

COMPUTED TOMOGRAPHY

COMPUTERTOMOGRAPHIE (CT)

Information and medical history for patients for preparation of a talk with the surgeon

Klinik / Praxis



Data about the patient: Patientendaten:

englisch

- without contrast medium ohne Kontrastmittel
 with contrast medium mit Kontrastmittel orally oral
 intravenously intravenös Other Sonstiges:

On (date) (Datum):

Part of the body to be checked: zu untersuchende Körperregion:

Dear patient,

In your case computed tomography (CT) is planned for a more detailed check-up.

We will inform you and if requested your family members about the course of the procedure, possible complications and measures before and after the procedure in the following text. This form will prepare you for the talk with the surgeon. During the talk, the surgeon will inform you about the necessity of a check-up and possible alternative methods. He will explain to you risks, specific and possible complications. Please, continue to read the following information and complete the form carefully. It is understood that your data will be confidential.

During the talk, the surgeon will answer all your questions in order to reduce your fears and concerns. Then you can give or decline consent to CT check-up. The surgeon will give you a copy of the completed and signed form after the talk.

MODE OF OPERATION OF COMPUTED TOMOGRAPHY FUNKTIONSWEISE DER COMPUTERTOMOGRAPHIE

Computed tomography is a modern process of cross-sectional imaging, in which cross-sections of human body's images are made by means of X-rays. These CT images give the surgeon the possibility to accurately determine the position and size of the findings (e.g. infectious focus, tumour, fracture), as well as the connection with other organs and enable the planning of the treatment.

During the examination, an X-ray tube surrounds the patient and sends X-rays, which are measured by a detector positioned on the opposite position and transformed by the computer into cross-sectional images.

Computed tomography is a painless method and lasts, as a rule, depending on the reasons of examining, from few seconds to some minutes. Processing, preparation, analysis and evaluation of CT images require 5-30 minutes.

COURSE OF EXAMINATION UNTERSUCHUNGSABLAUF

During examination in the CT room, you will lie on a special bed (usually on your back), which will automatically and slowly slide you into the ringlike opening (Gantry) of the CT (Figure). The opening has a diameter of about 70 cm and is therefore relatively wide. If you still feel claustrophobic, you can use the intercom equipment to inform your surgeon or his/her assistant about that at any time.

During the examination it is necessary to follow the instructions of the medical staff and to stay in an as much as possible relaxed position. Avoid any movements. Examination is often carried out by you breathing in and holding the air (for about 5-20 seconds), please follow the instructions as accurately as possible. If you suffer from claustrophobia, please inform us before the examination so that we can give you a sedative.

In certain examinations, it is necessary to apply a contrast medium which contains iodine and which is injected into the blood, e.g. through a venous cannula in the arm or forearm. You may feel a kind of heat

spreading through your body and disappearing after a few seconds.



ALTERNATIVE PROCEDURE ALTERNATIV-VERFAHREN

Alternative methods of examination may be an ultrasound examination, a basic X-ray examination, nuclear spin tomography (magnetic resonance imaging or MRI), PET (positron emission tomography) or scintigraphy. The surgeon will explain the alternatives to you and inform you about why in your case computed tomography is recommended as the most appropriate method of examination.

ADVICE FOR PREPARATION AND AFTERCARE

HINWEISE ZUR VORBEREITUNG UND NACHSORGE

Please take with you any previous X-rays, CT images, i.e. previous findings, should you have some.

Please follow the instructions of your surgeon regarding the intake of medicines and food. The instructions may vary depending on the type of examinations.

Preparation:

Administration of medicines: It is important to tell the surgeon which medicines or injections you have to take regularly (especially anti-clotting drugs, such as Aspirin® [ASS], Marcumar®, Heparin, Plavix®, antidiabetics which contain metformin, the so-

Herausgeber: e.Bavarian Health GmbH

Nürnberg Straße 71, 91052 Erlangen

PHONE: +49(0)9131-814 72-0, FAX: -99

MAIL: kontakt@bavarian-health.com

Mithrsg: DRG Deutsche Röntgengesellschaft e.V., Berlin

Wissenschaftlicher Fachberater: Prof. Dr. med. Michael Uder

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called „Biguanides“ for diabetic patients) or took irregularly in the last 8 days prior to the procedure. This includes any medicines without prescription and herbal remedies. The surgeon will inform you whether and for how long you should stop using the therapy.

A lot of examinations do not require special preparation. When the examining gastrointestinal tract, you need to drink a contrast medium before the examination. When examining the rectum and colon, it may be necessary to insert the water, or contrast medium through a tube into the intestine. For examination of the bladder, a contrast medium must be inserted into the bladder via a catheter. For most of the examinations you do not have to have an empty stomach, examinations of the gastrointestinal tract require an empty stomach for about 2-4 hours. Light food is usually recommended. When examining the abdominal cavity, do not take food that causes flatulence (e.g. beans, cabbage) one day before the examination.

In case of some previous diseases, it is necessary to determine laboratory values, e.g. of renal and thyroid gland function, before the planned computed tomography with administering of contrast media. Your surgeon will inform you about that in due course.

Contrast media containing iodine may be also given during breastfeeding. It is not necessary to stop breastfeeding.

Aftercare:

After the examination with the administrated contrast medium, it is necessary to consume enough fluids in order to wash the contrast medium quickly through the kidneys.

If you received a sedative, being an **outpatient**, it is necessary for an adult to pick you up. Make sure that someone is staying with you at home for 24 hours, i.e. during the period recommended by the surgeon. The power of reaction is limited due to administration of sedatives. Therefore, you/your child must not actively participate in road traffic (not even as a pedestrian) and perform risky activities for **24 hours after the discharge from the hospital**. Furthermore, during this period you should avoid making important decisions.

Please inform your surgeon or come to the hospital, if you experience symptoms such as skin rash, choking, palpitations, cold sweat after the examination with contrast medium. This requires an immediate treatment. Problems may occur even a few days after the treatment.

RISKS, POSSIBLE COMPLICATIONS AND SIDE EFFECTS

RISIKEN, MÖGLICHE KOMPLIKATIONEN UND NEBENWIRKUNGEN

It is well known that **every medical intervention entails some risks**. Computed tomography is a harmless routine. The exposure to radiation due to the X-ray during CT is minimal in modern appliances, but higher compared to conventional X-rays. Therefore, CT examination is performed only if the benefit justifies increased exposure to rays. It is important to point out to the surgeon the previous X-ray examinations you had, in order to keep the total amount of rays on the lowest possible level within a certain period of time. Your surgeon will explain to you in more detail the risks which are specific to you during the talk. You can also reject detailed explanation. In that case, skip the chapter on risk and confirm that at the end of explanation.

The exposure to radiation is kept as low as possible. Reliable data do not exist about subsequent consequences. In case of a pregnancy, it may cause damage to the fetus.

Allergic reactions (reactions of intolerance), e.g. to contrast media, anaesthetics or other medicines are rare. Consequences can be skin rashes, itching, swelling, as well as nausea and cough. They usually disappear without any treatment. Severe reactions, such as choking, spasms, tachycardia or cardiovascular **shock with possibly fatal consequences are rare**. Due to reduced blood flow and despite urgent medical intervention, this may lead to temporary or permanent damages, such as brain

damage, paralysis or kidney failure. The contrast medium can lead to severe diarrhea. It is necessary to drink plenty of water.

Risks specific for administering a contrast medium

In patients with existing kidney disease, the X-ray contrast medium can lead to a **deterioration of kidney function**. Fluid intake or medication treatment is usually successful. In case of severe previous damages kidney failure may occur, which requires permanent dialysis in certain cases.

In **diabetic patients** who take **biguanides**, such as Metformin, **dangerous metabolic disorders** (excessive acidity) may occur. In disorders of thyroid function, the X-ray contrast medium containing iodine, may cause **hyperfunction of the thyroid gland**, so-called hyperthyroidism. This is manifested by fast heart rate, feeling of heat, anxiety and diarrhea.

Risks specific for injecting a contrast medium

Bruises (hematoma) at the puncture sites or surrounding sites appear occasionally. In most cases they disappear without treatment, after a few days or weeks.

During the injection of the contrast medium, a **rupture of the vein** may occur, leading to **bruises** that require treatment. If the contrast medium leaks into the surrounding tissue, it can cause **inflammation**, which has to be treated with cold compresses for several days.

Infections at the site of injection with abscess, tissue death (necrosis) or inflammation of the vein (phlebitis), are rare. They are manifested as swelling, redness, pains, overheating of the skin and temperature. In most cases, such infections are successfully treated with antibiotics. Transfer of germs in the blood and dangerous blood poisoning (sepsis) or inflammation of the inner layer of the heart (endocarditis) rarely occur.

After the injection of the contrast medium, an **inflammation of veins, circulatory disturbances** or blood clots forming (**thrombi**) may occur in the respective blood vessel. Clots can also be shifted and block blood vessels in other organs (**embolism**). Despite the treatment, it may cause permanent damages (e.g. pulmonary embolism, stroke with permanent paralysis, kidney failure).

Damage of the skin, soft tissues, i.e. nerves (e.g. by injection, hematoma, abscess from a syringe or contrast media which leaks near the vein when injecting contrast medium (Paravasat)) is rare. The consequences can be numbness, paralysis and pain. They generally disappear. It is rare that discomforts or scars may remain despite the treatment.

Important Questions for Outpatient Procedures

Wichtige Fragen für ambulante Eingriffe

Who will pick you up when you are discharged from the hospital/hospital/surgeon's practise? Wer wird Sie abholen, sobald Sie aus Klinik/Praxis entlassen werden?

Name and age of the person picking you up: [Name und Alter des Abholers]

Where can you be reached during the 24 hours after the procedure?
Wo sind Sie in den nächsten 24 Stunden nach dem Eingriff erreichbar?

Street, house number, postcode, place: [Straße, Hausnummer, PLZ, Ort]

Telephone: [Telefonnummer]

Name and age of person looking after you: [Name und Alter der Aufsichtsperson]

Who is your physician (the one whose care you are in/who referred you/family surgeon)? Wer ist Ihr überweisender / weiter betreuender Arzt / Hausarzt?

Name: [Name]

Street, house number: [Straße, Hausnummer]

postcode, place: [PLZ, Ort]

Telephone: [Telefonnummer]

Questions about Your Medical History Please fill in the following questionnaire carefully before your information talk. **Please tick the applicable box!** It goes without saying that your information will be treated confidentially. The information you provide will help the physician to better assess the risks of treatment in your particular case, to advise you on the complications that could occur, and to take any steps needed to prevent complications and side effects.

yes=ja no=nein

Gender: M / F, **age:** _____ years, **weight:** _____ kg, **height:** _____ cm
Geschlecht: m / w, Alter: Jahre, Gewicht: kg, Größe: cm

Have you ever had a CT scan, for instance during an earlier hospitalisation? yes no

Haben Sie schon einmal eine Computertomographie, z. B. bei einem früheren Krankenhausaufenthalt, erhalten?

Which area(s) or your body was (were) checked-up?

If you have an X-ray card, please bring it with you.

Welche Region(en) Ihres Körpers wurden hierbei untersucht? Sollte ein Röntgenpass vorliegen, bitte mitbringen!

Do you suffer from claustrophobia? yes no
Leiden Sie an Klaustrophobie („Platzangst“)?

Have you ever received contrast medium? yes no
Haben Sie schon einmal Kontrastmittel erhalten?

Were there any complications?
Ergaben sich dabei Komplikationen?
If so, which ones?
Wenn ja, welche?

Do you take any diabetes medications? yes no
Nehmen Sie Diabetesmedikamente ein?

insulin injections, drugs containing metformin (e.g. Glucophage®, Metformin®, Janumet®)

Any other:
 Spritzen (Insulin), metforminhaltige Tabletten (z.B. Glucophage®, Metformin®, Janumet®),
Sonstiges:

Do you regularly require blood thinning medications (anticoagulants) or have you taken any or have any been injected during the past 8 days? yes no
Benötigen Sie regelmäßig blutgerinnungshemmende Mittel oder haben Sie in der letzten Zeit (bis vor 8 Tagen) welche eingenommen bzw. gespritzt?

If so, which ones?
Wenn ja, welche:

Do you take any other medications? yes no
Nehmen Sie andere Medikamente ein?

If so, which ones: Wenn ja, bitte auflisten:

(including non-prescription medications, natural or herbal medications, vitamins, etc.)
(Auch rezeptfreie Medikamente, natürliche oder pflanzliche Heilmittel, Vitamine, etc.)

Do you have a metal implant (e.g. hip implant)? yes no
Haben Sie ein Metallimplantat (z. B. künstliche Hüfte)?

If so, where?
Wenn ja, wo?

Are you pregnant? not certain nicht sicher yes no
Besteht eine Schwangerschaft?

Do you have or have you ever had any of the following diseases or symptoms:

Liegen oder lagen nachstehende Erkrankungen oder Anzeichen dieser Erkrankungen vor:

Blood diseases / blood clotting disorders? yes no

increased tendency to bleed (e.g. frequent nosebleeds, increased bleeding after surgery, minor wounds or dental treatment), tendency to bruise (frequent bruising possibly for no particular reason).

Bluterkrankung/Blutgerinnungsstörung? Erhöhte Blutungsneigung (z.B. häufiges Nasenbluten, verstärkte Nachblutung nach Operationen, bei kleinen Verletzungen oder Zahnarztbehandlung), Neigung zu Blutergüssen (häufig blaue Flecken auch ohne besonderen Anlass).

Do you have any blood relatives with signs of blood disease / clotting disorders? yes no

Gibt es bei Blutsverwandten Hinweise auf Bluterkrankungen/Blutgerinnungsstörungen?

Allergies / Oversensitivity? yes no
 Medications, foods, contrast media, io-

dine, sticking plaster, latex (e.g. rubber gloves, balloons), pollen (grass, trees), anaesthetics, metals (itching caused by metal spectacles frames, jewellery, jeans buttons).

Allergie/Überempfindlichkeit? Medikamente, Lebensmittel, Kontrastmittel, Jod, Pflaster, Latex (z.B. Gummihandschuhe, Luftballon), Pollen (Gräser, Bäume), Betäubungsmittel, Metalle (z. B. Juckreiz durch Metallbrillengestell, Modeschmuck oder Hosennieten).

Other: Sonstiges:

Heart, circulatory or blood vessel diseases? yes no

Heart attack, chest pain and/or tightness (angina pectoris), heart defect, irregular heart rhythm, inflammation of heart muscle, Inflammation of the inner layer of the heart, heart valve disease, heart surgery (possibly with insertion of an artificial heart valve, pacemaker, defibrillator), high blood pressure, stroke, varicose veins, inflammation of a vein, Brain aneurysm.

Herz-/Kreislauf-/Gefäß-Erkrankungen? Herzinfarkt, Angina pectoris (Schmerzen im Brustkorb, Brustenge), Herzfehler, Herzrhythmusstörungen, Herzmuskelentzündung, Herzzinnenhautentzündung, Herzklappenerkrankung, Herzoperation (ggf. mit Einsatz einer künstlichen Herzklappe, Herzschrittmacher, Defibrillator), hoher Blutdruck, Schlaganfall, Krampfadern, Venenentzündung, Gefäßaussackung im Gehirn.

Any other: Sonstiges:

Diseases of the respiratory tract (breathing passages) or lungs? yes no

Asthma, chronic bronchitis, inflammation of the lungs, emphysema.

Erkrankung der Atemwege/Lungen? Asthma, chronische Bronchitis, Lungentzündung, Lungenemphysem.

Any other: Sonstiges:

Do you have a malignant tumour (cancer)? yes no

Leiden Sie an einer Tumorerkrankung (Krebs)?

If so, which one?

Wenn ja, an welcher?

Are you undergoing or have you undergone chemotherapy? yes no
Erhalten oder erhalten Sie eine Chemotherapie?

Metabolic diseases? yes no

Diabetes (sugar sickness), gout.

Stoffwechsel-Erkrankungen? Diabetes, Gicht.

Any other: Sonstiges:

Thyroid diseases? yes no

Overactive thyroid, Nodes, thyroid swelling (goitre), Inflammation, thyroid gland operations, thyroid gland cancer.

Schildrüsenerkrankungen? Überfunktion, Knoten, Kropf, Entzündung, Schilddrüsenoperation, Schilddrüsenkrebs.

Any other: Sonstiges:

Kidney diseases? yes no

Kidney insufficiency, kidney inflammation, kidney operations, kidney or ureter stones, blood in the urine, plasmacytoma.

Nieren-Erkrankungen? Nierenfunktionsstörung (Niereninsuffizienz), Nierenentzündung, Nieren-OP, Nieren- oder Harnleitersteine, Blut im Urin, Plasmozytom.

Any other: Sonstiges:

Liver diseases? liver inflammation. yes no

Lebererkrankungen? Leberentzündung.

Any other: Sonstiges:

Gastrointestinal diseases? yes no

stomach ulcer, inflammatory diseases of the bowel, duodenal ulcer, blood in the stool.

(If certain answers are preselected, please correct them if anything has changed.)

