Taichung Armed Forces General Hospital
Computed Tomography Instructions

電腦斷層攝影檢查說明書

This instruction sheet shall be kept by patient (or patient's family)

The instructions provide an introduction to the examination you will receive and precautions, and may be used as supplementary material when you have discussions with your doctor. It is important to us that you fully understand what is described in this file, so please read it carefully. If you still have questions after your doctor has explained the examination to you, please discuss your questions sufficiently with your doctor before you sign the form. Your doctor will be happy to answer your questions. Let's work together for your health.

Introduction to computed tomography

Computed tomography (CT) is a diagnostic tool that combines X-ray and computer technology. It uses a computer to compile data into cross-sectional images of the body, which can then be further reconstructed into 3D images.

CT is an excellent diagnostic tool for problems related to the head, chest, abdomen, and spine. It also helps determine the location and size of tumors in many areas, such as the lungs, liver, and pancreas, and provides important information about the extent of invasion into surrounding tissues. For patients with trauma, CT can quickly diagnose injuries to the brain, liver, spleen, kidneys, or other internal organs.

Precautions before examination

Please wear comfortable and light clothing for the examination, or change into an examination gown as instructed by the healthcare professional. Do not wear clothes with metal accessories to avoid interference by the metal with CT imaging. Depending on the area being examined, you may be asked to remove hair accessories, jewelry, glasses, hearing aids, or removable dentures. If you may be pregnant, please inform the radiographer before the examination. In addition, you may be asked to fast from food and drinks for several hours before the examination depending on the area to be examined.

If you are wearing an external electronic medical device, you should ask the doctor whether it is safe to temporarily turn it off or remove it from the scanning area. (Following the recommendations by the Ministry of Health and Welfare on July 24, 2008)

Examination process

- A CT scanner is a large square machine with a hole in the center and a movable examination table. The radiographer will ask you to lie on the examination table, and after adjusting you to the proper position, the radiographer will leave the table and go to the control room next door. You can communicate with the radiographer through an intercom. In some situations, or when a child needs to undergo an examination, one family member may be allowed to accompany the patient in the examination room while wearing radiation protection equipment. The examination table will slowly move into the CT scanner, and X-rays will be used to capture images. The entire process takes approximately a few minutes to an hour.
- You may be asked to take a contrast agent or receive an injection of a contrast agent depending on the examination. Before injecting the contrast, the healthcare professional will typically ask you if you have a history of drug allergies, or if you have asthma, heart disease, kidney disease, or thyroid problems, as these conditions may result in discomfort caused by the contrast agent.
- After the contrast agent injection, some may experience a sudden sensation of warmth in the body or a metallic taste in the mouth. These are common side effects and usually subside within one or two minutes.

Some may also experience itching on the skin and develop a mild rash, even urticaria, and these conditions, if persistent, may be controlled by medication. Very few patients experience shortness of breath, throat swelling, and body edema. These are signs of a severe allergic reaction and require immediate appropriate treatment. If you experience any of the above conditions, you must immediately inform the radiologist, radiographer, or nurse.

- You may leave after the examination is completed and eat normally.

Risks of examination/procedure

Potential side effects of the contrast agent: (Most patients must receive a contrast agent via intravenous injection to enhance the visibility of the lesions.)

1. A small number of individuals may experience a warm sensation, nausea, vomiting, dizziness, or sneezing when injected with an iodine-based contrast agent. These symptoms usually resolve within a short period. A small number of patients may experience vein swelling and pain. Please do not apply hot compresses. For any discomfort, please return to the original examination room or visit the emergency department for management.
2. Individuals with allergic tendencies may experience more severe reactions, such as generalized urticaria, chills, difficulty breathing, and other symptoms.
3. Individuals with a special constitution may experience laryngeal edema, asthma, low blood pressure, heart and lung failure, shock, and sudden death (with an incidence of approximately 1 in 100,000).
4. Before injecting the contrast agent, the healthcare professional will first establish an intravenous catheter and inject saline to check the patency of the injection vessel. However, a small number of individuals may still experience severe inflammation, ulcer, and local nerve compression reactions, requiring hospitalization, surgical intervention, or skin grafting.
5. Patients with renal insufficiency are advised to discontinue metformin for 48 hours before undergoing a contrast agent-based examination or treatment, and should have kidney function tested 48 hours after injection of the contrast agent. The test must return normal before metformin can be re-prescribed to avoid contrast-induced kidney damage. Please consult your clinician regarding whether discontinuing the medication is necessary.

※ **For all patients undergoing CT examinations in this hospital, a "non-ionic contrast agent" that is less likely to cause adverse reactions is used.**

Alternative options

Please discuss alternative options with your clinician, such as magnetic resonance imaging (MRI), ultrasound, and positron emission tomography (PET).

Examination instructions

- No fasting is required if no contrast agent will be used. **If a contrast agent will be injected, you must fast for more than 4 to 6 hours.**
- If you are on chronic medications, such as medications for cardiac diseases, hypertension and thyroid dysfunction, **please continue to take them as scheduled (**drugs for diabetes must be suspended to avoid significantly lowered blood sugar).
- Please bring the examination requisition form and the signed consent form to the Radiology Department for check-in on time, and wait patiently.
- If you are pregnant, **please** inform the doctor or nurse before the examination.
- Please wear clothing without metal items (such as sportswear) on the day of examination.
- **Please bring a family member as company to take care of you**.

＊Note: If you wish to cancel the examination, please call the registration desk of the Radiology Department promptly at 04-23934191, extension 525415 to pass the opportunity of undergoing this examination to someone who needs it.

Taichung Armed Forces General Hospital
Computed Tomography (CT) Consent Form

(Please review the examination instructions carefully and wait for the doctor to explain the examination to you before signing the consent form)

* Basic Information

Patient Name_____

Patient Date of Birth_____YYYY_____MM_____

D Patient Medical Record No._____

Name of Attending Physician_____

I. Examination planned (provide brief explanation if not familiar with the medical terms)

1. Disease name:

2. Name of examination planned:
   Computed tomography (CT)
3. Reason for the planned examination:

II. Physician statement

1. I have explained the examination to the patient in ways as comprehensible as possible to provide the patient with the relevant information, particularly the following:

☐ Reason why the examination must be performed, method and site of the examination, and risks and success rate of the examination.
☐ Examination complications and possible management methods.
☐ I have clearly informed the patient of the potential allergic reactions to the contrast agent.
☐ Patients with any of the following conditions have an increased risk of allergy. Heart, lung, and vascular diseases (impaired cardiac function, hypertension, arteriosclerosis and emphysema). Cirrhosis, liver dysfunction. Kidney dysfunction, uremia. Asthma. Diabetes mellitus for five years or longer. History of allergies (including reactions caused by the injection of iodine-based contrast agents, and allergies to food, other medications, pollen, or other allergens). A senior age with poor physical condition (72 years or above). A young age (infants or small children of two years or younger)
☐ I have given the patient any other information available related to the treatment

2. I have provided the patient with adequate time to ask the following questions about the examination (procedure, treatment) and I have answered the questions:

(1) ----------

(2) ----------

(3)----------

Signature of attending physician:

Date: YYYY MM DD

Time: hh mm

III. Patient statement

1. The doctor has provided me with explanations and examination instructions, and I have understood the information related to the necessity, steps, and risks and success rate of the examination.
2. The doctor has explained to me and I have understood the possible prognosis of the examination and risks if the examination is not performed.
3. The doctor has explained to me that situations that are immediately life-threatening, if any, during the examination will be treated according to appropriate steps.
4. I understand that this examination may be the best option now.

IV. Special precautions :

Please fast for 4 to 6 hours before the examination (necessary medications may be taken, except for diabetes medications). Diabetic patients may consume food such as candy and chocolate.

Note: Emergency contrast agent injection information

Fasting for less than 4 hours increases the risk of suffocation due to vomiting-induced pulmonary aspiration. However, if this is an emergency, and the patient needs injection of a contrast agent for examination with less than 4 hours of fasting, the healthcare professionals have explained the situation to the patient and his/her family. The patient and family agree to receive the contrast agent injection to undergo the examination despite the insufficient fasting period that is less than 4 hours.

Based on the above statement, I hereby give my consent to this examination. Statement by woman of childbearing potential: The doctor has clearly informed me of the risks this examination may pose to a pregnant woman and the fetus.

Signature:_____

Consenter Signature: Relationship to patient:

Address: Telephone:

Date: YYYY MM DD Time: hh mm

Witness: Signature:

Date: YYYY MM DD Time: hh mm

Notes:

I. If the consenter is not the patient, the relationship to the patient should be indicated in the "Relationship to patient" field.

II. The fields for the witness may be left blank if no witness is available.

III. If the patient is a minor, a legal representative should sign the consent form.

Radiology Department of Taichung Armed Forces General Hospital Contrast Agent Injection Consent Form

Examinations involving the intravenous injection of a contrast agent utilize the contrast's effect on the area to be examined to enhance and improve the visibility of the organs or lesions under examination to reach a diagnosis. Conventional ionic iodine-based contrast agents may cause allergic reactions in a small number of patients (the incidence of allergic reactions is 10%). Symptoms include nausea, vomiting, skin rashes, itching, and in a few severe cases, shock or even sudden death (the reported mortality rate is approximately 1 in 100,000, according to international statistics). However, if you have any of the following conditions, you have a significantly increased risk of allergy.

☐ 1. Heart, lung, and vascular diseases (impaired cardiac function, hypertension, arteriosclerosis and emphysema).

☐ 2. Cirrhosis, liver dysfunction.

☐ 3. Kidney dysfunction, uremia.

☐ 4. Asthma.

☐ 5. Diabetes mellitus for five years or longer.

☐ 6. History of allergies (including reactions caused by the injection of iodine-based contrast agents, and allergies to food, other medications, pollen, or other allergens).

☐ 7. A senior age with poor physical condition (72 years or above).

☐ 8. A young age (infants or small children of two years or younger).

☐ 9. Critical illness. If you have any of the above conditions, please indicate a ˇ in the corresponding ☐

Signature of patient or family:_____

If the patient is a minor, a legal representative should sign the consent form.

※Please read these instructions before deciding to sign the examination consent form※

Date: YYYY MM DD Time: hh mm

Name:_____

ID No.:_____

Date of birth:____YYYY__MM___DD

Radiology Department of Taichung Armed Forces General Hospital

Pre-Contrast Injection Risk Assessment Form

※ **Please read the following questions first and complete the known ones. The remaining questions will be completed by the doctor in the examination room.**

Have you ever had a history of allergies in the past? Allergy

☐ None

☐ Previous allergy to a contrast agent injected, and the type of allergy is:_____

☐ Allergy to food, drug or others, and the type is:_____

☐ Not known

Contraindication

☐ None

☐ Severe hyperthyroidism

☐ Severe de-compensated heart failure

☐ Severe hepato-renal dysfunction

☐ Oliguria or anuria

Assessment of high risk conditions

☐ None

☐ Asthma, allergy constitution

☐ Renal dysfunction

☐ Cardiovascular disease

☐ Pulmonary hypertension

☐ Cerebral disease

☐ Thyroid disease

☐ Pheochromocytoma

☐ On metformin for diabetes mellitus

Cre values in last three months:_____(mg/dL)___

Evaluation physician:_____ Date: YYYY MM HH MM