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**Special Report**

**"Modalities in Japan" posted on 30-September-2002**

**MODALITIES in JAPAN**

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Last updated : October 2002.

**Introduction**

We reviewed the situation of the spread of the medical devices and systems in Japan. The Objects are CT, MRI, Istopes, radiation instruments, and PACS. The numerical value of the devices and the systems primarily depends on "Medical Devices & System Databook 2002" by M-E Promote Association co. Ltd.

**Abbreviations of makers**

- Aloka: ALOKA co., LTD.
- CTI: [CTI Molecular Imaging, Inc.](#)
- Electa: [Elekta.K.K.](#)
- GE: [GE Yokokawa Medical Systems Corporation.](#)
- Hamamatsu: [Hamamatsu Photonics K.K.](#)
- Hitachi: [Hitachi Medical Corporation.](#)
- MDS: [MDS Nordion Haan GmbH.](#)
- Mitsubishi: [Mitsubishi Electric](#)
- Nucletron: [Nucretron](#)
- Philips: [Philips Medical Systems Japan.](#)
- Postiron: Positron Corporation.
- Shimadzu: [Shimadzu Corporation.](#)
- Siemens: [Siemens-Asahi Medical Technologies Ltd.](#)
- Toshiba: [Toshiba Corporation Medical Systems Company.](#)
- Varian: [Varian Medical Systems](#)

**CT scanners as of August 2001.**

	Toshiba	GE	Hitachi	Shimadzu	Siemens	Other	Total
Conventional	1618	1443	1399	416	10	0	4886
Helical	2723	1705	888	401	248	38	6003
MDCT	254	163	0	0	55	0	472
AngioCT	38	23	15	0	10	0	86
Total	4633	3334	2302	817	323	38	11447

MDCT: Multi Row Detector CT.

Angio CT: Combined system of Angiography and CT scanner.

Recently 16 slice MDCT system has been released, which will spread rapidly in the near future.

**MR systems as of May 2001.**

	GE	Hitachi	Toshiba	Siemens	Shimadzu	Philips	Total
below0.5T	111	954	85	70	0	0	1220
0.5T	433	89	452	5	160	79	1218

1.0T	126	0	0	237	164	13	540
1.5T	450	9	319	208	73	175	1234
Total	1120	1052	856	520	397	267	4212(+10)

Since April 2002, the amount of the public insurance payment for a MR examination has changed according to the performance of the machine. The spread of the machine of 1.0T or more will be expected in the near future.

#### Angiography systems as of March 2002.

Shimadzu	Toshiba	Philips	GE	Siemens	Hitachi	Total
940	878	478	477	404	380	3557

#### SPECT systems as of January 2002.

Shimadzu	Toshiba	GE	Hitachi	Siemens	Aloka	Total
583	578	350	170	149	33	1863

#### PET systems as of March 2002.

Shimadzu	Siemens	GE	Positron	Hamamatsu	Hitachi	CTI	Total
19	15	9	6	2	2	1	63

#### LINAC systems as of October 2001.

Mitsubishi	Toshiba	Varian	NEC	Hitachi	Electa	Total
367	235	89	65	37	2	793

#### Brachytherapy systems as of October 2001.

Shimadzu	Nucletron	STS	Varian	MDS	Total
85	73	18	7	3	186

#### Particle Therapy as of October 2001

##### Proton

Institute	Energy
<a href="#">Proton Medical Research Center, University of Tsukuba</a>	250 MeV
<a href="#">National Cancer Center East</a>	235 MeV
<a href="#">National Institute of Radiological Sciences</a>	70 MeV
<a href="#">Fukui Wakasa Wan Energy Research Center</a>	230 MeV
<a href="#">Hyogo Ion Beam Medical Center:</a>	230 MeV

##### Heavy Ion

Institute	Energy
<a href="#">National Institute of Radiological Sciences:</a>	800 MeV
<a href="#">Hyogo Particle therapy Center</a>	320 MeV

#### Radio Surgery (LINAC) as of October 2001

140 systems.

#### Radio Surgery(Gamma knife) as of October 2001

35 systems.

#### Hyperthermia as of October 2001

268 systems.

#### ESWL as of October 2001

803 systems.

#### Teleradiology(Dignosis of CT, MR image, etc.) systems as of March 2002.

Secom	NetHospital	DrNet	NetMedical	ImagingNet	Tepco	Total
255	103	36	28	17	1	1272 hospitals

n many hospitals that equip CT or MR systems, no radiologists are there. Then many radiologists work as a part-timer in those hospitals.

### **PACS as of March 2002**

1468 systems.

The definition of "PACS" is assumed to be a system with at least one image file server.

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