

## Prostate Cancer Therapy with Radium-223 Dichloride

Dear patient

You have been diagnosed with prostate cancer. By means of this brochure, details of the Alpharadin therapy with radium-223 dichloride will be discussed.

### What is Radium-223 Dichloride?

Radium-223-dichloride is a radiopharmakon (a radioactive drug), which is being used in the treatment of patients with prostate cancer, metastasizing into the bone. It is administered by an injection into a vein of your arm. Radium-223 dichloride is similar to calcium and is therefore incorporated into the bone. It works by delivering radioactive radiation and destroying the tumor cells in the bone. The range of the deposited radiation (mainly alpha particles) into the tissue is very short (less than 100 micrometers). Therefore, radium-223-dichloride is only effective on the tumor cells close to the treated bone.

### How does the Radium-223 Dichloride therapy work?

We plan six injections every four weeks. Before every application, there will be a blood test and a medical consultation. You will be questioned regarding possible side effects.

### Is this radiation dangerous for me and do I feel anything?

Early side-effects/early toxicity:

The toxicities observed in earlier studies with radium-223 chloride, which can be regarded as early side-effects are: anemia, decreased number of white blood cells, reduced blood platelet count, diarrhea, vomiting, nausea (usually mild) constipation or bone pain. Life-threatening and / or fatal bleedings (hemorrhages) have been reported occasionally. Most side effects caused by the standard therapy plus radium-223-dichloride have a comparable severity to standard therapy plus placebo.

Delayed effects or late toxicities:

During clinical development, Alpharadin has proven an advantageous safety profile. However, there is always the possibility that unexpected adverse events or late side-effects may occur.

As with any radiation treatment, late sequelae such as secondary primary malignant tumors, such as leukemia or other secondary primary cancer diseases can occur. However, following observations, this is extremely rare.

In the case of administration of radioactive medication, there is a possible risk for third parties due to the radiation emanating from the test medicament and due to a possible contamination of the body fluids of the patient such as urine or stool. After the intravenous injection of radium-223 dichloride, the risk of third-party radiation exposure is very low and limited by the low range of the alpha particles (<0.1 mm) in the tissue and the low proportion of gamma radiation emanating from the patient's body. However, good body hygiene with thorough hand washing and double toilet flushing is important. If you are advised to consult other physicians or the dentist, or if you plan a surgery during the treatment, please inform your physician about the ongoing therapy with Xofigo®.

### How is the therapy procedure?

First, you will be given detailed information by the treating nuclear physician. Then an intravenous access is placed in your arm and you will be given 250 ml of NaCl (sodium chloride). After about 15 min. the radium-223 dichloride will be injected. After the treatment you can go home, you do not have to stay in the hospital. A total of six therapies are planned. There is a therapy every 4 weeks.

**Legal and costs**

Both, the drug and any additional studies, e.g. doctor's fees or blood tests will be compensated for by the health insurance company.

In case of emergency, uncertainties or unexpected effects or side-effects, you can contact the doctor below

Name (stamp):

**Please note:**

The parking space offered by the University Hospital is limited. Please use public transportation (Tram 6 and 10 from Hauptbahnhof).

I have read and understood this patient information

Patient first and last name

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Place and date

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Signature

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