Samarium Treatment (Quadramet®)  
(Samarium Sm-153 Lexidronam Pentasodium)  
A Question and Answer Guide for Patients

What is a samarium treatment and how does it work?
A samarium treatment (trade name Quadramet®) is a type of radiation treatment. It is a radiopharmaceutical—a drug that is partly radioactive. Samarium is given to help reduce pain in a person whose cancer has spread to the bones (bone metastases or bone mets). The radioactive material in the samarium treatment goes into the cancer cells. It does not go into healthy bones or tissues. The treatment gets into the bones through the bloodstream. Samarium can reach cancer cells in bones throughout the body. Left over drug is passed out of the body through the urine.

What are bone metastases?
Bone metastases (mets) are parts of bone that contain cancer cells. Bone mets occur when cancer cells travel from the primary site (prostate, breast, lung, etc.) and lodge within bone tissue. Bone mets can be very painful. Sometimes they are very hard to relieve with pain medicines alone.

What can I do if my normal pain medicine doesn’t help with this kind of pain?
Keeping control of cancer pain is very important. Some patients get relief from regular radiation treatments. Others get help from a blend of radiation treatments and pain pills. A samarium treatment is a further option. It has few side effects and can relieve pain in many areas.

How is a samarium treatment given?
A samarium treatment is given during a 2-3 hour clinic appointment. At the start of the appointment, an IV is put into a vein in your hand or arm. IV fluids are then given. This is done to ensure that you are well hydrated. The samarium is then given. It is injected into the IV, over 1-2 minutes, by the doctor. Medical physicists are present to monitor the injection of the drug. This is followed by more IV fluids. Then the IV can be removed. A patient getting samarium must pass urine into a clinic toilet before leaving. At home, after urinating, you will need to double flush the toilet for the next 24 hours. This is because some of the radioactive drug is passed out of the body through urine. You should use good hand washing during this time.

Are there any side effects from a samarium injection?
Samarium can decrease your blood platelet counts for a few weeks. Your doctor will check your blood platelet test before the treatment. This lab work can be done by your local doctor. In about 8 weeks, your blood counts should return to pre-treatment levels. Your doctor may order a blood platelet test after the treatment.

If you notice unusual amounts of bleeding or bruising, call the Radiation Oncology Clinic right away at (608) 263-8500. Most patients do not have any problem with their blood platelet counts after a samarium treatment.
When will I start to notice pain relief?  
Some patients notice pain relief as soon as 1 week after treatment. Others take longer to respond. A few patients may not get any pain relief from this type of treatment.

Patients who respond to this type of treatment will find that their pain continues to lessen for 3-4 weeks after the treatment. Many patients find that they can reduce the amount of pain medicines they take. The pain relief from a samarium treatment generally lasts about 4 months.

Some patients may notice an overall increase in boney pain in the first 24-72 hours after getting a samarium treatment. This can be a sign that the drug has been absorbed into the bones and is going to work on the cancer cells. This type of increase in pain will go away in a few days. It can be lessened by over-the-counter products like Advil®, Tylenol®, or Aleve®. Your doctor may also prescribe stronger pain relievers for this time period.

What if the pain returns?  
If you get good pain relief after a samarium treatment, but the pain returns after a few months, call your doctor. Some patients get more than one samarium treatment.

Are there any safety measures I should take?  
There are some basic safety measures you should take for a couple of days after getting a samarium treatment. These measures will protect you and others:
- Drink at least two cups (one pint) of water, juice, or other liquid just before you receive your treatment. This will help to fill your bladder. It can protect it from left over radioactive matter.
- Radiation will be present in your urine for about 12 hours after the treatment. Be sure to drink extra fluids for 12-18 hours after the treatment. You should also pass urine often. Use a toilet if at all possible. Double flush the toilet for the first 24 hours after getting the drug. If you must use a urinal or bedpan, carefully dispose of the urine in a toilet.
- Flush the toilet twice after passing urine into it. Use toilet paper to absorb any spills. Flush the toilet paper. Wash your hands well.
- If any urine or blood gets on your clothing, wash the clothing right away.

Other safety measures
- If you are pregnant or are trying to get pregnant you should not get a samarium treatment. Birth control measures should be used until your samarium treatment is over. Nursing mothers should not get this treatment.
- Tell your doctor if you have ever had a bad response to phosphonate drugs (medicines used in bone scans).

Will I be able to be close to other people?  
You do not have to change how you act with your friends or family after your treatment. The amount of radiation that they might be exposed to is quite small. It is about the same as having an x-ray.

What about sexual contact?  
We suggest that you refrain from sexual contact for about 12 hours. After that time, any left over radioactive material will be cleared from your system.
Should I tell people that I’ve been given a samarium treatment?
You should tell your health care providers about your treatment for the first 2 months after the treatment. This includes your dentist, doctor, nurse, and/or pharmacist. If your provider has any questions, he or she can call your doctor at (608) 263-8500. Your provider can also call the maker of Quadramet®, Berlex Professional Services, at 1-800-888-4112. No one else needs to know about your treatment unless you choose to tell them.

Will receiving a samarium treatment affect my daily routine?
It takes about 12 hours for the leftover radiation from the treatment to be cleared from your body. There is no reason to limit your daily activities. You may exercise and drive your car. You can enjoy being with friends and family. Feel free to follow your normal diet.