

## **RADIATION MEDICINE**

Guidelines for the 2<sup>nd</sup> year students (Faculty for International Students)

### **LESSON № 10: THE PRINCIPLES OF RADIATION DOSE REDUCTION IN HUMANS**

**THE AIM:** to get acquainted with the principles of reducing radiation dose on the human body;  
to study methods of protection from ionizing radiation;  
to master the structure and principle of x-ray apparatus operation and doses of x-ray radiation;  
to perform laboratory work.

**DURATION:** 3.0 hours.

**PLACE:** SELF-EDUCATION.

**EQUIPMENT:** methodical grant, tables, PowerPoint presentation, tasks according to the topic.

#### **Required theoretical knowledge**

1. Medical irradiation: a concept. The concept of closed and open sources of ionizing radiation.
2. The main documents that regulate the work with ionizing radiation sources.
3. Methods of protection against ionizing radiation "protection by amount", "protection by time", "distance protection", "protection by screen".
4. Radiation safety of personnel and population in the conditions of the existing exposure.
5. The principles of radiation dose reduction in patients.

#### **Literature**

##### **Basic:**

1. Radiation medicine : учебное пособие для иностранных студентов учреждений высшего образования : допущено Министерством образования Республики Беларусь / А.Н. Стожаров [и др.]; под ред. А.Н. Стожарова. – Минск: Новое знание, 2020. – 203 с.

##### **Additional:**

1. Мойсеёнок, Е.А. Лекции по радиационной медицине (в таблицах) = Lectures on Radiation Medicine (in tables): пособие для студентов факультета иностранных учащихся (на английском языке) [изд. на CD-дисках] / Мойсеёнок Е.А. – Электрон. текст. дан. и прогр. (объем 29 Мб). – Гродно: ГрГМУ, 2012. – 1 электрон. опт. диск (CD-ROM).
2. Radiation and Ecological Medicine: Electronic Educational and Methodological Complex. Access: <http://edu.grsmu.by/course/view.php?id=99>