSK fosters close collaboration with society.

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## Radiology Services Provided in Kazakhstan

Radiology services in Kazakhstan include ultrasound diagnostics, digital radiography, CT, MRI, nuclear medicine (single-photon emission CT [SPECT] and PET/CT), and interventional radiology for diagnosing and treating diseases using minimally invasive image-guided procedures.

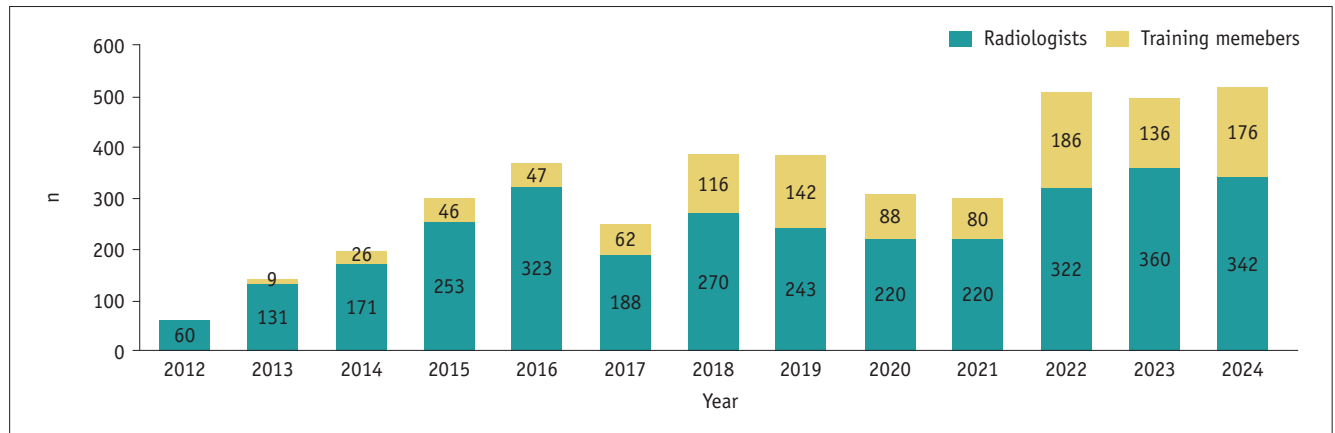
## Regulation of Radiological Services in Kazakhstan

Regulations governing all aspects of radiological services, such as workload, radiation exposure, training in the field of radiology, and the structure of radiographic imaging rooms, are issued through directives from the Ministry of Healthcare of the Republic of Kazakhstan.

The primary document regulating radiological services in the Republic of Kazakhstan is order number 381 issued by the Ministry of Healthcare titled "On the further improvement of the radiology diagnostic service" dated 12th of October, 1994.

The latest orders manage radiology services, radiation safety, minimum standards for equipping healthcare organizations with medical devices, hazardous and/or dangerous working conditions, entitlements to reduced working hours, additional paid annual leave, and increased wages based on the abovementioned order, updating, and complementing it.

Radiologists' coverage hours are regulated by the Labor Code of the Republic of Kazakhstan, according to the code, employees engaged in strenuous work or exposed to harmful and/or hazardous working conditions are entitled to a reduced working time of no more than 36 hours per week. Consequently, they should not be more than 6 hours daily



**Fig. 1.** Changes in the number of full members of the Radiological Society of Kazakhstan for the years 2012–2024.

in a 6-day working week and not more than 7.2 hours daily in a 5-day working week.

### Specifications in Loading and Coverage Hours

In Kazakhstan, hospitals are categorized into two types based on the presence of emergency services: hospitals with emergency services that provide primary care and admission of patients with acute medical conditions, and non-emergency hospitals (national-level research medical centers) that provide planned and highly specialized medical care.

In hospitals that provide emergency services, radiologists have a substantial workload determined by the number of patients per coverage hour. For instance, a sonographer in an emergency hospital may complete 18–25 ultrasound examinations during a day shift of 6 hours (which accounts for 378–525 ultrasound examinations per month). Moreover, in emergency departments, the number of ultrasound examinations can reach 100–150 in 24 hours (2100–3150 ultrasound examinations per month).

With regard to specialized research medical centers in Kazakhstan, which do not offer emergency services, doctors in radiology departments usually work in two shifts, with each shift spanning 6 hours on working days. Hence, during one working day, approximately 8–10 CT and 6–8 MRI examinations could be conducted, comprising 248 CT and 186 MRI examinations monthly.

Coverage hours during night shifts in hospitals providing emergency services last 12 hours. In specialized medical research centers, a doctor on duty responsible for inpatient emergency conditions is summoned to the hospital if required at night, on weekends, or on public holidays and is compensated with payment rewards.

In both types of medical institutions, every working hour is compensated at an increased rate of not less than 1.5 times the employee’s hourly rate, as stipulated by the Labor Code of the Republic of Kazakhstan.

### Estimated Time Standards for Interventional Radiology Procedures

The duration of the diagnostic interventional radiology procedures should not exceed 70 minutes, with a limit of 10 procedures per week. The duration of the therapeutic interventional procedures should not exceed 120 minutes, with a limit of four procedures per week.

These time standards include the preparation time before the procedure and diagnostic or therapeutic interventional radiology procedures.

### CONCLUSION

The adherence of the RSK to international guidelines concerning radiology loading and coverage hours underscores the commitment of society to maintaining standards of excellence in the field. By following these guidelines, society ensures the provision of quality radiological services to meet the needs of patients and healthcare providers across the nation. This dedication to best practices serves as a foundation for fostering trust, reliability, and effectiveness in the healthcare system, ultimately benefiting Kazakhstan.

### Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

**Author Contributions**

Conceptualization: Tairkhan Dautov. Supervision: Zhanar Kozhakhmetova. Visualization: Bibissara Yerekesh. Writing—original draft: Nurmakhan Zholshybek, Bibissara Yerekesh. Writing—review & editing: Tairkhan Dautov, Bauyrzhan Kaliyev.

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