

Regulatory Program of Radiation Sources in Medical Use

June 11, 2019

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KINS

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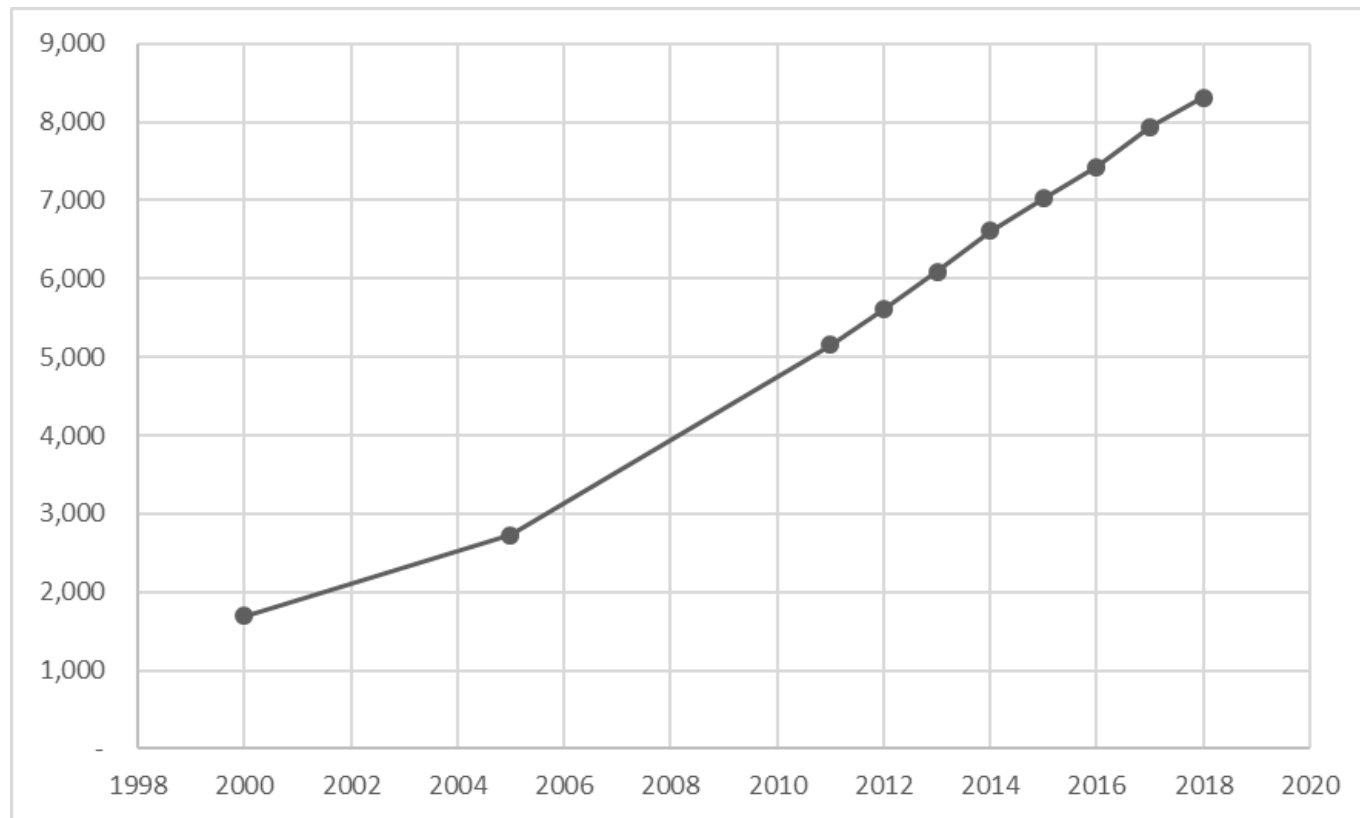


I. Use of Medical Radioactive Sources

Medical Accident in Korea



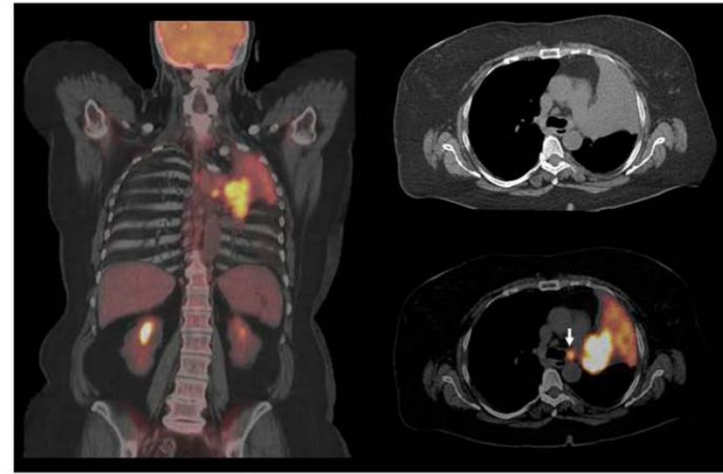
Safety Regulation on Radiation



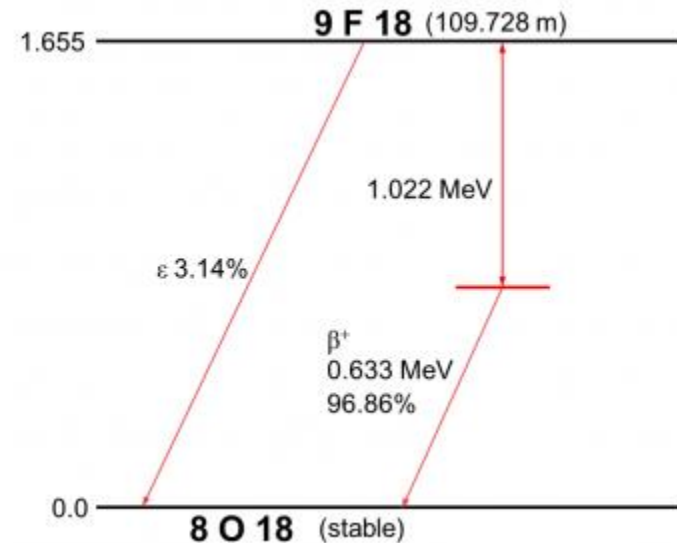
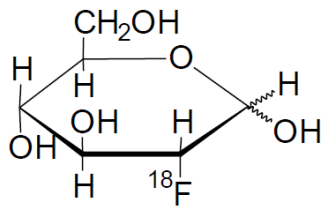
Type	Industrial Organization, etc.	Medical Organization	Education and Research Organization	Total
Unit	7,488	195	631	8,314

* Increase in number of organizations : 1,692 (2000) → 2,723 (2005) → 5,155 (2011) → 5,606 (2012) → 6,085 (2013)
 → 6,612 (2014) → 7,024 (2015) → 7,474 (2016) → 7,938 (2017) → 8,314 (2018)

PET-CT



PET Fludeoxyglucose F18



The active ingredient 2-deoxy-2-[18F]fluoro-D-glucose (Fludeoxyglucose F-18), abbreviated [18F] FDG

Mo/Tc-99m Generator



Ge-68 Line Sources

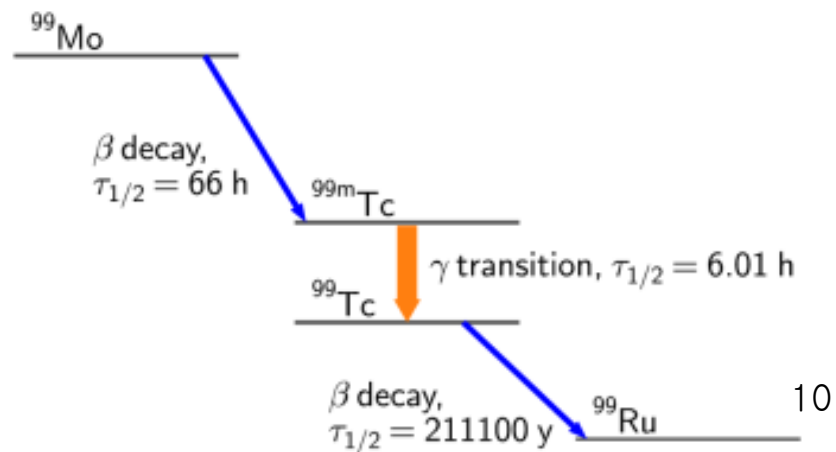
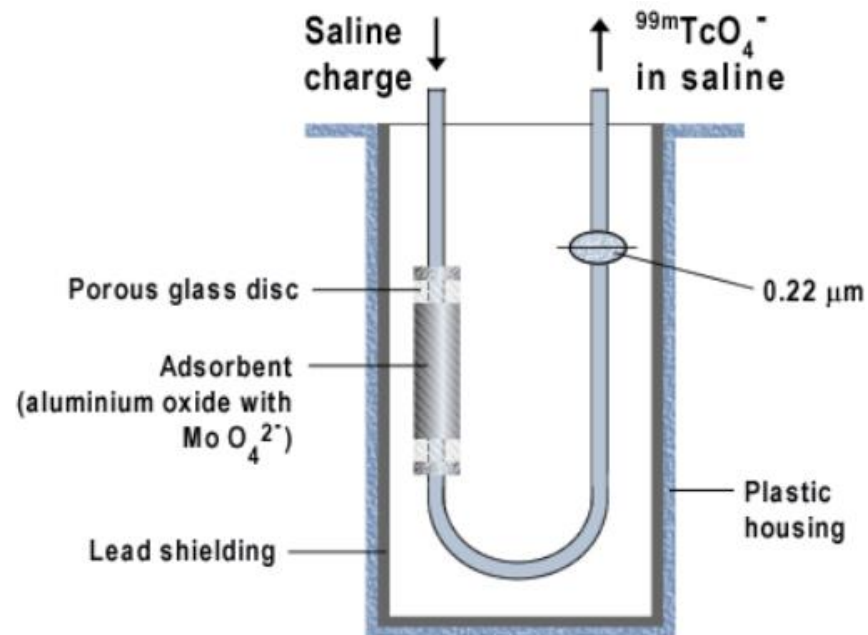


GE-68 Cylindrical Phantom

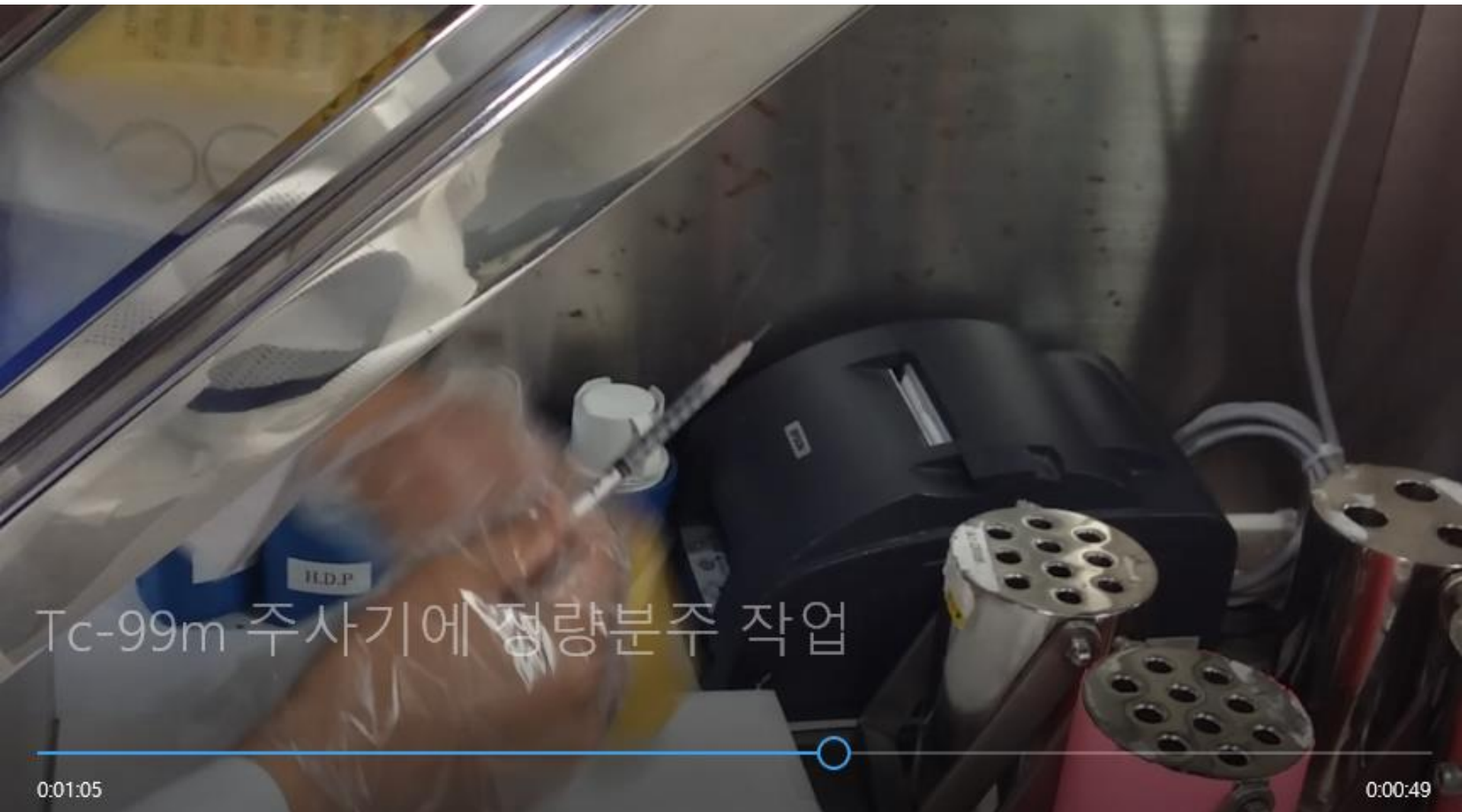
Gamma Camera



Mo/Tc-99m Generator



Injection of Tc-99m





Gammacell® 1000 Elite/3000 Elan

Gammacell® 3000 Elan

Caesium¹³⁷

Fixed Source(s)/Turning Canister

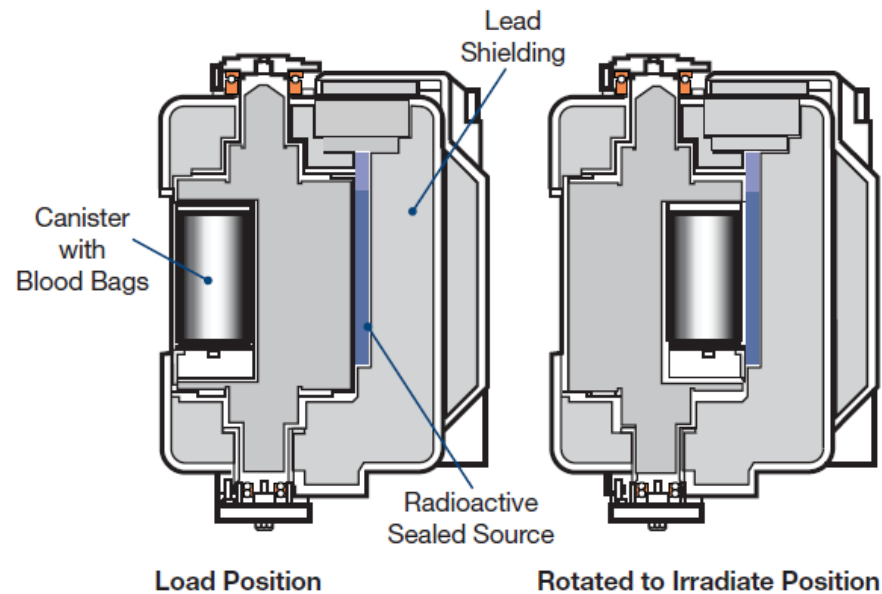
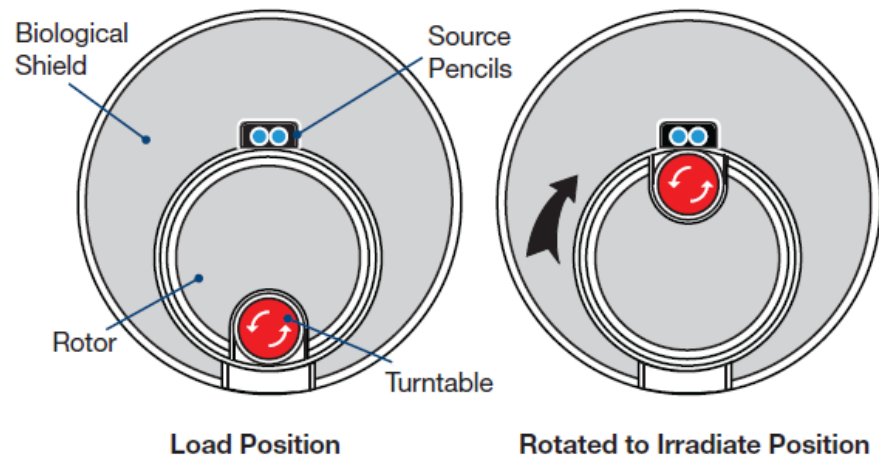
n/a

Model I = 1300 Ci (48.1 TBq)

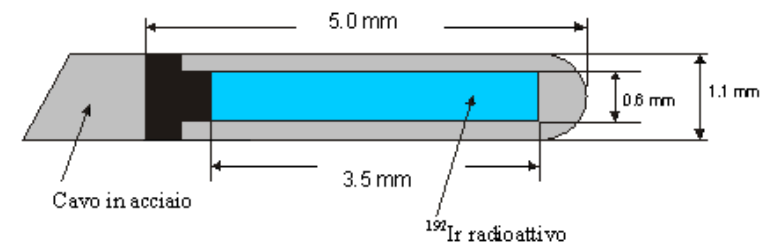
Model II = 2600 Ci (96.2 TBq)

≤ 5 µSv/h (0.5 mrem/h) at 5 cm
(1.94 in) from front

Safety Regulation on Radiation



Brachytherapy Machine and Ir-192



Linear Accelerator

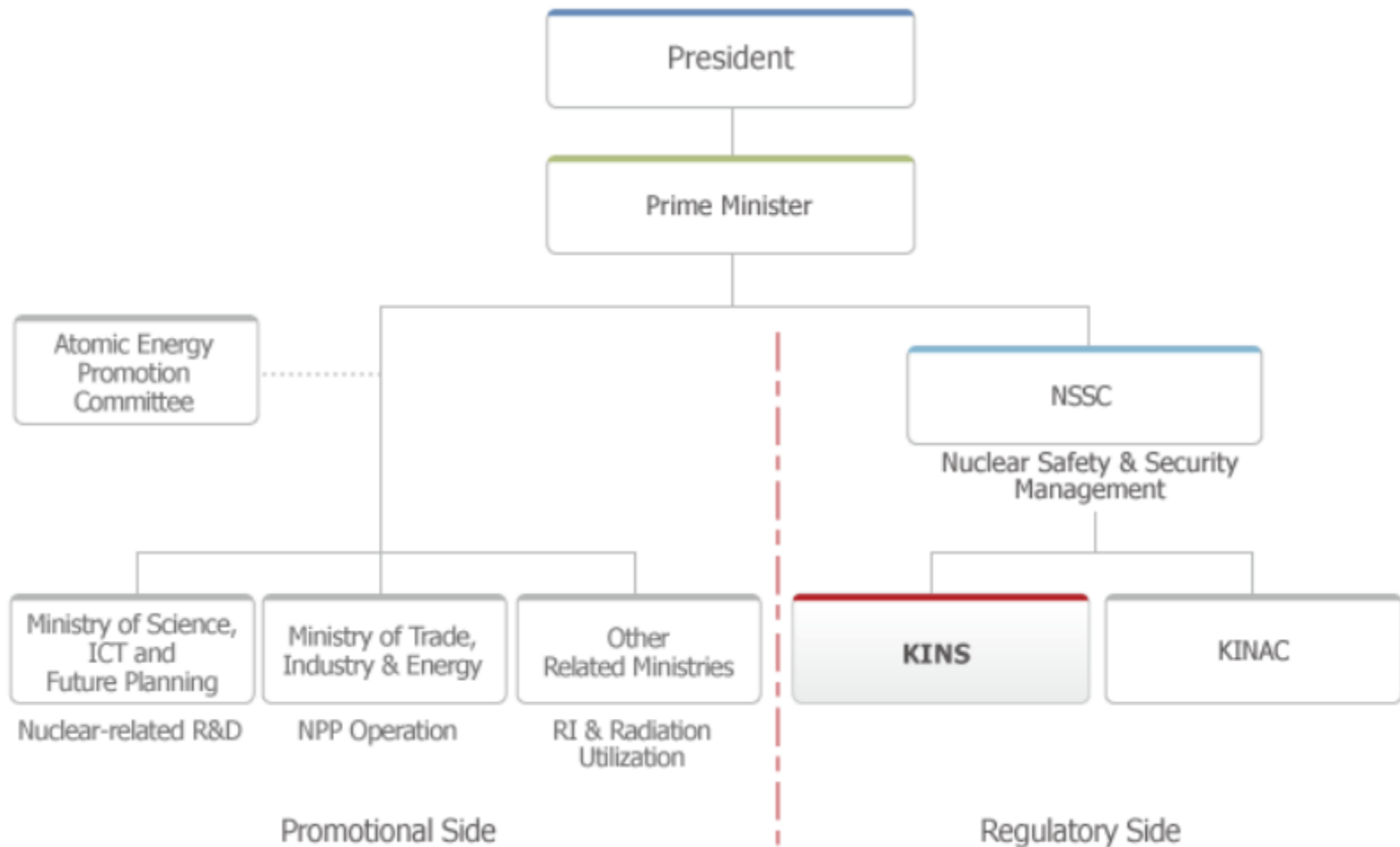


A linear accelerator is a device that uses high Radio-frequency(RF) electromagnetic waves to accelerate charged particles(i.e. electrons) to high energies in a linear path, inside a tube like structure called the accelerator waveguide.

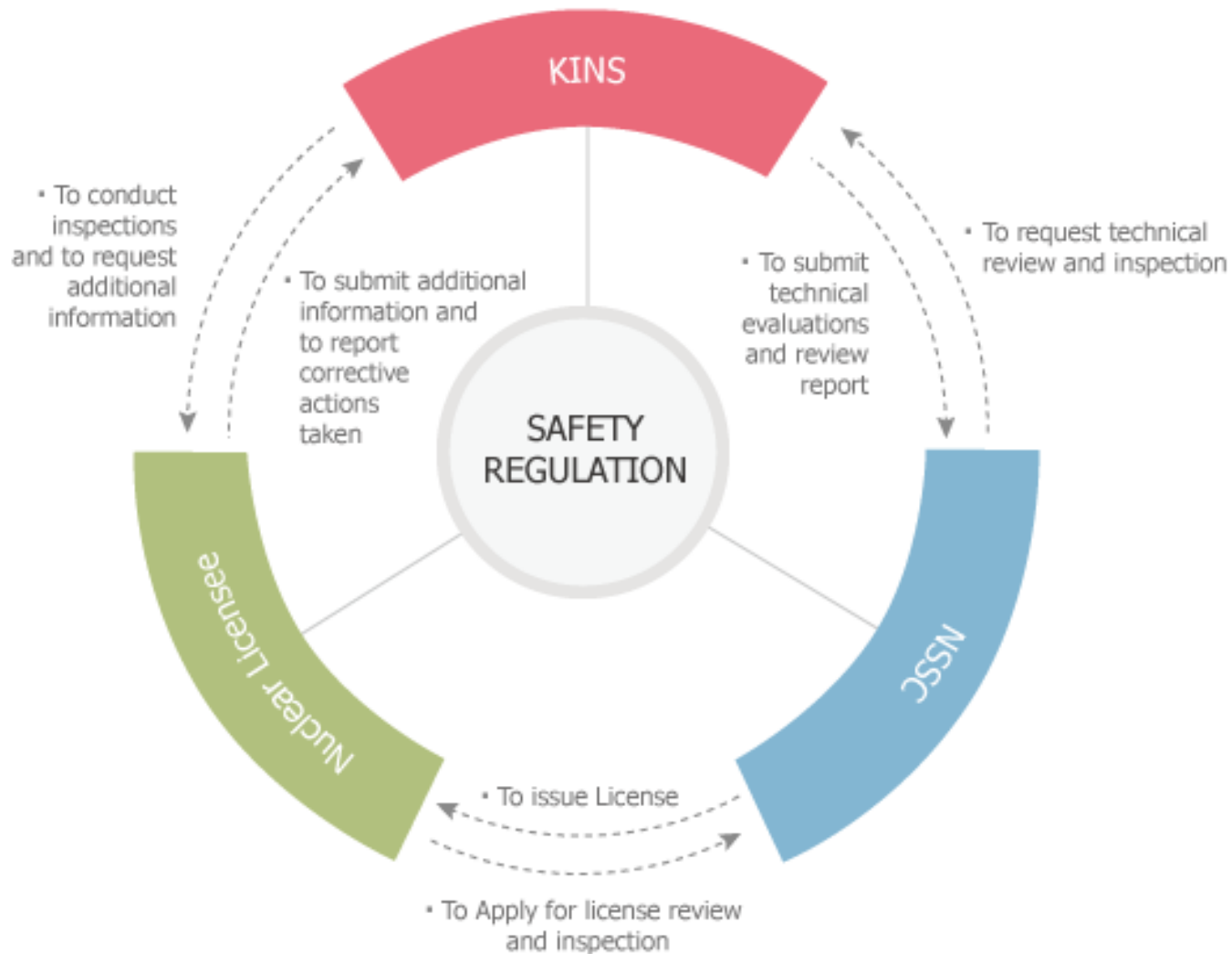


II. Regulation System on Medical Radioactive Sources

Nuclear-related Government Organization

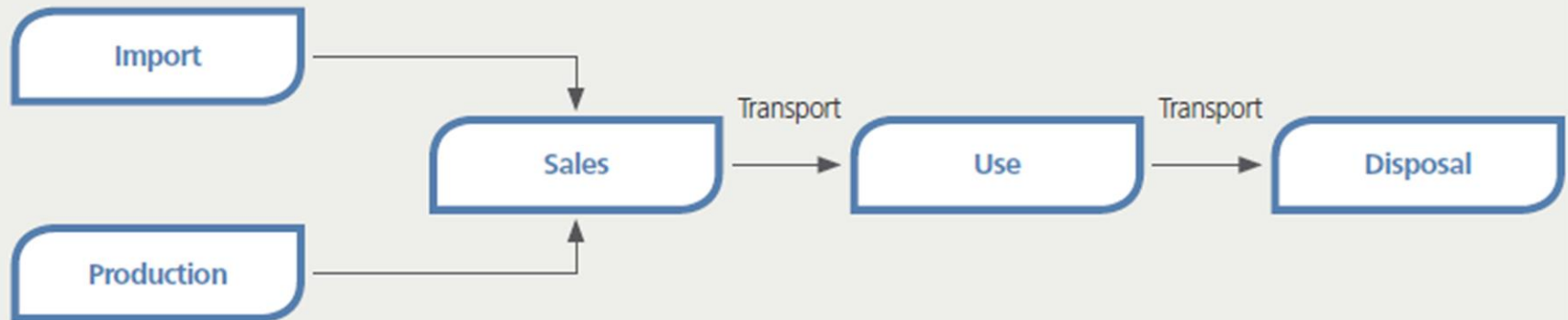


Regulatory Mechanism

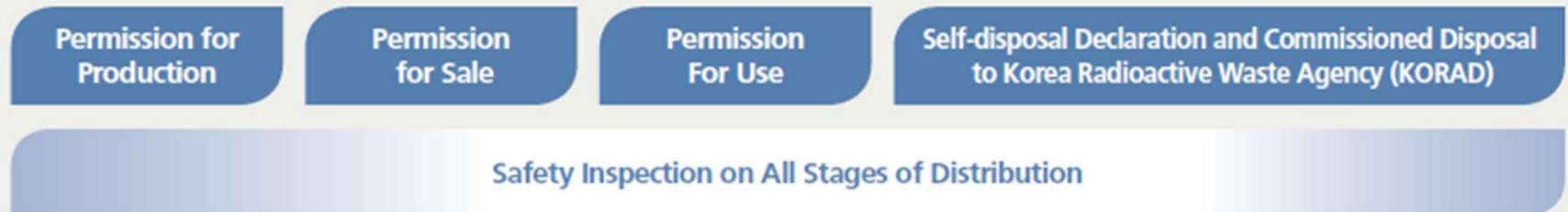


Safety Regulation on Radiation

Distribution



Regulation



Nuclear Safety Act

Article 53 (1), A person who intends to produce, sell, use or make a mobile-use of radioisotope or radiation generating device shall obtain permit from the Commission as prescribed by the Presidential Decree.

Director's message

[HOME](#) > [About EUMC](#) > [Director's message](#)



Director of Ewha Womans
University Medical Center,
Vice President of
Ewha Womans University

Byung In Moon
문병인

GREETINGS

WELCOME TO THE WEBSITE OF EWHW WOMANS UNIVERSITY MEDICAL CENTER

"We will be born with customer-centered medical care and dedication."

Ewha Womans University Medical Center is a medical institution with a long history and tradition began as Pogoonyogoan which was the first hospital for women in Korea in 1887. As the nation's only one affiliated hospital for women's medical university, we have received the love of customer by providing the best medical services based on experiences accumulated in the field of women's education, research, and medical treatment and differentiated competitiveness.

Ewha Womans University Medical Center has continued innovated in order to provide new value based on customer-priority management.

For the first time among the university hospitals in Korea, we have improved the convenience of customers with differentiated medical services by operating treatment, examination, operation and specialization treatment by disease and patient customized collaboration treatment on Saturday. We are making its leap into a globally competitive hospital while having the affiliated medical institutions including Ewha Womans

University Mokdong Hospital and Ewha Womans University Cancer Center for Women, the first female cancer treatment clinic in Korea which is well-known to both domestic and foreign customers and managing the Yangcheon-gu Dementia Support Center,

Decree of Nuclear Safety Act

Article 79, A person, who intends to obtain permit for the production, sale, use or mobile use of radioactive isotope or radiation generating device under the provisions of the former part of Article 53 (1) of the Act, shall submit an application for the permit to the Commission as prescribed by the Ordinance of the Prime minister.

Application for Radioisotope Use Permission

※ DO NOT fill columns with dark backgrounds.

receipt number	receipt date	processing date	processing period	20 days
Applicant	Name of Corporation		Business License Number	
	Location		Telephone	
	Representative name		Resident Registration Number	
	Name of Division			
	Location of Division		Telephone	
	Department Responsible		Person in charge	
	Radioisotope seller (or prospective)		Telephone	

I, hereby, apply for permission of radioactive isotope use, under Article 53, 「Nuclear Safety Act」, the Enforcement Ordinance, Article 79 and Enforcement Rule, Article 60.1.

(Year) (Month) (Date)

Applicant

(signature or seal)

To the Nuclear Safety and Security Commission

Attached Documents	1. One (1) original copy of Radiation Safety Report containing the details of each clause of Article 58.4, 「Nuclear Safety Act Enforcement Rules」 2. One (1) original copy of Safety Management Rule containing the details of each clause of Article 58.5, 「Nuclear Safety Act Enforcement Rules」 3. One (1) original copy of documents proving the purchase of devices under Table 2 attached to 「Nuclear Safety Act Enforcement Ordinance」 4. One (1) original copy of documents proving the employment of staff required under Table 3 attached to 「Nuclear Safety Act Enforcement Ordinance」 (Plus a Proxy Service Agreement if the radiation management is outsourced under Article 58.2.6)) 5. One (1) original copy of compensation standards under Article 152.1, 「Nuclear Safety Act Enforcement Ordinance」	No fees 「charged under Table 8, 「Nuclear Safety Act Enforcement Rules」.
Matters to be confirmed by The Nuclear Safety and Security Commission	One (1) original copy of Business License	

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Agreement on Shared Use of Administrative Information

With regard to processing this document, I agree on the confirmation of above details by Nuclear Safety and Security Commission

Regulation of Nuclear Safety Act

Article 60, The application shall be accompanied by these documents

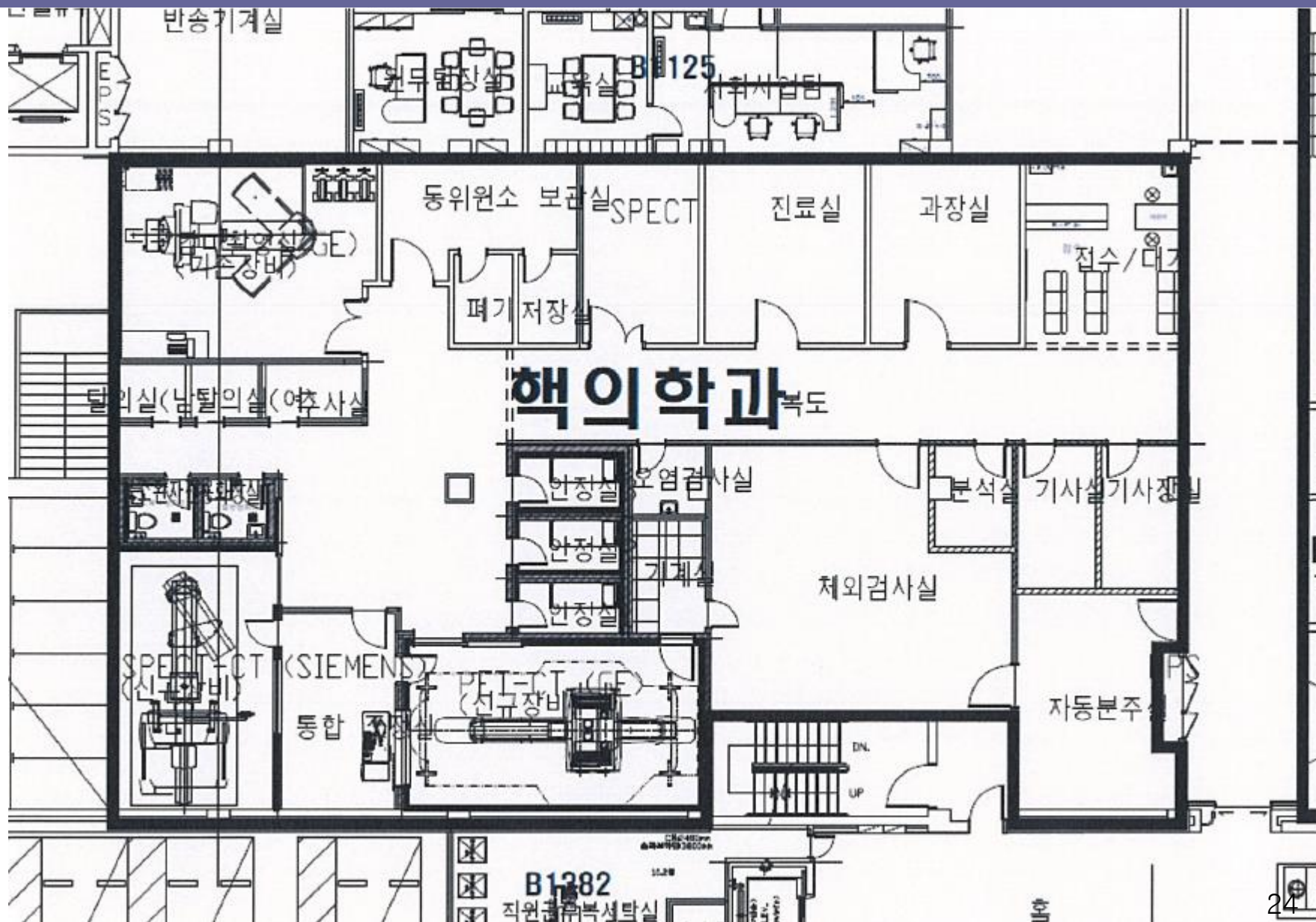
1. Radiation safety report
2. Safety management regulations
3. Documents evidencing the purchase of equipment
4. Documents evidencing the employment of personnel
5. Compensation standards for injuries





III. Practice to Find Regulatory Targets

In Area of Nuclear Medicine



In Area of Nuclear Medicine



In Area of Nuclear Medicine



In Area of Nuclear Medicine



In Area of Nuclear Medicine



In Area of Nuclear Medicine



9318 수간호사#2

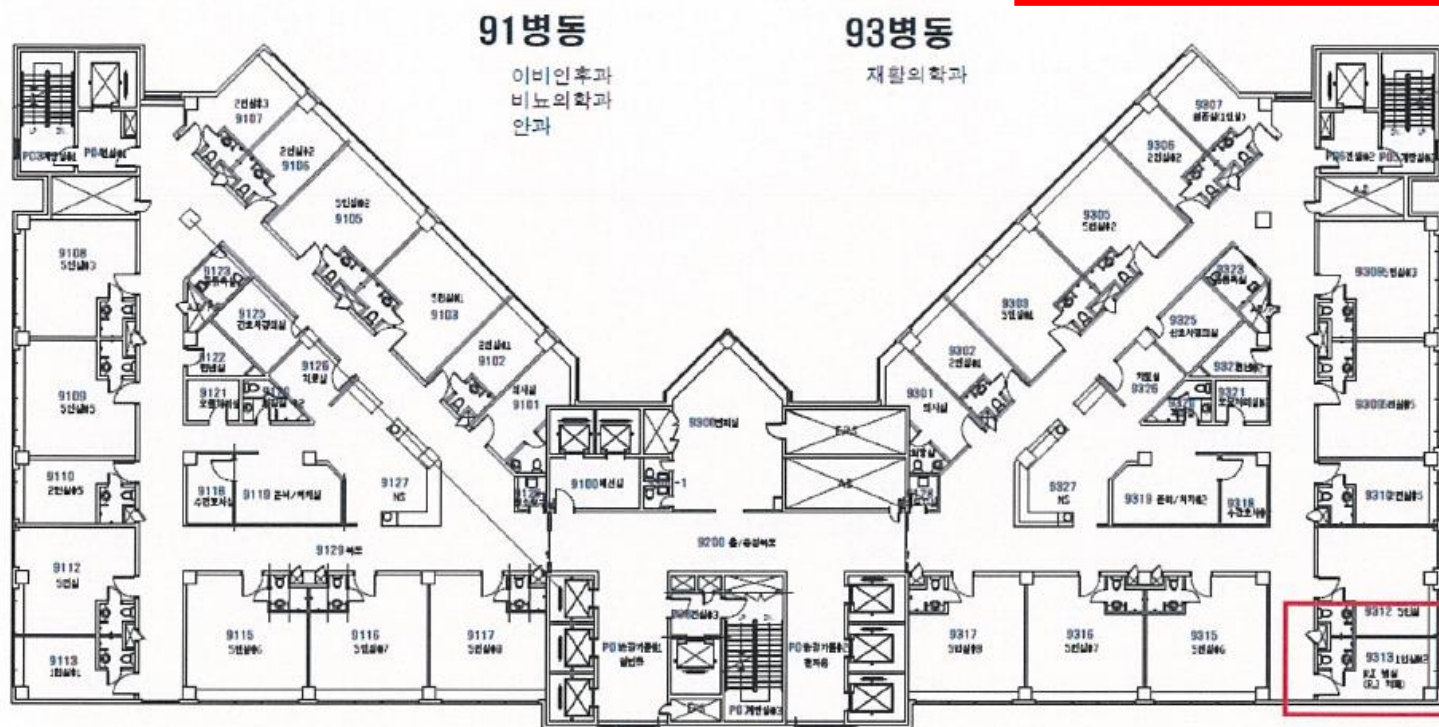
9312 1인실#5

9312 5인실

9313 1인실#2

RI 병실
(R.I 차폐)

5
실#6



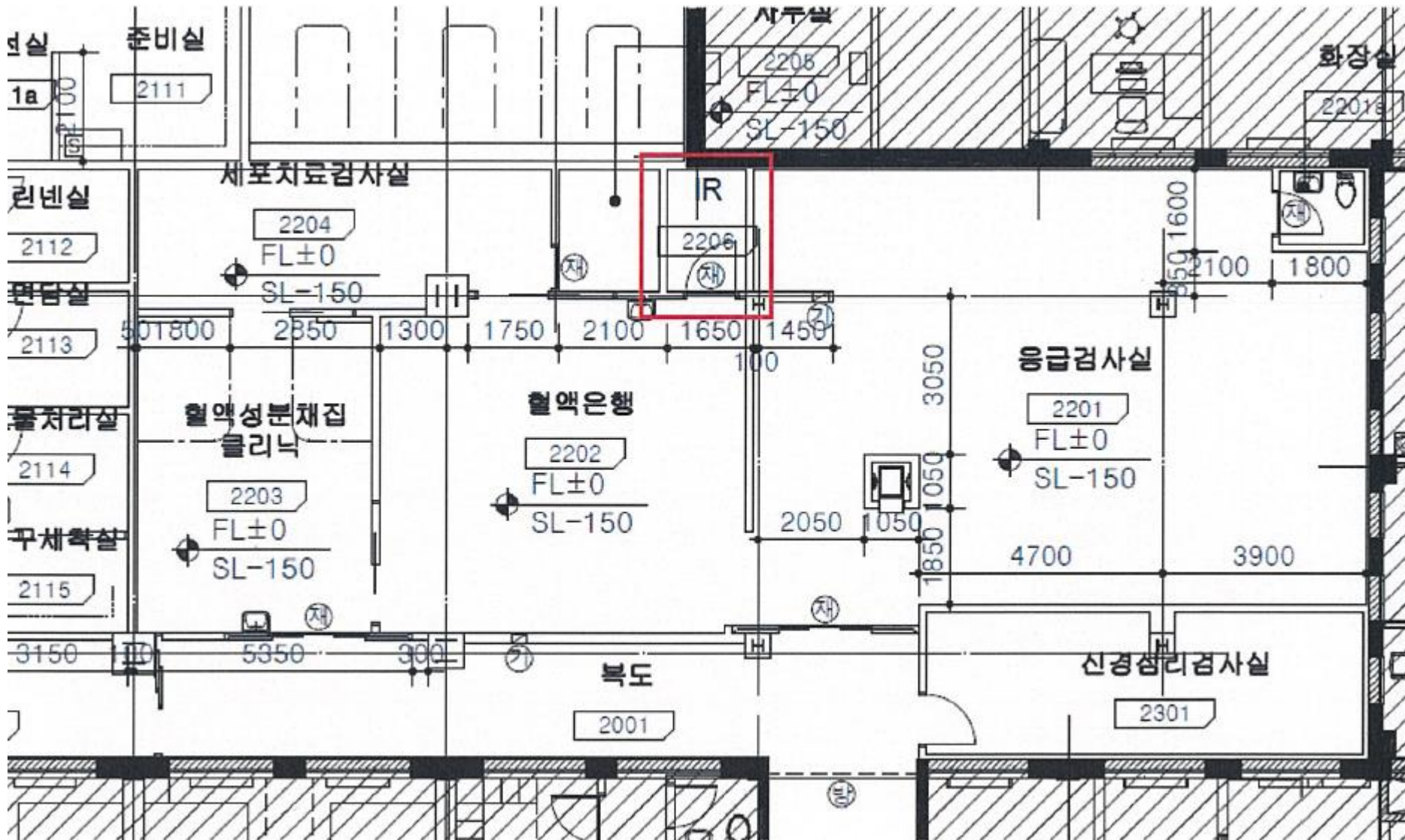
I-131 Treatment Room



I-131 Treatment Room



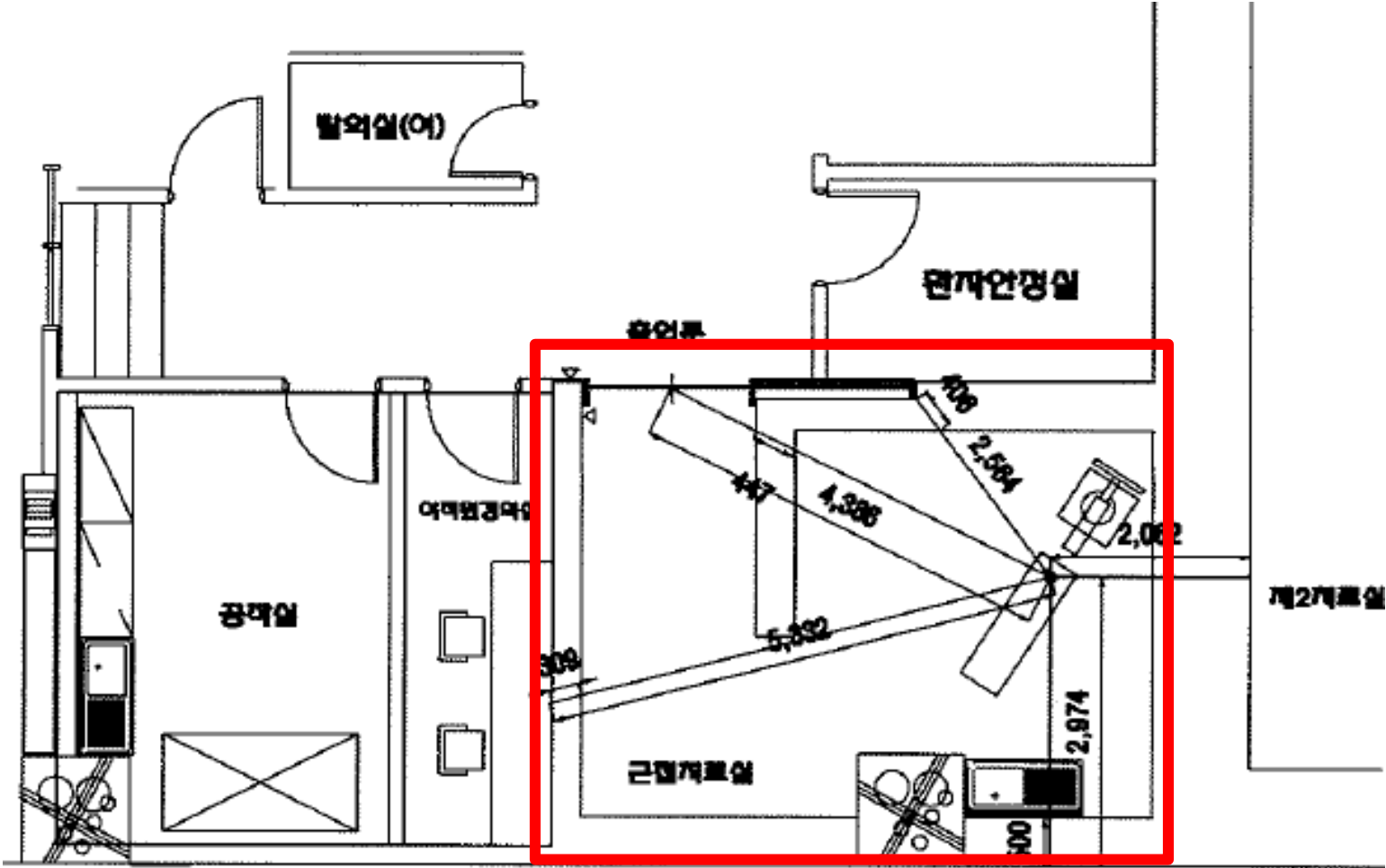
Blood Irradiator Room



Blood Irradiator Room



Brachytherapy



Brachytherapy





IV. Discussion

Thank you very much **KINS**

