

Informed Consent Yttrium – 90 Radiation Therapy

This information is given to you so that you can make an informed decision about having **Yttrium-90 (Y-90) therapy**.

Reason and Purpose of the Procedure

Yttrium-90 uses radioactive beads to treat liver cancer. These tiny beads, or microspheres, are placed into the tumor. The beads give off high radiation directly to the tumor to shrink it.

The treatment consists of two separate sessions.

Planning Session:

Angiogram. During an angiogram, a long tube (catheter) is placed into the femoral artery in the groin. Guided by X-ray, the doctor moves the catheter through your blood vessel into your liver. Three things are done:

1. The doctor maps your liver anatomy. This allows us to identify arteries that may be feeding your tumor and plan bead placement.
2. The doctor looks for any small arteries that go to your stomach or intestines. If these arteries are close to the radiation site, small coils are inserted to block the blood supply. This prevents the radiation beads from getting into your stomach or intestines and causing an ulcer. (Other blood vessels take over the work of those vessels that are blocked.) Not every patient needs this part of the procedure.
3. Macro aggregated albumen (MAA) beads are injected into your liver. These beads are the same size as the Yttrium-90 beads. They contain a radioactive tracer so we can track where they go. We want to make sure the beads stay in your liver and do not travel to other organs and cause problems. The MAA beads are harmless proteins that break down on their own. They are passed out of the body through your stool and urine within 24 hours.

Nuclear Medicine Imaging. After the MAA beads have been injected, the catheter is removed. The nurse will take you to the Nuclear Medicine department. There, a scan is done to trace the location of the MAA beads.

Yttrium-90 (Y-90) Microsphere Treatment Session:

The doctor will perform an angiogram like the one that was done during the planning session. A catheter will be placed in the groin and Y-90 filled beads will be placed in the liver tumor. Most of the Y90 is no longer active after 10 days.

Benefits of this procedure

You might receive the following benefits. Your doctor cannot promise you will receive any of these benefits. Only you can decide if the benefits are worth the risk.

- Direct treatment into the tumor limits radiation to other parts of the body. This may lessen side effects
- No surgical incision is needed. A small cut is made in the skin.
- A higher dose of radiation to the tumor is given during Yttrium-90 than with standard radiation therapy. This may shrink the tumor faster and decrease treatment time.

Risks of Procedures

No procedure is completely risk free. Some risks are well known. There may be risks not included in the list that your doctor cannot expect.

General Risks of Yttrium-90 Procedure

- **Infection:** Either at the puncture site or in the blood stream. You may need intravenous (IV) antibiotics.
- **Allergic reaction from the x-ray contrast material.** Reactions are typically mild. Medicines may be given to reduce symptoms.
- **Y-90 beads may lodge in the wrong place.** This puts you at risk for an ulcer in the stomach or duodenum. This happens in approximately two (2) percent of patients. You may need surgery or more treatment.

- **Any procedure that involves placement of a catheter inside a blood vessel carries certain risks.** These risks include damage to blood vessels, bruising and/or swelling at the puncture site. This may need surgery.

Known Risks of Yttrium-90 Procedure

- Fatigue.
- Mild abdominal pain.
- Nausea.
- Fever.

All side effects should lessen by the end of 10 days. Medicine can help the fatigue and protect your stomach.

Potential Radiation Risks

- **Any exposure to radiation may cause a slightly higher risk for cancer later in life.** This risk is low.
- **Skin rashes.** Skin rashes may lead to breakdown of skin and possibly severe sores. This is rare.
- **Hair loss.** This does not happen to everyone. This can be temporary or permanent.
- **It is possible we may have to use higher doses of radiation.** If we do we will tell you.
- **If you see changes with your skin you should report them to your doctor.**

Risks Associated with Smoking

Smoking is linked to an increased risk of infections. It can also lead to heart and lung complications and clot formation.

Risks Associated with Obesity

Obesity is linked to an increased risk of infections. It can also lead to heart and lung complications and clot formation.

Risks Specific to You:

Alternative Treatments

Other choices:

- Some tumors can be treated with chemotherapy.
- Some tumors can be treated with external beam radiation.
- Some tumors can be treated with surgery.
- Some tumors can be treated with liver transplantation.
- Do nothing. You can decide not to have the procedure.

If you choose not to have this treatment

- Your cancer may grow and symptoms may get worse.

General Information

- During this procedure, the doctor may need to perform more or different procedures than I agreed to.
- During the procedure the doctor may need to do more tests or treatment.
- Tissues or organs taken from the body may be tested. They may be kept for research or teaching. I agree the hospital may discard these in a proper way.
- Students, technical sales people and other staff may be present during the procedure. My doctor will supervise them.

Patient Name: _____

DOB: _____

- Pictures and videos may be done during the procedure. These may be added to my medical record. These may be published for teaching purposes. My identity will be protected.

By signing this form I agree

- I have read this form or had it explained to me in words I can understand. I understand its contents.
- I have had time to speak with the doctor. My questions have been answered.
- I want to have this procedure **Yttrium-90 Radiation Therapy**
- I understand that my doctor may ask a partner to do the surgery/procedure.
- I understand that other doctors, including medical residents or other staff may help with surgery. The tasks will be based on their skill level. My doctor will supervise them.

Provider: This patient may require a type and screen or type and cross prior to surgery. IF so, please obtain consent for blood/product.

Patient Signature _____ Date: _____ Time: _____

Relationship: Patient Closest relative (relationship) _____ Guardian

Interpreter's Statement: I have translated this consent form and the doctor's explanation to the patient, a parent, closest relative or legal guardian.

Interpreter: _____ Date _____ Time _____

*Interpreter (if applicable)***For Provider Use ONLY:**

I have explained the nature, purpose, risks, benefits, possible consequences of non-treatment, alternative options, and possibility of complications and side effects of the intended intervention, I have answered questions, and patient has agreed to procedure.

Provider signature: _____ Date: _____ Time: _____

Teach Back

I have explained the nature, purpose, risks, benefits, possible consequences of non-treatment, alternative options, and possibility of complications and side effects of the intended intervention, I have answered questions, and patient has agreed to procedure.

Patient shows understanding by stating in his or her own words:

____ Reason(s) for the treatment/procedure: _____

____ Area(s) of the body that will be affected: _____

____ Benefit(s) of the procedure: _____

____ Risk(s) of the procedure: _____

____ Alternative(s) to the procedure: _____

OR

____ Patient elects not to proceed: _____ Date: _____ Time: _____

(patient signature)

Validated/Witness: _____ Date: _____ Time: _____