

Certification System of Medical Physicists in Japan

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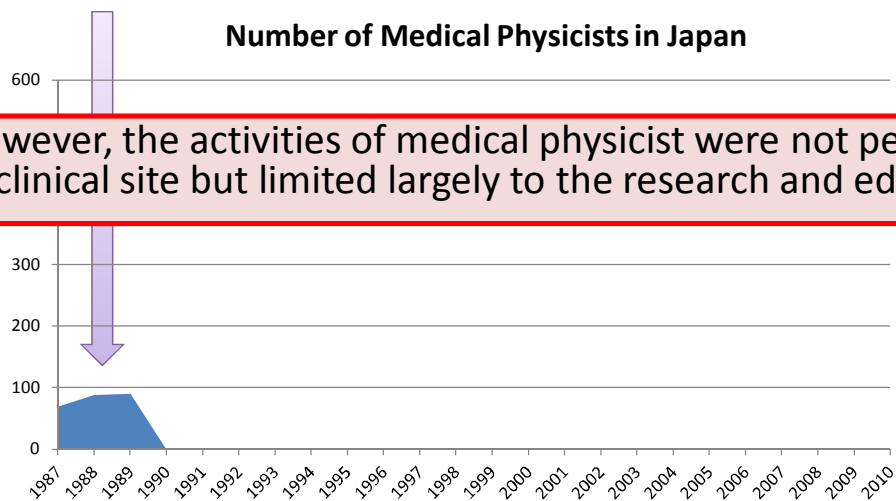
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Background 1

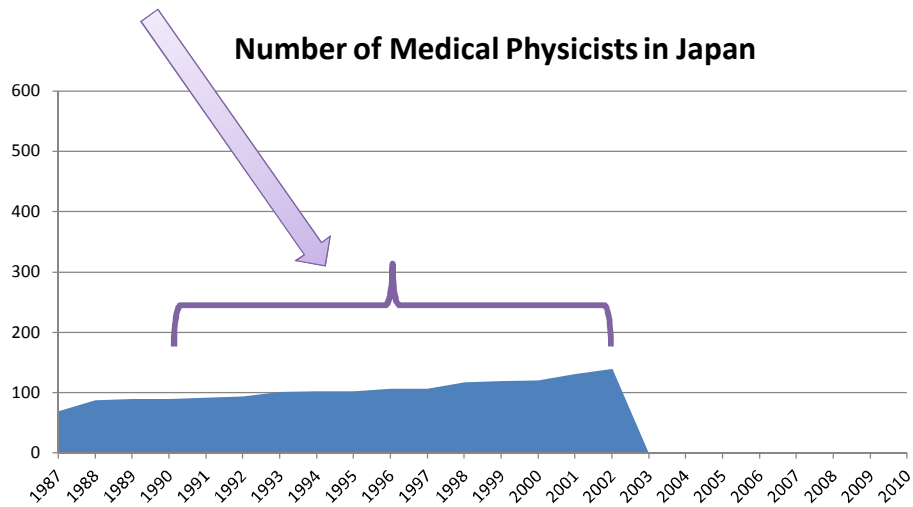
- The certification system in Japan has a long history, which started from the certification of 70 medical physicists in 1986.



- ◆ However, the activities of medical physicist were not performed in clinical site but limited largely to the research and education.

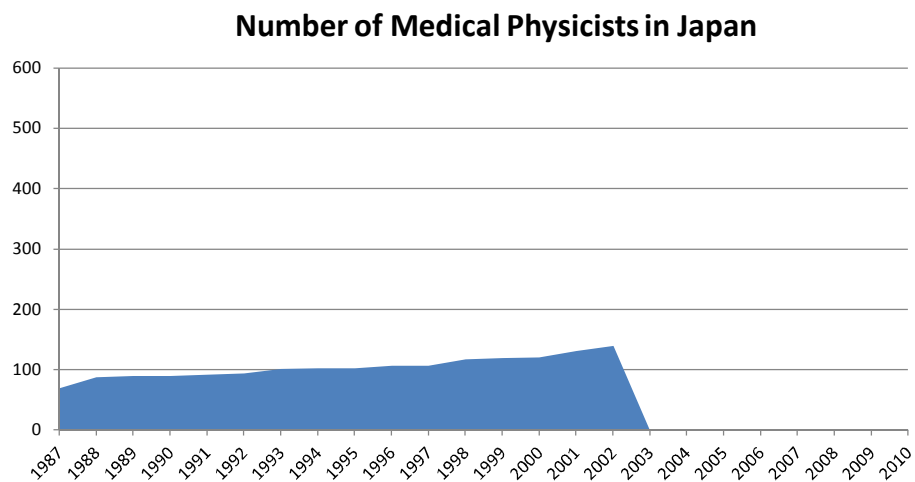
Background 2

- As a result, the number of medical physicists in Japan did not increase for a long time.



Background 3

- Since 2000, many accidents of radiation therapy have been revealed.



Accidents in radiation therapy in Japan

| Institute | City | Date | Period | Fact |
|------------|-------------------|---------|----------------------|---|
| T. H. | Tokyo | 2001/4 | 98/7-00/12 (2Y5M) | Input error of wedge factor Erroneous irradiation to 23 pts. |
| K.Univ. H. | Kanazawa | 2002/7 | 00/6-02/7 (2Y1M) | Input error of wedge factor Erroneous irradiation to 12 pts. |
| H. H. | Hirosaki | 2003/10 | 95/4-99/10 (4Y6M) | Discrepancy in understanding evaluation point between physician and therapist Erroneous irradiation to 276 pts. |
| Y.Univ. H. | Yamagata | 2004/2 | 99/4-03/11 (4Y7M) | Input error of field factor Erroneous irradiation to 63 pts. |
| Y.City.H. | Yamagata | 2004/3 | 02/10-04/3 (1Y5M) | Operation mistake of planning system Erroneous irradiation to 25 pts. |
| T.H. | Aizuwaka matsu | 2004/4 | 99/3-04/4 (5Y1M) | Improper use of dosimeter Erroneous irradiation to 256 pts. |
| W.Univ.H. | Wakayam a | 2004/5 | 03/9 | Operation mistake of planning system Erroneous irradiation to 1 pts. |
| I.Univ.H. | Iwate | 2004/5 | 98/9-04/2 (5Y5M) | Input error of wedge factor Erroneous irradiation to 111 pts. |

Establishment of JORQM

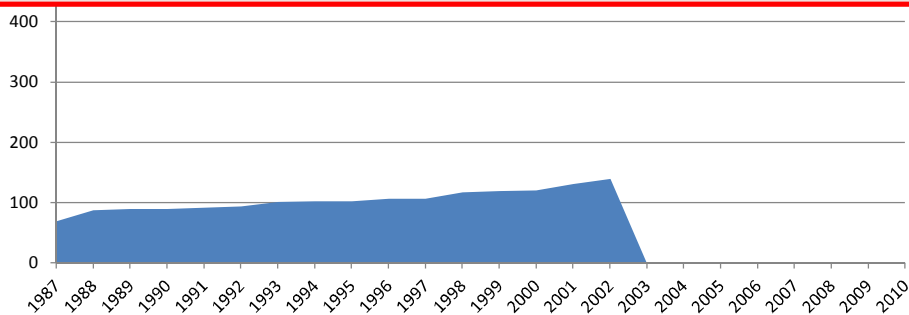
- To meet the societal safety demand for radiotherapy, Japanese Organization of Radiotherapy Quality Management (JORQM) was established in 1997. JORQM is a non-profit organization and is composed of the following organizations:
 - ◆ Visit poster presentation of “RADIOTHERAPY QUALITY MANAGER AND MEDICAL PHYSICIST”
PO2-ED-15
- JORQM certifies experienced radiology technologists and medical physicists as “**Radiotherapy Quality Manager**” who is responsible for quality assurance of radiotherapy.
- At this time **medical physicists could not lead** QA/QC for radiotherapy because the number of medical physicists was not large and some radiotherapists opposed it.

Background 4

- Meanwhile, In 2002, the qualifying standards for medical physicist were changed so that **radiology technologist** can obtain qualification for examine.

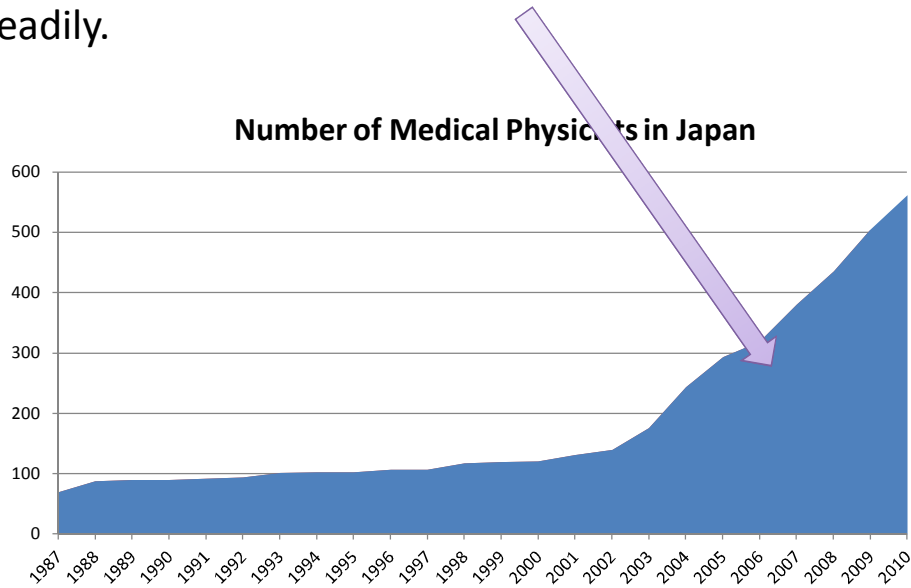
Number of Medical Physicists in Japan

- ◆ Because they worked for parts of medical physics practice such as QA/QC.



Background 5

- Since then, the number of medical physicists has increased steadily.



Establishment of JBMP

- In these surroundings, Japanese Board for Medical Physicist Qualification (JBMP) was established in 2009 under the agreement between Japan Radiological Society (JRS) and Japanese Medical Physics Society (JSMP).

Purposes of JBMP

- Certification of medical physicist and renewal of the certification.
- Certification of educational facilities of medical physicist and renewal of the certification.
- Formulation of guidelines of educational curriculum for medical physicist.
- Holding seminars to foster medical physicists and to maintain medical physicist's ability.

Certification of medical physicist

- Eligibility for admission to credentialing examination
 - Master's degree of science, technology and health science (including future graduates)
 - Medical physics accomplishments

- Eligibility for application for certification
 - Pass of credentialing exam.
 - 3 years of medical physics experience for master's degree, 1 year for doctor's degree

*There are many exceptional regulations to rescue medical physicists certified by old certification system.

Renewal of certification

requires over 60 units within 5 years from following categories.

- Category I
Practical accomplishments relevant to medical physics
- Category II (mandatory)
Attendance of continuing education (training session) of medical physics
- Category III
Research and educational performance of medical physics

Formulation of guidelines of educational curriculum for medical physicist

In progress

- Radiation therapy (almost completed)
- Diagnosis
- Nuclear medicine

Certification of educational facilities of medical physicist and renewal of the certification

- will depends on that the level of medical physics education is achieved compared to the guidelines of educational curriculum for medical physicist.
- Certified educational facilities will obtain the merit in the certification of medical physicist.

They can take examination during master's course, and so on.

Summary 1

- The certification system in Japan has a long history since 1986.
- Because the activities of medical physicist were not performed in clinical site , the number of medical physicist in Japan did not increase for a long time.
- In 2002, the qualifying standards for medical physicist were changed so that radiology technologist can obtain qualification for examine. Since then, the number of medical physicists has increased steadily.
- In these surroundings, Japanese Board for Medical Physicist Qualification (JBMP) was established in 2009.

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Summary 2

- The dominant purposes of JBMP are as follows.
 - Certification of medical physicist and renewal of the certification.
 - Certification of educational facilities of medical physicist and renewal of the certification. (in progress)
 - Formulation of guidelines of educational curriculum for medical physicist. (almost completed)
 - Holding seminars to foster medical physicists and to maintain medical physicist's ability. (planning)

Thank you for your attention.

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Thank you for support to Japan from all over the world.

