**Workplace:** **Department of Nuclear Medicine**

 Proton Therapy Center Czech s.r.o. (PTC)

**PATIENT:**

**Name and surname:** 

**Date of birth:** 

**Address:** 



***Important patient information. Please fill out:***

*(Mark the correct answer with an ‘X’)*

**Are you fasting:**

**[ ]**  yes **[ ]**  no

**Do you have an intravenous access (cannula, PORT, PICC):**

**[ ]**  yes - specify which one: **[ ]**  No

**Women - Pregnant or breastfeeding:**

 **[ ]**  yes **[ ]**  no **[ ]**  I do not know if I'm pregnant

**Have you ever had an allergic reaction to:**

|  |  |  |  |
| --- | --- | --- | --- |
| Iodine contrast agents: | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Medicines: | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Other types of allergies (e.g., pollen, insect bites, ...) | **[ ]**  Yes | **[ ]**  No | **[ ]**  I don’t know |

**Do you suffer from/are you being treated for the following disease(s):**

|  |  |  |  |
| --- | --- | --- | --- |
| Kidneys | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Thyroid | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Bronchial asthma | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Diabetes Mellitus | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Epilepsy | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Myasthenia gravis | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Multiple myeloma | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Other serious diseases (e.g., heart, liver, ...) | [ ]  Yes | [ ]  No | [ ]  I don’t know |
| Claustrophobia (fear of enclosed spaces) | [ ]  Yes | [ ]  No | [ ]  I don’t know |

PET/CT scan information

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| Description and purpose: | PET/CT is the most commonly used method to examine patients with suspected cancer or to obtain detailed findings in patients with already confirmed cancer. PET/CT is a non-invasive diagnostic imaging method. It combines the advantages of metabolic (PET) and structural (CT) imaging. The simultaneous use of both methods and their hybridization (hybrid imaging) allow the determination of the exact anatomical localization of a pathological finding apparent from the metabolic image. The result of PET/CT scanning helps determine the correct diagnosis or clarify a health problem or enables the optimization of the medical or other diagnostic procedure. It is performed either before treatment or as a follow-up after treatment. It is also used for diagnosis of inflammatory or autoimmune diseases, in neurology, and also in cardiology.  |
| Course: | The scanning is performed on an **empty stomach**, but sufficient hydration (fluid intake) is required before the scanning. During the examination, you will be exposed to ionizing radiation, but you will not feel it. The source of ionizing radiation is the scanning device and the administered radioactive substance (radiopharmaceutical). **Administration of the radiopharmaceutical:** The radiopharmaceutical is administered via a cannula (plastic or silicone tube) which is introduced into a vein (or into a port or PICC) prior to the scanning. Due to the distribution of this substance in the body, you will wait about 60 minutes in a small room (patient box) after administration of the radiopharmaceutical. After this time, you will be invited to the examination room where the scanning will be performed using the CT scanner. For some examinations, the waiting time may vary (40 to 90 minutes depending on the type of procedure and radiopharmaceutical administered). For some radiopharmaceuticals, the procedure is the opposite, i.e., they are administered only once the patient has been placed under the scanning device and the waiting time for the distribution follows after a short scan. **The duration of the patient's stay at the Department of Nuclear Medicine is about 2 to 3 hours,** only exceptionally may it be longer (depending on the type and course of the procedure). |
| Procedure: | PET/CT scanning is performed with the patient lying on their back with the arms above the head. The examination table is located in a gantry, which is the short tunnel of the scanning machine. The table on which you are lying will be moved continuously through the gantry during the examination. **The scanning process itself takes about 20 to 30 minutes** (depending on the height and weight of the patient and type of procedure, it can sometimes take up to 40 minutes). You **must not move** during the procedure. Sometimes, a certain level of patient co-operation with the medical staff (e.g., holding the breath) is required during the procedure. **Administration of iodine contrast agent:** Iodine contrast agent is administered intravenously at the start of scanning, which improves the quality (contrast) of the CT image. The doctor will decide on the administration of iodine contrast agent depending on your health. Shortly after intravenous administration of the contrast agent, you might experience hot flushes, nausea, or palpitations. These are accompanying symptoms of administration of an iodine contrast agent, which are quite common and expected and resolve quickly. **Throughout the scanning, we will monitor you using a camera system** (we will see you and hear you), and you can communicate with the attending staff via a microphone.  |
| Preparation: | **Before the procedure:*** You will show us your medical records for inspection.
* With the exception of insulin and anti-diabetes medicines, you can take medicines that you take on a permanent basis (for the heart, high blood pressure, epilepsy, pain). It is important that you take them only with clean water!
* For some of these tests, we will measure your blood sugar (known as glycaemia) from a finger-prick sample. If your blood glucose level exceeds the permitted limit, we will need to re-schedule your PET/CT date.
* For administration of the radiopharmaceuticals or iodine contrast agent, a silicone or plastic tube called a cannula will be introduced into your vein. The radiopharmaceutical and the iodine contrast agent will then be administered through this cannula.
* During the waiting period, you will have to drink liquid (usually about 1000 mL of pure water) in small sips. During the waiting period, you can go to the toilet at any time.
* Wear comfortable clothes without any metal elements, if you are a woman, wear a wire-free bra. You should not feel cold during the waiting period. Put on a sweatshirt/sweater or ask the staff for a blanket.

**After the procedure:** * You will be monitored for about 30 minutes after the scan, due to the potential risk of developing an allergic reaction (see below). During this time, we will also find out whether the examination was done correctly in technical terms or repeated scanning is needed (most often due to patient movement during the scanning process).
* Once the cannula is removed by a nurse or radiologist, you can go home. You can drive a motor vehicle if you have not received sedatives or other medicines affecting your attention or concentration (e.g., Dithiaden, Diazepam).
* Once you are discharged, you can eat normally and take your regular medication. If you are taking metformin-containing anti-diabetic drugs and have been given iodine contrast agent, start taking it again after adequate hydration (2 litres of fluid / 24 hours) and not earlier than 48 hours after the scanning (we recommend that you consult your doctor!).
* After administration of the radiopharmaceutical, you will emit ionizing radiation for some time after the examination (most of which will be eliminated within 12 hours, almost everything within 24 hours). This radiation cannot threaten anyone around you. Even when in close contact with you, no exposure of other persons can occur that would exceed the safety limits set by the legislation of the Czech Republic or the EU. However, we recommend that you **avoid staying near pregnant women and young children until the next day**.
* If you are breastfeeding, tell the staff of the department and they will let you know about the further procedure.
* **If you plan to travel by plane** on the same day that you have been screened, ask the receptionist for a radiopharmaceutical confirmation to prevent misunderstandings during personal controls.
* Sufficient hydration is needed after the examination, i.e., at least 2 litres of fluid, to accelerate elimination of the radiopharmaceutical by the kidneys, thus reducing the radiation burden on the body. This will also accelerate the excretion of iodine contrast agent, if administered (the radiopharmaceutical and contrast media are excreted in the urine).
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I have acknowledged that a PET/CT scan has its own specific advantages and disadvantages:

* **ADVANTAGES:**
* The uniqueness of the metabolic examination, a combination of two methods (PET and CT), to obtain very precise and complex results with the possibility of optimizing the subsequent therapeutic or diagnostic procedure, where the health benefits significantly outweigh the potential risks associated with the examination,
* Large scanning range (for most examinations, the standard scanning range is from the root of the nose down to the groin, other scanning ranges are possible at the discretion of the treating physician).
* **DISADVANTAGES:**
* Time-consuming examination.
* Higher radiation load compared to X-ray or CT alone.
* Possible psychological discomfort for patients with a fear of confined spaces.
* Risks/complications related to the procedure that are listed below.

Complications and risks of the PET/CT scan

A serious complication that may occur during a PET/CT scan is an allergic reaction. The reaction may occur especially after intravenous administration of an iodine contrast agent. This can escalate into anaphylactic shock that can result in death. The allergic reaction may occur even if you have never had such a reaction, even if you have already been examined using, for example, an iodine contrast agent. However, when modern non-ionic contrast agents are administered, more serious complications rarely occur.

Less severe forms of allergic reaction are vomiting, sweating, headache, chills or skin reactions (urticaria, redness, itching), which may rarely occur as a late reaction (within 3 to 48 hours after administration). Recognition and treatment depend on the severity of the allergic reaction, and the PET/CT staff will be ready to respond. In case of a delayed reaction, please inform us by phone or seek help from an emergency doctor.

Following intravenous administration of a radiopharmaceutical, the risk of an allergic reaction is negligible due to the minimal amount of the substance administered*.* The radiopharmaceutical is administered in a quantity adapted to the patient’s weight and the technical conditions of the scanning, thereby minimizing the risk of adverse reactions of the ionizing radiation. The NMD of the PTC center uses fluorine-labelled radiopharmaceuticals with a half-life of 110 minutes.

The source of ionizing radiation, which is very strictly controlled, is also the examining machine itself (the CT image is generated by the passage of X-rays through the examined volume of the patient’s body). Therefore, the CT part of the examination is optimized to minimize the patient's radiation burden. PET/CT scanning is generally performed where the benefits outweigh the potential risks of the medical exposure.

I have been advised that the treatment recommended by my physician may be accompanied by the aforementioned complications that may or may not occur.

**At the same time, I declare** that in the event of unanticipated complications requiring urgent follow-up interventions to save my life or health, I agree that all the necessary and urgent actions needed to save my life or health are to be carried out.

I have been advised that alternatives to PET/CT scanning may include other non-invasive examinations using conventional radiodiagnostic procedures (e.g., ultrasound, magnetic resonance, CT) or invasive medical examinations (e.g., fibroscopy, puncture, surgery). However, the proposed alternative examinations provide different information and cannot be regarded as fully equivalent (their disadvantage is the lower information value).

The **image description** is usually available within 24 hours, or rarely after a longer time. The finding can be sent to the referring doctor by mail, and the doctor will inform you of the results of the examination and its interpretation.

**I understand** that my referring doctor will receive the result of the examination within 5 working days after the scanning.

**I acknowledge** that if the healthcare provider experiences technical problems, I will be offered a new appointment on the first available date.

I had these additional questions:

I have been advised that I can revoke my consent to the provision of medical services. However, revocation of the consent is not effective if the medical treatment has already begun.

I have been advised of my right to waive the provision of health information.

I declare and certify with my signature that I am adding in my own hand that I have read the instructions regarding the medical treatment. The physician who provided me with these instructions explained to me in person everything contained in this written informed consent, which I had enough time to read carefully, and I was able to ask questions that were properly answered by the physician.

I declare that I fully understand the aforementioned instructions and expressly and freely consent to the PET/CT scan.

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**Patient's signature in own hand:**

*(Signature of a legal guardian)*

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**In Prague, on:**

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|  |

**The name and signature of the physician who provided the instructions:**

Identification of person granting the consent as a legal guardian:

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| --- |
|  |

Name and surname:

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| --- |
|  |

Date of birth:

|  |
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|  |

Relationship to the patient:

**Signature of witnesses to the provision of instructions and patient’s consent if the patient is unable to sign personally:**

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| --- | --- |
|  |  |
| *Name and surname of the 1st witness:* | *Name and surname of the 2nd witness:* |
| *Signature* | *Signature* |

Reason why the patient cannot sign in own hand:

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The way in which the patient gave the consent:

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