

Nuclear Medicine in Korea

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The first clinical use of radioactive material in Korea started 25 years ago in June, 1959, when a patient with hyperthyroidism was successfully treated with ¹³¹I.

In April of the following year, the first nuclear medicine laboratory was installed at the Seoul National University Hospital. Since then, the Seoul National University Hospital has played a pioneering and pivotal role in the field of Korean nuclear medicine. Subsequently, the four provincial national university hospitals were granted various kinds of sophisticated nuclear medicine laboratory equipment through the US Atomic Energy Commission.

Shortly thereafter, the number of nuclear medicine laboratories in general hospitals has steadily been rising, having reached a total of 61, as of 1984.

More than half of the nuclear medicine laboratories in general hospitals are heavily concentrated in the metropolitan area of Seoul, namely 32. Others are located in Incheon, 3; Taejon, 5; Chonju, 2; Kwangju, 3; Taegu, 6; and Pusan, 7 (Figure 1).

Out of 61 nuclear medicine laboratories the gamma camera with highly sophisticated linkages, that has developed innumerable advances in new instrument technology, is operational in 41. The regional distribution of these gamma cameras is illustrated in Figure 2. The metropolitan

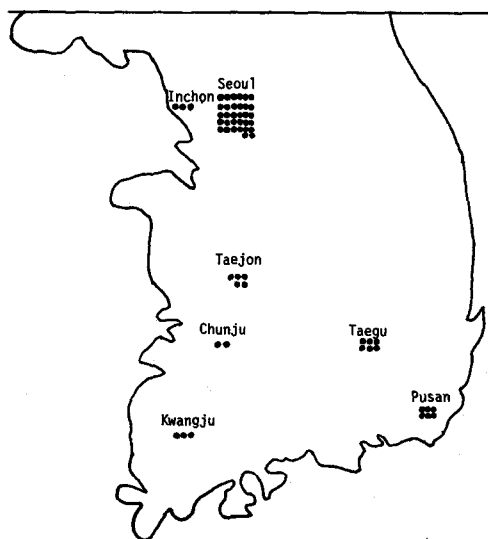


Fig. 1. Regional distribution of nuclear medicine laboratory in Korea.

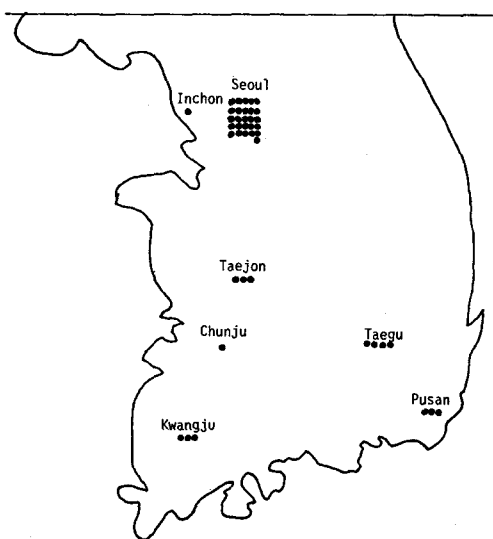


Fig. 2. Regional distribution of gamma camera in Korea.

area shows the highest installation of 26. Other areas are Inchon, 1; Taejon, 3; Chonju, 1; Kwangju, 3; Taegu, 4; and Pusan, 3.

The exquisitely sensitive analytic methods of radioimmunoassay which have brought increased precision to work in field of endocrinology is in operation in 48 general hospitals. The capital area is again predominant numbering 30. Other areas which have hospitals employing these methods are Inchon, 2; Taejon, 3; Chunju, 2; Kwangju, 2; Taegu, 4; and Pusan, 5 (Figure 3).

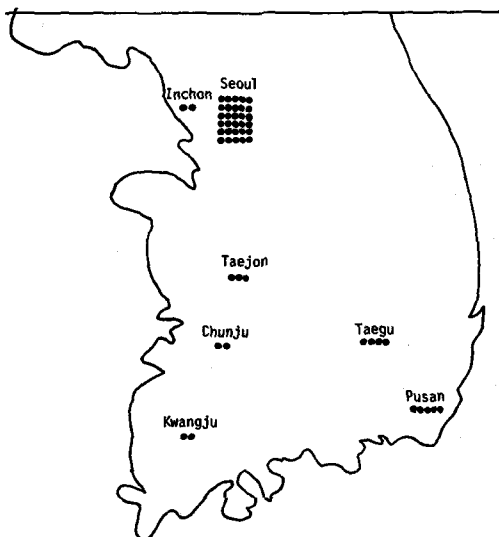


Fig. 3. Regional distribution of RIA laboratory in Korea.

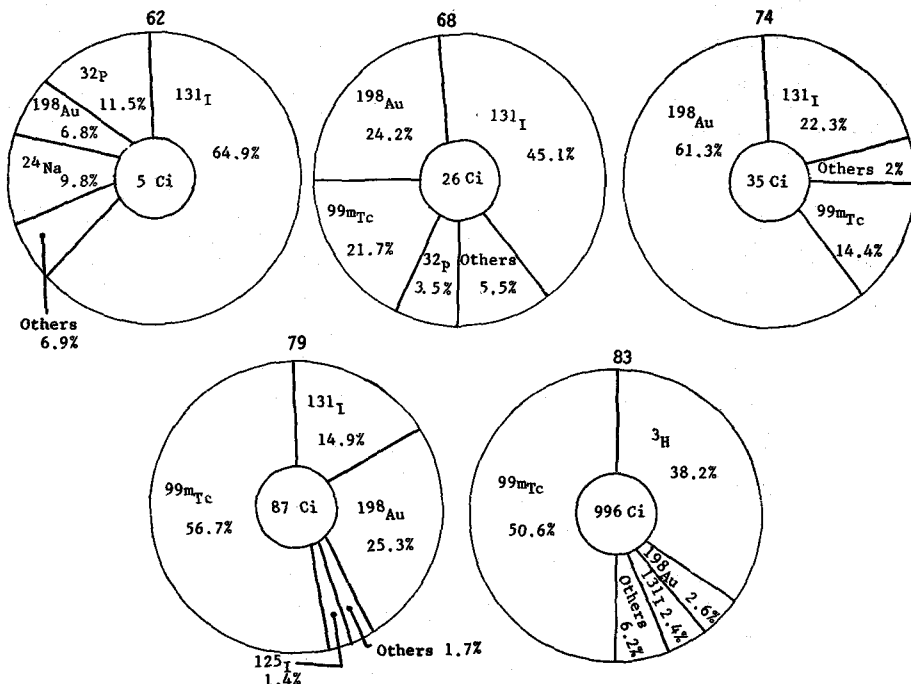


Fig. 4. Annual total dosage of radioculides for clinical use in Korea.

The annual total dosage of radionuclides for clinical use is shown in Figure 4. As the graphic figure demonstrates, the annual total dosage in 1962 reached only the small figure of 5 Ci. Then, as Korean nuclear medicine has made progress rapidly, the annual total dosage use has risen dramatically, amounting to 996 Ci as of 1983.

The main radionuclides and their dosage employed in 1983 are shown in Figure 4, ^{99m}Tc being the highest 50.6%; ^3H , 38.2%; ^{198}Au , 2.6%; ^{131}I 2.4%; and the remaining compounds totaling 6.3%.

The Korean Society of Nuclear Medicine which was inaugurated with only 40 members, is the second oldest such society in Asia. It was initially founded in Dec. 1961, 7 years after the creation of the American Society of Nuclear Medicine.

The number of members has gradually been growing, and currently the Society consists of

Table 1. Academic achievements of the Korean Society of Nuclear Medicine (KSNM)

Year	No. of articles presented at the KSNM meetings	No. of articles published in the J of KSNM
62	5	—
63	7	—
64	5	—
65	8	—
66	27	—
67	30	14
68	35	11
69	27	19
70	49	17
71	41	20
72	34	22
73	38	19
74	37	20
75	36	21
76	32	13
77	46	20
78	43	17
79	37	10
80	35	15
81	51	17
82	36	24
83	52	21
Total	711	318

250 active members.

During the past 24 years, 711 invaluable scientific papers have been presented at the semi-annual meetings (Table 1). In addition, many distinguished foreign speakers were invited at the meetings, exchanging instructive information and allowing us to share their expertise. Beside the semiannual conventions, the Society has decided to hold monthly meetings from this year in order to utilize most advantageously the knowledge gained in this rapidly advancing discipline.

Since 1967, the Korean Journal of Nuclear Medicine has been issued semiannually and distributed to domestic members as well as oversea institutions. Upto now, 318 outstanding articles have been published (Table 1).

In Oct. 1966, the first international symposium on nuclear medicine which was attended by many internationally known scholars including Dr. Wagner and Dr. Born was held in Seoul. This

Table 2. Training course on RI for clinical use and licenses issued for handling RI

Year	No. of physician trainees	No. of licenses for handling RI acquired from KIST
62	46	73
63	12	25
64	13	16
65	6	23
66	13	27
67	15	24
68	16	17
69	13	13
70	16	17
71	24	17
72	18	23
73	11	17
74	20	22
75	15	20
76	22	23
77	30	35
78	18	22
79	27	26
80	37	33
81	44	53
82	53	42
83	1	31
Total	470	604

symposium was not only exceedingly meaningful, but also gave impetus and stimulus to the initial stage of Korean nuclear medicine.

An epoch-making event in the history of Korean nuclear medicine took place in 1974. That is, the Korean Society of Nuclear Medicine was unanimously endorsed as an affiliate of the World Federation of Nuclear Medicine and Biology at the first International Congress of Nuclear Medicine, Tokyo, Japan.

Since 1962, a training course on radioisotopes for medical use has been implemented under the auspices of the Korean Institute of Science and Technology (KIST) (Table 2). So far, 604 physician trainees have received this training course, and 470 of them have acquired the license issued by KIST. These inestimable human assets have been actively and vigorously engaged in nuclear medicine work. Knowledges of this field has permeated all medical domains and significantly contributed to advance Korean nuclear medicine.

Presently, many medical schools in Korea offer an intensive undergraduate course of nuclear medicine, realizing the essentiality of this relatively new discipline in medical education.

In conclusion, I'm convinced that in the past two decades, Korean nuclear medicine has undoubtedly made great strides in overcoming adverse circumstances.

We are looking forward to seeing a further great advance of Korean nuclear medicine including the procurement of more nighly sophisticated equipment, and also look forward to the formation of a Korean Board of Nuclear Medicine in the foreseeable furture.