

Explanation of CT Scans/CT検査に関する説明書

1. What is a CT scan?/CT検査について

A computerized tomography (CT) scan combines a series of X-ray images taken from different angles and uses computer processing to create cross-sectional images of the whole body. The entire procedure typically takes 10 to 20 minutes.

Effects from radiation are minimal in normal CT examinations. If you have any concerns, please consult your doctor.

/CTは、身体の周りからX線をあて、身体を通過したX線情報をコンピューターで解析し、全身の断層写真（輪切りの画像）を得る検査です。通常検査にかかる時間は10分～20分程度です。

通常の検査では放射線による影響は、ほとんどないと考えられています。心配な方は主治医に相談してください。

2. Before the examination/検査を受ける前に

If you have a pacemaker or an Implantable Cardioverter Defibrillator (ICD), please be sure to bring your “Pacemaker Identification Book” or “ICD Identification Book” on the day of the examination.

A CT scan may interfere with certain types of pacemakers or ICDs. A staff member in the CT room will check the pacemaker or ICD type written in your “Pacemaker Identification Book” or “ICD Identification Book” in order to perform the examination safely.

If you are pregnant or there is a possibility that you are pregnant, please inform the doctor or staff before the CT scan. This is to protect your fetus from radiation exposure.

/心臓ペースメーカーやICD(埋め込み型除細動器)等を体内に埋め込まれている方は、検査当日、必ず「ペースメーカー手帳」「ICD手帳」を持参してください。

ペースメーカーやICDの中にはCTによって不具合が生じる可能性のあるものがあります。CTスタッフが手帳で確認し、安全に検査できるよう対応します。

妊娠している可能性がある方、または妊娠している方は検査前に担当医またはスタッフに申し出てください。胎児をCTによる放射線被爆から守るためです。

3. Preparing for the examination/検査前の準備

You may be asked to remove all clothing or underwear with metallic materials and precious metals, etc. because they can interfere with the scan.

/金属は検査の妨げになる場合があるので、金属のついた服や下着、貴金属などを外していただく場合があります。

4. During the examination/検査中

You will be asked to lie on a scanning table during the CT. Please relax and lie on your back.

The radiologist may ask you to hold your breath at certain points. Please follow instructions as much as possible.

You will be able to communicate with the radiologist via intercom any time during the examination.

/検査は、検査台に仰向けに寝た状態で行ないます。体の力を抜いてリラックスしてください。

検査中に呼吸を止めて撮影することがあります。可能な限り技師の指示に従ってください。

検査中はマイクを通して検査担当者といつでも会話できます。

5. After the examination/検査後

After the examination, there are no specific instructions or restrictions regarding meals, etc.

The doctor will explain the results to you at a later date.

/食事や生活について、検査に関連した指示や制限はありません。

検査結果については医師が後日説明します。

CT 検査 医療被ばくに関する説明書**○ Necessity of examination (Justification)**

Since Computer Tomography tests use radiation, there is minimal exposure to radiation. However, considering the test is essential for the detection and treatment of diseases, and the risks associated without undergoing the test. Furthermore, testing is performed only when the needs for testing is considered to outweigh the risk of exposure.

Optimization Dose:

We conduct examinations under optimal conditions based on the laws and regulations and guidelines of relevant academic societies at our hospital, and minimize exposure to radiation as necessary is practiced.

○ Exposure Dose:

X-rays administered during a CT scan typically range from 5 to 30 millisieverts, however it varies depending on the site and method of examination and may be administered more than that. It is generally considered that there is no significant effect from exposure under 100 millisieverts. Regarding the risk of developing cancer, it is said to be indistinguishable from that caused by factors other than radiation, such as diet and stress. *mSv: Dose units to evaluate the effects of radiation exposure on human bodies

For a person weighing 50-70 kg

| Site of CT scans | Estimated Exposure Dose in our hospital (Gy) | DRLs in 2020 FY (Gy) * |
|--|---|---------------------------|
| Head | 1.9 | 2.8 |
| Chest | 3.6 | 7.1 |
| Abdomen (from liver to pelvic) | 8.5 | 13.2 |
| Thoracoabdominal CT (from chest to pelvic) | 11.2 | 18 |
| Thoracoabdominal CT (with/ without Contrast) | 32.8 | - |
| Abdominal Dynamic CT with Contrast | 24.1 | 31.5 |
| Cerebrovascular | 7.7 | - |
| Arteries of the lower limbs (from abdomen to feet) | 32.5 | - |
| Coronary arteries | 9 | 19.5 |
| Head at age of 1-5 years old | 0.9 | 1.4 |

* Gy: Unit indicating the amount of energy received from radiation

*DRLs: Reference values that serve as guidelines for managing medical radiation exposure.

If you'd like more detailed information on medical radiation, please contact us during weekdays in the following operating hours.

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