



You Can Take Care Today
For Your Better Health Tomorrow

SIEMENS
medical

Early Diagnosis with Ultra Modern Computed Tomography

Early evaluation of risks can provide intervention before it's too late – undoubtedly the best way to preserve your health.

After all, health is our greatest asset – even though we all too seldom realize this important fact. If you would like to assess the health status of your heart/lungs/colon etc., you now have the possibility of undergoing a Computed Tomography (CT) examination, if your doctor feels it warranted.





A CT scan for the early visualization of various diseases is an uncomplicated and painless type of medical evaluation, which depending on the anatomical region being examined, takes approximately 15 to 30 minutes to perform. Also, the radiation dose required for this examination is kept as low as possible using ultra modern CT technology.

If you are interested in undergoing a CT examination for early diagnosis, please contact your family physician. He will provide you with a recommendation based on your personal medical case history and answer any questions you may have about CT.



CT Medical Examination for Early Visualization of Lung Nodules

Risk of lung cancer

Throughout the world, lung cancer is the most commonly occurring form of cancer. Since the symptoms of this disease usually first appear in its advanced stages, the chances of recovery in such cases are often quite poor.

However, if lung nodules can be diagnosed early enough before they have a chance to spread, it may be possible to treat this disease at this early stage when it is the least resistant to treatment which may increase the chances of a successful recovery.



Who is a high-risk person?

You belong to a high-risk group if any of the following factors apply to you:

- You have smoked for more than 10 years
- You are hereditarily at risk
- You are professionally at risk
- You are over 60 years old

If one or more of the above points apply to you, contact your physician to find out if a CT scan might be appropriate for you.

How is the examination performed?

A CT scan is acquired with a low radiation dose in just 15 seconds. If the result is negative, clinically significant lung lesions/nodules can be excluded with very high probability. If positive, further measures appropriate for the severity of the disorder are required.



CT Medical Examination of Patients at Risk of Suffering a Heart Attack

Risk of a heart attack

Heart attacks are currently the most common cause of death in the USA and Europe. Some 175,000 deaths attributable to this disorder occur each year in Germany alone. Of these 25% occur among persons who are less than 70 years old – and 40% without prior symptoms.

If you would like to know if you are at risk for heart disease, ask your family doctor about undergoing a Cardiac CT examination. Such an examination can not only tell you more about the calcium load in your coronary arteries, a known predictor of the risk for a heart attack, but also can indicate the presence or absence of lesions called “plaques” which may cause narrowing of these arteries, reducing blood supply to the heart muscle which may lead to a heart attack.

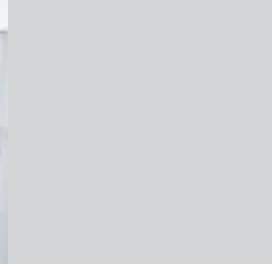
Only early diagnosis can ensure timely measures to reduce the risk factors and follow-up treatment if necessary to help prevent the onset of heart disease.

Who is a high-risk person?

You belong to a high-risk group if any of the following factors apply to you:

- You have a high cholesterol level
- You have high triglyceride values
- You smoke
- You have high blood pressure
- You are hereditarily at risk
- You have diabetes
- Any of the factors in combination with a sedentary lifestyle

If one or more of the above points apply to you, contact your physician to find out more about CT for early diagnosis of heart disease.



What examination methods are available?

Calcium Scoring

The examination can be performed in approximately 15 seconds. The radiation dose is as low as possible – comparable to only one third of the natural radiation received from our atmosphere. A positive coronary calcium score result serves as a good indicator of the risk for certain types of heart attack. A negative calcium score result is a good indicator that coronary vessels are intact.

CT-Angiography of the coronary vessels

This detailed examination is performed by injecting a contrast medium (to enhance the display of the patient's anatomical cavities and vessels) in a brachial vein. ECG electrodes are positioned on the patient's chest in order to synchronize the scanner exactly to his/her heart rate. This makes it possible to acquire a complete 3D scan of the heart – a "virtual trip through the heart" – without a catheter. And this examination takes only 20 seconds. The precise results of this examination provide the doctor with information about the condition of the patient's coronary vessels.



CT Examination for Early Visualization of Bowel Polyps

Risk of intestinal cancer

Intestinal cancer currently ranks as the second most common form of lethal carcinomas. The main risk of developing intestinal cancer results from polyps located in the large intestine, which may eventually grow to become malignant tumors.

This primarily affects patients over 50 years of age. If the polyps are identified in time and removed while in a benign state, we may be able to prevent the development of a cancerous form. The “gold standard” to visualize colon polyps is a colonoscopic examination – usually uncomfortable or even painful for the patient involved.

By comparison, a CT examination is much less complicated and relatively painless for visualizing clinically significant colon polyps.

Who is a high-risk person?

You belong to a high-risk group if any of the following factors apply to you:

- Presence of polyps
- You indulge in a high fat and/or high meat diet
- You are hereditarily at risk
- Ulcerative colitis

If one or more of the above points apply to you, contact your physician to find out if a CT scan is appropriate for you for Early Disease Diagnosis.



How is the examination performed?

Patient preparation is required so that the intestine is as empty as possible. The actual examination or scan takes approximately 25 seconds and is performed using a special technique to reduce the radiation dose. The images on the monitor look like a three-dimensional flight through the patient's intestine. Numerous studies have shown that clinically significant polyps can be identified using this examination method.

If the result is negative, the doctor may not advise any additional follow-up. If positive, the polyps – depending on their size – may have to be removed. Smaller polyps are generally placed under further observation and removed only in case they continue to grow.



Computed Tomography: Non-Invasive Diagnostic Method for Early Disease Diagnosis

Computed Tomography is a radiological technique used to visually display specific anatomical regions of the human body slice-by-slice. A technology which in recent years has been refined to a now indispensable, gentle and non-invasive method of examining the human body.

Use of contrast media

Most CT examinations do not usually require any special patient preparations. However, in some body regions a detailed display is possible only with the help of a contrast medium.

The contrast medium is administered immediately prior to the examination and is usually well tolerated by the patient. This medium contains iodine, which might cause an allergic reaction in some patients. You should therefore consult your physician about possible existing allergies prior to the examination.

During a CT medical scan, you will be lying on a comfortable couch as it slowly moves through an opening in the examination unit, commonly referred to as the "gantry". All you have to do is follow the instructions given by the medical personnel in charge. For example, you may be instructed to briefly hold your breath or not to move certain regions of your body.



What happens while a CT scan is performed?

During the examination, the X-ray beam system rotates 360 degrees around your body while scanning detailed transverse slices of the previously defined body regions. Based on the data gained, the computer will then generate the final diagnostic quality images.

A word about radiation exposure

As with conventional X-ray examinations, you hardly notice the acquisition of CT images at all. One main objective of modern CT technology is to achieve “minimum radiation exposure levels together with extremely fast examination times”. To support this aim, all Siemens CT scanners feature a package of technical measures (CARE Dose) designed to reduce the radiation dose.

Following the CT examination, the radiologist analyzes the exposures and sends his report to your family doctor, who then discusses the examination results with you during your next appointment.

STAMP of practice/hospital

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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Siemens AG, Medical Solutions
Henkestr. 127, D-91052 Erlangen
Germany
Telephone: ++49 9131 84-0
www.SiemensMedical.com

Siemens AG, Medical Solutions
Computed Tomography
Siemensstr. 1, D-91301 Forchheim
Germany
Telephone: ++49 9191 18-0

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