National Center for Global Health and Medicine (NCGM)

Clinical Training Guidelines 2015

National Center for Global Health and Medicine
Radiology department
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Introduction

This training is in line with the training content being conducted at the National Cancer Center Hospital. This text is a sub-text of the National Cancer Center training guidelines 2015. This text will be a description of Radiology department of National Center for Global Health and Medicine(NCGM).Also it is listed for training content is carried out in NCGM.

As with the National Cancer Center Hospital staff, NCGM radiology department staff, more information, that can safety and security of the technology providers, we hope from the bottom of my heart.

Clinical Training Time Period and Schedule in NCGM

From August,31,2015 to September,3,2015 (5days)

Taiwan students Clinical Training Calender

Division of Radiology Department in NCGM

		Time schedule							
		9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00
First half (2 persons)	31,August (mon)	Orientation	Nuclear medicine	RT	Lunch	Angiography		MRI	
	September,1 (tue)	Emergency X-ray (ER)	General X-ray		Lunch	CT		Center for Infectious Diseases	
Second half (3 persons)	September,2 (wed)	Orientation	General X-ray		Lunch	Angiography		MRI	
	September,3 (thu)	Emergency X-ray (ER)	Nuclear medicine	RT	Lunch	CT		Center for Infectious Diseases	

Note

○Diagnostic Radiology

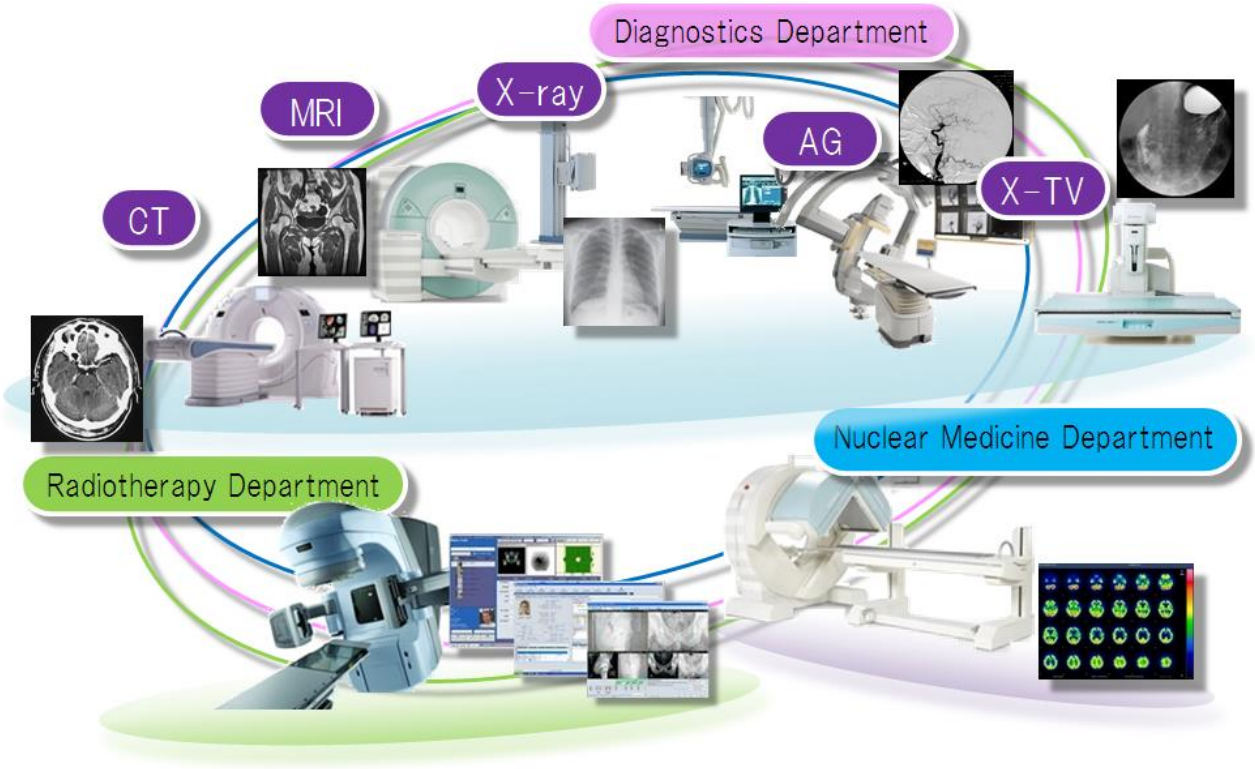
・Tuesday / Thursday afternoon, Coronary CT

・Monday / Tuesday / Thursday, myocardial scintigraphy

○Radiation therapy

・Training has been the latest methods of treatment at the National Cancer Center Hospital.
Medical safety mainly in radiation therapy in NCGM, and introduces techniques on our hospital.

Configuration of a radiology department



Radiological technologist：44s

・General radiography number ：102,906/year

・CT number：29,059/year

・MRI number：11,141/year

・RI number：4,515/year

・Radiotherapy number：5,825/year

Facilities Guide

(1 General radiography)

Configuration of staff

・Radiological technologist：17 people
・Acceptance：3people

X-ray equipment

・TOSHIBA MRAD
・Fuji EVstation
・Dry Imager：Fuji DRYPIX4000
・Mobile X-ray equipment
：HITACHI Sirius
・Bone mineral quantitative equipment
：QDR4500W
・Pantomo：AUTOⅢNCM
・X-TV-ray fluoroscopy equipment
：HITACHI CUREVISTA
・・・Other

Radiographic X-ray equipment

Radiographic X-ray equipment

Mammography

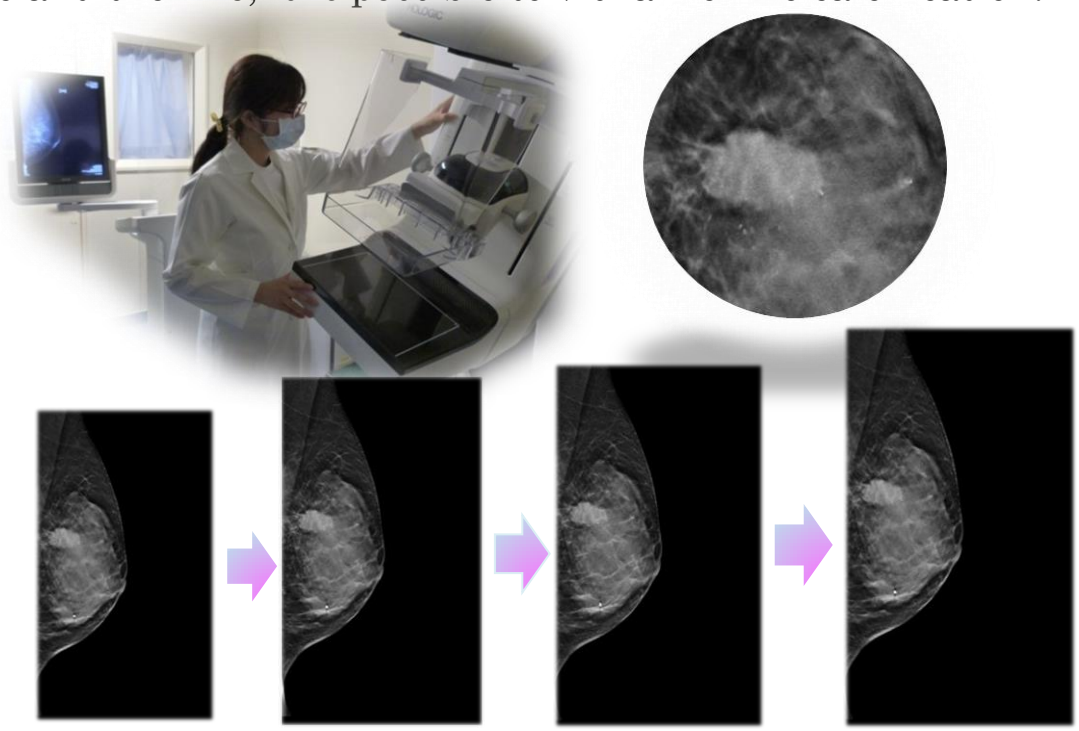
Portable X-ray equipment

Bone mineral quantitative equipment

Introduction of general radiography

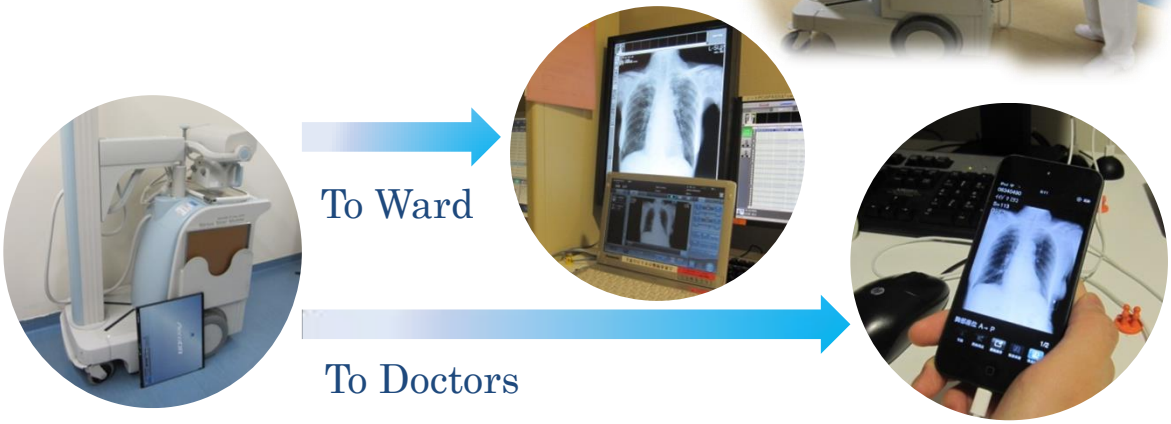
<Tomosynthesis>

3-dimensional photography technology for image acquisition from multiple angles in a short period of time the breast。 Image is reconstructed high-resolution tomographic image displayed in cine mode and the like, it is possible to visualize fine calcification.



<Image distribution in the wireless LAN>

X-ray image delivery by using the wireless LAN from the ward. In the case of a hurry, provide an X-ray image to the doctor in the tablet terminal.



(2 Angiography)

Configuration of staff

・Radiological technologist：3 people
・Acceptance：3people

X-ray equipment

・Angiography equipment
・Angio room-1　SIEMENS　IVR-CT
・Angio room-2　PHILIPS
　　Heart catheterization equipment
・Angio room-3　SIEMENS　IVR
・Injector　：Z0NE-master

・・・Other

Angiography equipment

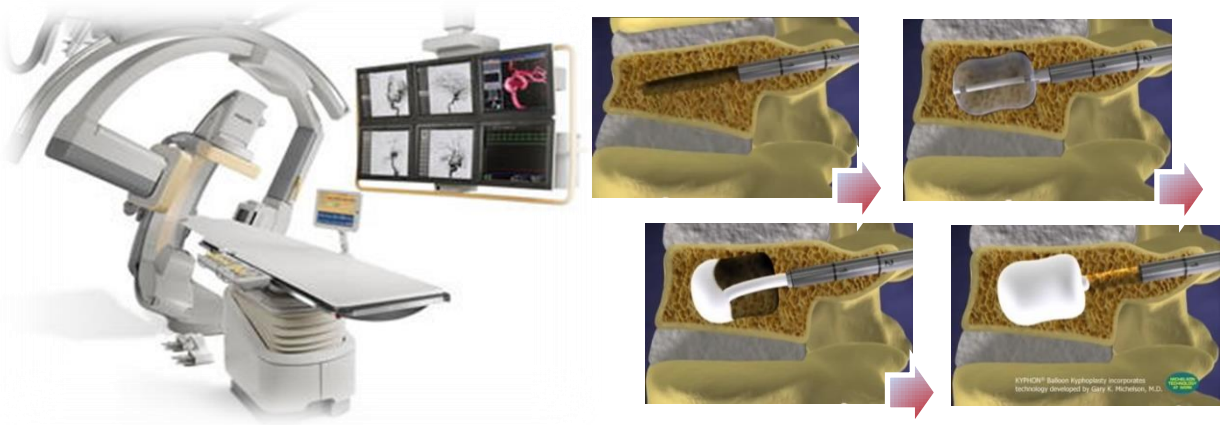
Angiography-CT equipment

Angiography equipment injector

Introduction of angiography

<Percutaneous Vertebroplasty (PVP)>

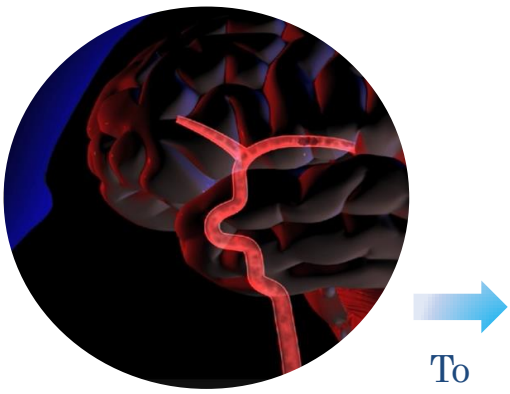
PVP, under X-ray fluoroscopy, treatment to cure the compression fracture without the burden of the body by using a medical cement.



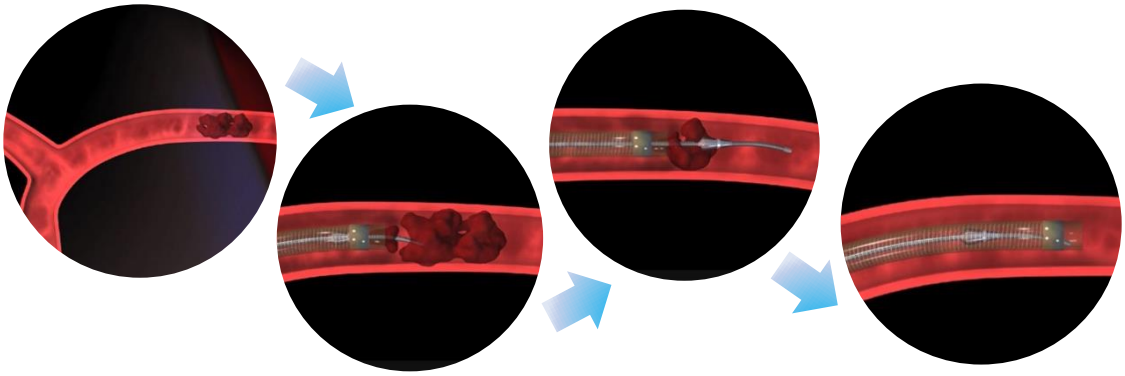
<Cerebral thrombosis removal>

It is not dissolved the thrombus, and underwent physical work of writing out "endovascular treatment". In NCGM, and it performs the endovascular treatment with the Merci retriever Lieber system and Penumbra system.

Penumbra System



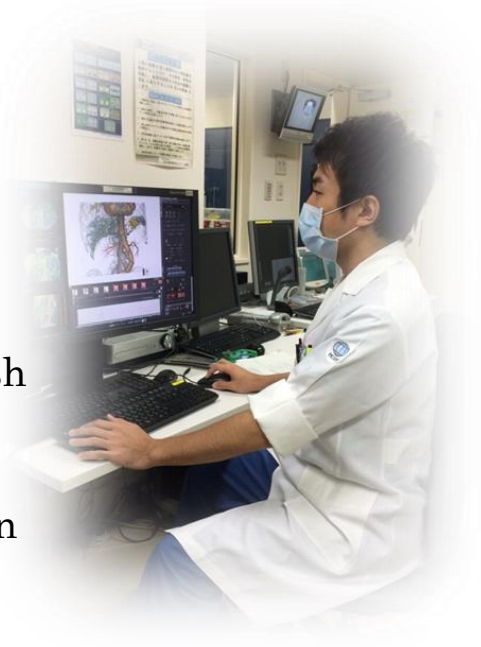
To



(3 Computed tomography :CT)

<u>Configuration of staff</u>

・Radiological technologist：6 people
・Acceptance：3people



<u>CT equipment</u>

・GE Healthcare　Discovery CT750HD
・TOSHIBA　Aquilion ONE
・SIEMENS　SOMATOM Definition Flash
Workstation
・Zio STATION
・GE Healthcare　Advantage Workstation
・FUJIFILM　VINCENT

・・・Other

Discovery
CT750HD

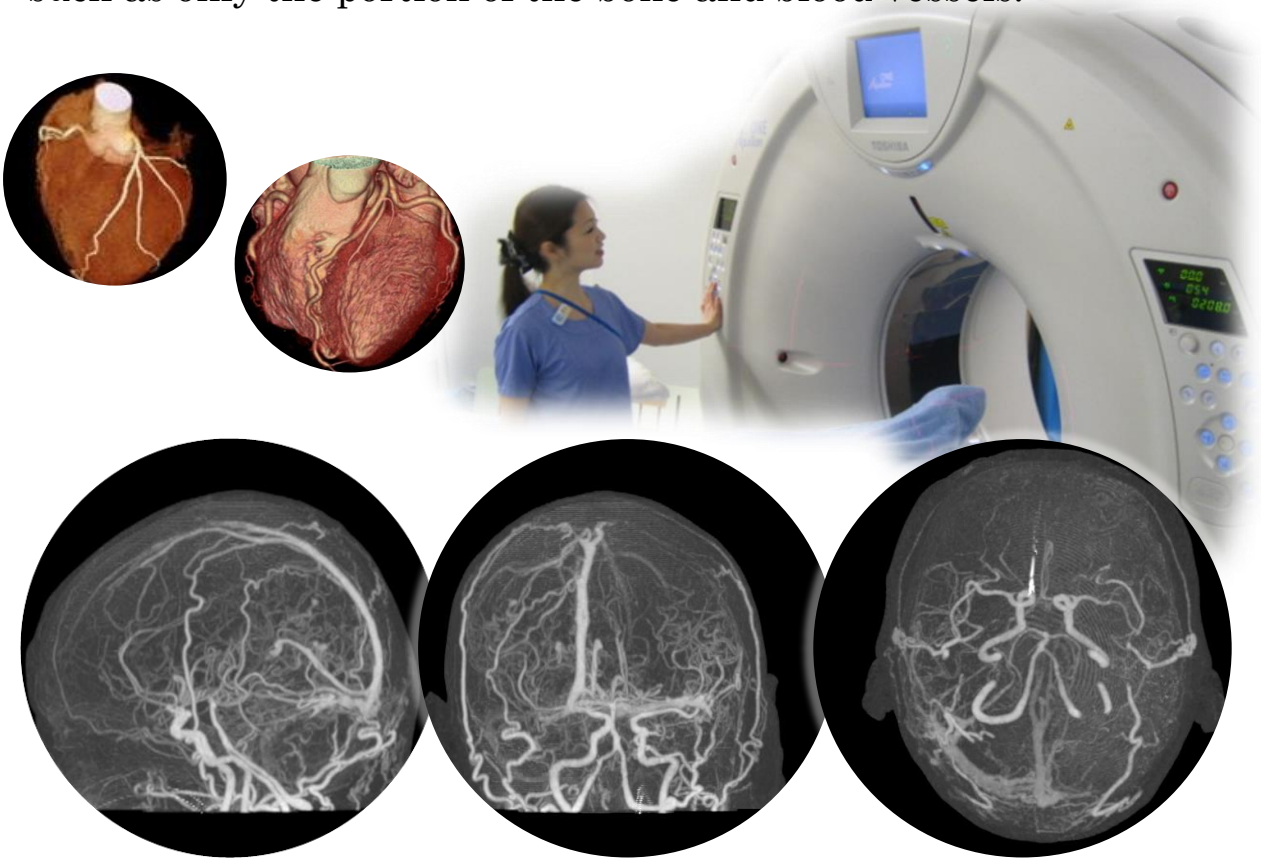
SOMATOM Definition Flash

Aquilion ONE

Introduction of CT

<Short time cardiac examination in the Dual Source CT>

Difficult trauma patient stationary state, such as in pediatric patients, can be CT imaging whole body at a high speed. From different X-ray energy, and by subtraction of the photographic data, it is possible to image only the space required for diagnosis, such as only the portion of the bone and blood vessels.



<DoseWatch（Dose management of CT）>

In NCGM, to analyze and evaluate the dose data information is carried out efforts "dose optimization". To realize the provision of safe and secure CT examination, and performs dose optimization using software "DoseWatch" which has been recently developed.

(4 Magnetic resonance Imaging :MRI)

Configuration of staff

・Radiological technologist：7 people

・Acceptance：3 people

MRI equipment

・TOSHIBA

1.5T-MRI　Vantage Atras

・Siemens

1.5T-MRI　MagnetomAvant

・Siemens

3.0T-MRI　MagnetomVerio

・・・Other

MAGNETOM Verio

MAGNETOM Avanto

EXCELART Vantage Atlas

(5 Nuclear Medicine)

Configuration of staff

・Radiological technologist：5 people
・Pharmacist：1 people
・Acceptance：1 people

Equipment

・SIEMENS　Gamma camera e-cam
・GE　SPECT/CT
　　infinia hawk eye4
・SIEMENS　SPECT/CT
　　Biogragh 16
・GE　PET/CT
　　Discovery 600 Motion
・Cyclotron　　JFE B-20
・・・Other

infinia hawk eye4

e-cam

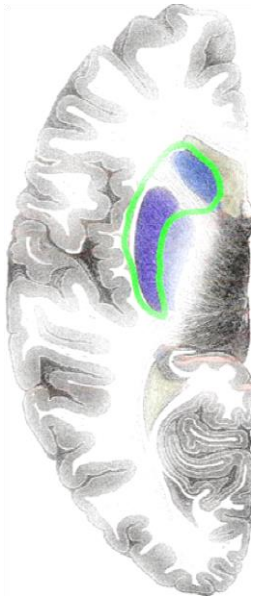
Discovery 600 Motion

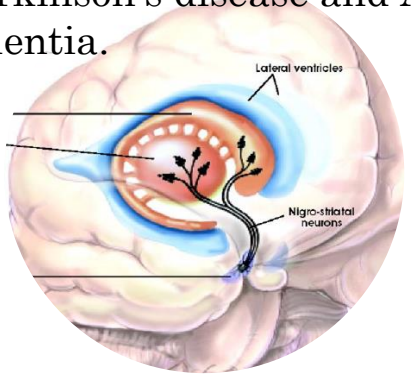
Biogragh 16

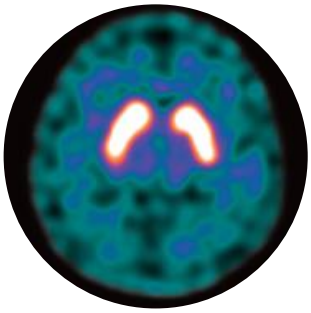
Introduction of Nuclear Medicine

<DAT-Scan>

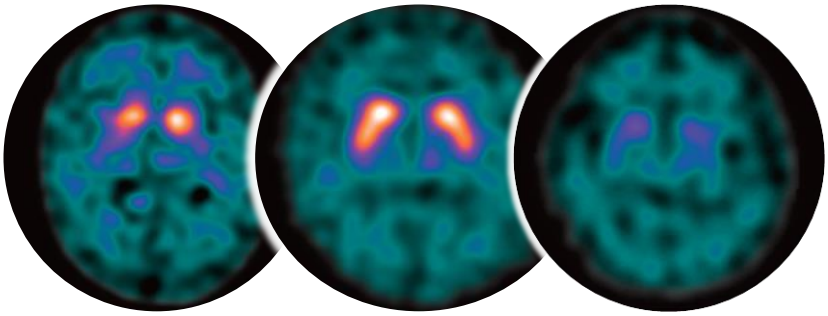
Issued from nigrostriatal dopamine nerve, check to see the dopamine transporter (DAT). It can be used for differential diagnosis of Parkinson's disease and Alzheimer's disease and Lewy body dementia.







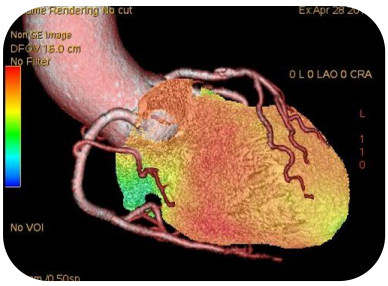
Nornal

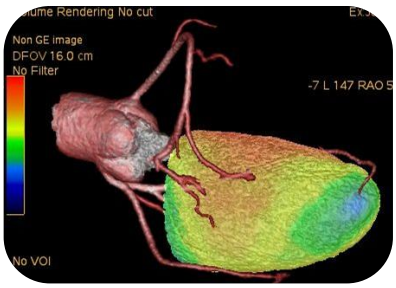


PD AD DLB

<13N-ammonia myocardial PET>

Blood flow myocardium are imaged using ammonia myocardial PET.It is possible to grasp the state of blood flow, such as during myocardial infarction, it is possible to visualize morphology and blood flow at the same time by combining a contrast CT is in the form information.





Cold-region
decreased vascular flow

(6 Radiation therapy)

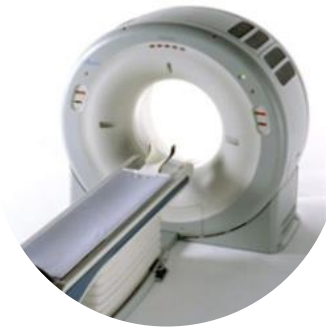
Configuration of staff

・Radiological technologist：5 people
・Acceptance：1 people

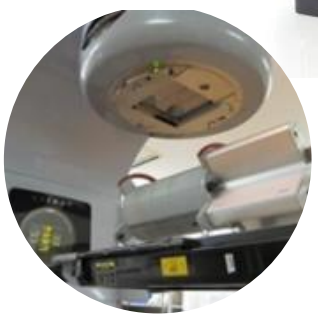
Radiotherapy equipment

・Varian Linac Clinac-iX
・Varian X-ray simulator Ximatron
・RTPs Eclipse
・RTPs Pinnacle
・TOSHIBA Aquillion64
・Delta-4
・・・Other

Clinac-iX

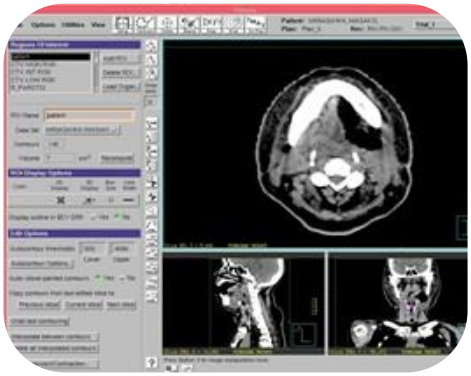


Aquillion-64

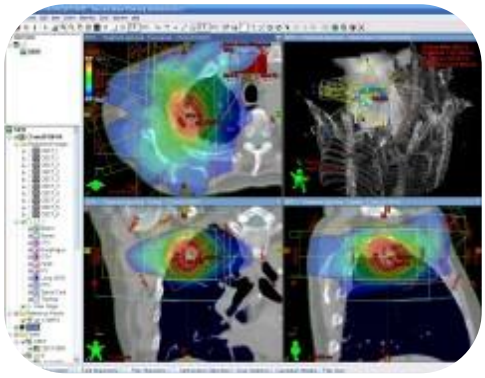


Delta-4

Ximatron



Pinnacle

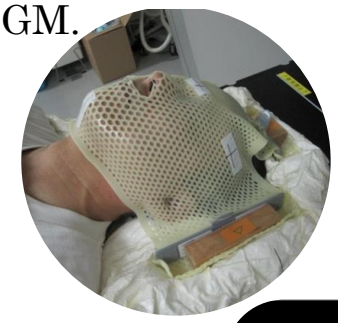


Eclipse

Introduction of Radiation therapy

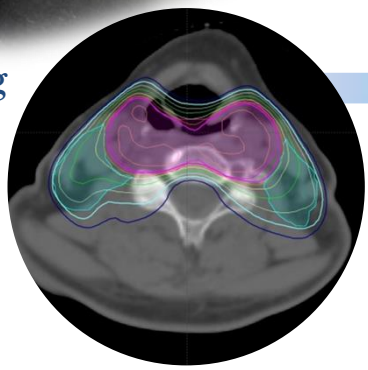
<RapidArc>

Intensity-modulated radiation therapy of the rotation type (VMAT). A short period of time can be performed compared to the STATIC-IMRT, and performs high-precision therapy in head and neck tumors and brain tumors in NCGM.

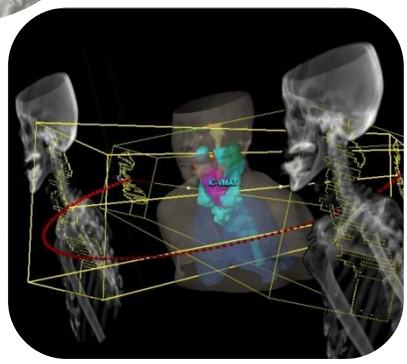


Set-up

Planning



Verification

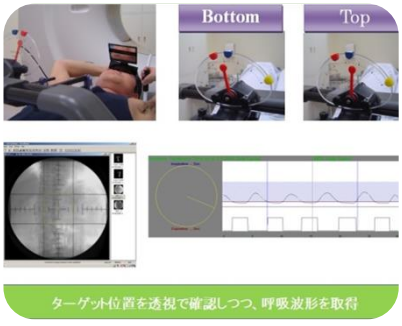


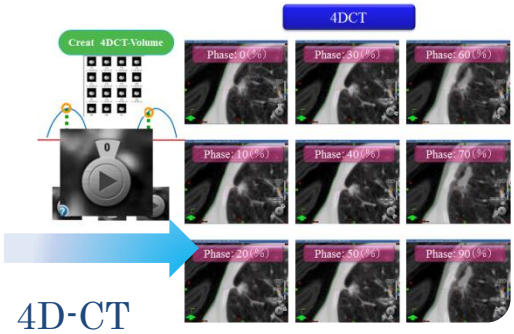
Treatment

<SBRT（stereotactic irradiation）>

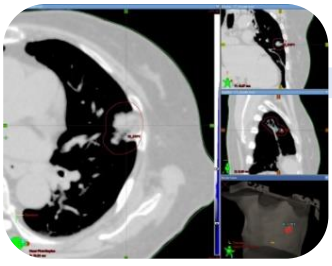
In the body stereotactic irradiation (SBRT), and doing breathing synchronization irradiation in combination VARIAN-RPM and Abches in NCGM. It is possible to dose reduction and precision therapy to lung.

Respiratory





4D-CT



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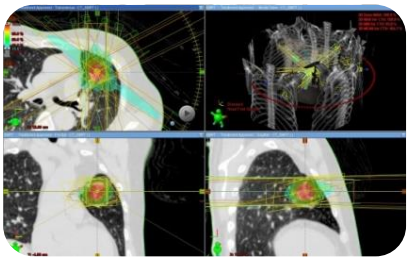


planning

Treatment

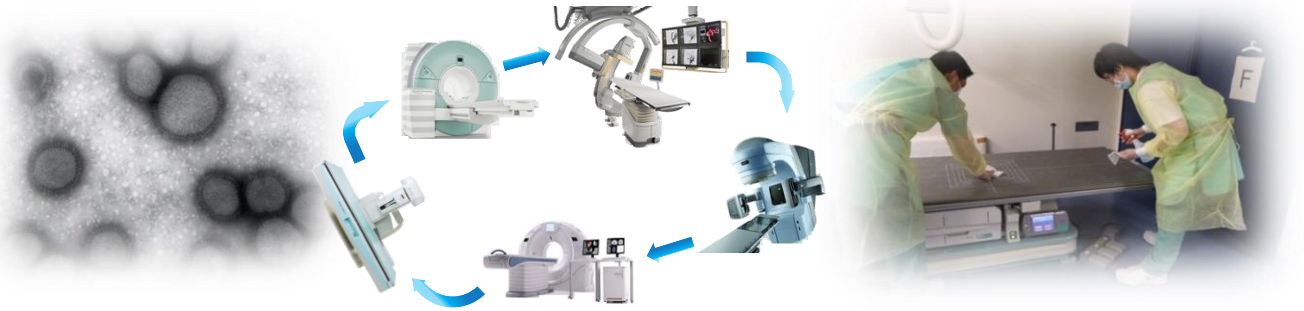
(7 Medical safety)

Medical safety, efforts in NCGM

- Thorough the day-to-day management
- Quality management and security
- High-quality, high-precision by collateral medical
- Provide a safe medical

Medical safety, Infection Control

- Acquisition of infection information sticky by infection controlTeam (ICT) to HIS
- The described in X-ray order comment column
- And also described in message
- Information can be shared by all modalities
- Infection prevention measures table



Our Website

http://www.ncgm.go.jp/sogoannai/housyasen/index.html

Global human resources education

In addition, we will introduce a lot of modalities.

We look forward…

August.31～September.3