Protocol title: A Phase II Pilot Single Arm Prospective Clinical Trial of Rapid Institution of Tomo Therapy-based Radiation Therapy for Patients with Painful Osseous Metastatic Disease

NCT#: NCT01391234

Informed Consent Version Date: 04/01/2013

Consent of an Adult to Be in a Research Study

In this form "you" means a person 18 years of age or older who is being asked to volunteer to participate in this study.

Participant's Name_____

Medical Record # _____

Principal Investigator: **Paul W. Read, MD PhD**
Associate Professor
Department of Radiation Oncology
University of Virginia Medical Center
Charlottesville, VA 22908
PO Box 800383
Phone: 434-924-5191
Fax: 434-243-9789
E-mail: pwr3u@hscmail.mcc.virginia.edu

Sponsor: University of Virginia Department of Radiation Oncology
UVA Cancer Center
Centers for Medicare and Medicaid Services
Center for Medicare and Medicaid Innovation

What is the purpose of this form?

This form will help you decide if you want to be in the research study. You need to be informed about the study, before you can decide if you want to be in it. You do not have to be in the study if you do not want to. You should have all your questions answered before you give your permission or consent to be in the study.

Please read this form carefully. If you want to be in the study, you will need to sign this form. You will get a copy of this signed form.

Who is funding this study?

This study is funded by the 2008 Buchanan Award, Radiation Oncology Departmental Funding, UVA Cancer Center and 2012 CMS-1C1-12-0001 from Centers for Medicare and Medicaid Services, Center for Medicare and Medicaid Innovation

Why is this research being done?

The purpose of this research study is to evaluate the safety and effectiveness of an experimental procedure that may result in a faster way to plan and deliver radiation for the treatment of pain caused by metastatic bone tumors (tumors that originally came from another organ and have

spread to bones causing pain) or multiple myeloma (a type of cancer that begins in white blood cells that produce antibodies).

Focused radiation (the radiation is focused on the tumor in the bone and reduced the radiation dose to the normal tissues) is used as standard of care treatment for patients with painful metastatic tumors in their spines. In the spine, reported results reveal rapid and long-term pain relief with few serious side effects. In this study, we will use the focused radiation to treat tumors in other bones as well. Therefore, the focused radiation will be used for research purposes.

Radiation simulation, planning and delivery require the following steps to be carried out:

- Treatment Simulation:You will undergo a CT scan and we may create custom supportive treatment aids to keep you from moving. If made, these treatment aids will be used during each and every radiation treatment to make sure that you are in the correct position for treatment each time)
- Treatment Planning: The radiation oncology staff uses the simulation CT scan and other recent imaging studies that you may have already had to determine the radiation treatment technique that would be best to reduce your pain and minimize radiation dose to the normal tissues to minimize side effects from the treatment. You do not have to be present during the treatment planning
- Treatment Delivery: You will be placed on the table of the radiation treatment machine in the treatment position and receive the radiation treatment. You may need to return to the clinic for additional treatments. The total number of treatments will be determined by your radiation oncology doctors (a doctor who specializes in the treatment of cancer with radiation).

The current standard of care radiation treatment planning and delivery takes 2 to 3 weeks from start to finish. We have developed an experimental workflow: a radiation treatment planning and delivery workflow called "STAT RT" (STAT means "right away", and RT means radiation therapy). This experimental workflow may shorten the time it takes to plan and treat painful bone metastases to 1 week or less. All steps in this process will be performed within the current standard of care but in a faster time frame to allow treatment to start on the same day.

The STAT RT workflow may allow patients to start treatment sooner and may require fewer radiation treatments because it uses:

1. Possible faster treatment planning
    a. We take all of the same steps used in the conventional treatment planning and condense them into a more coordinated and efficient planning process. In this way we may shorten the time required for radiation treatment planning from several days to several hours allowing treatment on the same day as planning.
2. Focused radiation
    a. We use techniques to focus the radiation on the tumor in the bone and reduce the radiation dose to the normal tissues. In this way we can treat you in fewer treatments.

The standard of care treatment for patients with painful metastatic bone tumors other than the spines are treated with non-focused radiation. This focused radiation is already used as standard of care treatment for patients with painful metastatic tumors in their spines. In this study we will use the focused radiation to treat metastatic bone tumors other than the spine. Therefore, the focused radiation will be used for research purposes.

In this study we will evaluate the safety and effectiveness of our current STAT RT workflow for treatment of metastatic bone tumors or multiple myeloma. We will evaluate effectiveness by using patient pain and quality of life evaluation questionnaires. We will also be collecting additional information from your treatments that will help us make future workflows even more efficient.

You are being asked to be in this study, because you are suffering from pain associated with bone metastases or multiple myeloma and your doctor has determined that you would benefit from radiation for pain relief.

30 people will be in this study at UVA and Culpeper Regional Hospital.

How long will this study take?

Your participation in this study will require 7-12 study visits over a one-year period. Each visit will last less than 1 hour except for the simulation, planning, and first treatment delivery visit, which will last up to 8 hours.

What will happen if you are in the study?

SCREENING (will take approximately 1 hour to complete):

Visit 1 (Day 1):

If you agree to participate, you will sign this consent form before any study related procedures take place. Before you can start in the study, there will be a screening period. You will have tests and procedures during this time to make sure you are eligible and it is safe for you to participate. Some of these tests and procedures are done per standard of care and the results will be recorded for research purposes. These include the following:

- Review of your medical history. This is standard of care.
- Physical examination by a radiation oncologist. This is standard of care.
- Review of your most recent imaging studies (CT, MRI, or PET-CT). This is standard of care.
- Serum or urine pregnancy test (for female of child bearing potential). This is standard of care.
- You will also be asked to complete 4 pain and quality of life questionnaires. This is done for research purposes. These questionnaires ask about:

- How you are feeling
- Daily activities
- What you expect the treatment to be like

These questionnaires will take about 15 minutes to complete.

If the physical examination and imaging studies show that you are eligible for this study, you will be invited to participate in this study and return to the clinic within 7 days to begin study treatment.

STUDY TREATMENT

Visit 2, will last up to 8 hours:
In this study you will receive:

- Treatment Simulation: You will be placed on the CT table in the treatment position with supportive treatment aides, if needed, to maintain you in the correct position during the CT scan. This process will take about 30 minutes and is standard of care. If this CT scan shows that you have a fracture or are at high risk for a fracture, you may no longer be eligible for radiation treatment or further participation in the study. If this is the case, your physician will discuss alternative treatment choices with you.
- Treatment Planning: You will then need to wait for several hours while the radiation oncology team plans your treatment using the STAT RT planning process. This STAT RT planning process is being evaluated in this study. You do not need to stay in the Department of Radiation Oncology during this time, and you may leave the hospital, have meals, or go to other scheduled medical appointments at UVA. After your customized radiation plan is developed we will run standard of care safety tests (called treatment quality assurance tests) to make sure that the planned treatment is accurately delivered by the treatment machine.
- Treatment Delivery: You will then be placed on the radiation treatment machine in the treatment position and receive the radiation treatment. This will take about 20-40 minutes. Treatment of bone metastases is a standard of care treatment on the radiation treatment machine. The use of a short course of radiation to treat bone metastases is also considered standard of care treatment although many centers treat bone metastases with 10 or more treatments.
  In this study we want to test if the use of 1-5 highly focused radiation treatments, as has been used to treat the spine, can be used to treat bone metastases anywhere in the body.

Visits 3-6, each visit will take about 30 minutes
In the next 4-14 days, you may need to return to the radiation oncology clinic to receive up to 4 more additional radiation treatments as determined by your radiation oncologist per standard of care.

FOLLOW UP (Each visit will last about 30 minutes):

Follow-up visits will be conducted at 4 weeks, 12 weeks, 6 months and 12 months after your last treatment visit. Some of these tests and procedures are done per standard of care and the results will be recorded for research purposes. These visits will include:

- Review of your medical history. This is standard of care.
- Physical examination. This is standard of care.
- You will be evaluated for general health and reviewed for any health related problems that may have occurred during the follow-up period. This is standard of care.
- You will be asked to keep a logbook of how much pain medicine you take each day for the first 3 months after treatment. This logbook will be reviewed at the follow-up visits. This is done for research purposes.
- You will also be asked to complete the 4 pain and quality of life questionnaires as described in the screening visit. This is done for research purposes.
- If you are unable to come to the clinic to follow-up, you will be contacted on the phone and asked to provide the information for the pain and quality of life questionnaires over the phone. This is done for research purposes.
- At 1 week and 8 weeks after treatment, you will be contacted on the phone and asked to provide the information for the pain and quality of life questionnaires over the phone. We will also review any health related problems and ask you about your pain medication logbook. You are not required to come to the clinic at these time points. This is done for research purposes.

Study Schedule table:

	Pre-treatment	During treatment	Week 1	Week 4	Week 8	Week 12	6 Month	12-Month
Informed Consent	X							
Medical History and Physical Exam	X			X		X	X	X
Review any health related problems		X	X	X	X	X	X	X
Pain Medication Logbook	X	X	X	X	X	X		
Questionnaires	X		X	X	X	X	X	X
CT scan	X							
Pregnancy test	X							
Radiation Treatment		X						

If you want to know about the results before the study is done:

The study leader will tell you, during the study, of any results that are important to your health. That information is important for you to know, because it may help you decide whether you want to continue being in this study. We cannot tell you any other information until the results have been studied. At that time you can ask for more information.

What are the risks of being in this study?

Risks of having radiation:
While you will receive radiation therapy and Computed Tomograph (CT) as part of this study, the only difference will be that these procedures will occur on the same day, and your treatment will begin much faster. The amount of radiation and type you will receive while participating in this study will not differ from the standard clinical protocol, with the exception of the speed of getting you treatment. The risks of participating in this study are the exact same as they would have been without you participating in the trial.

Risks for women:

Pregnancy and Contraception

The treatment used in this study can harm an unborn or nursing baby. Therefore, you cannot be in this study if you are pregnant or nursing a baby. A pregnancy blood test will be done within 7 days before starting this study if you are a woman able to become pregnant. You MUST NOT become pregnant while on this study or for up to one month after the study is over.

You and your partner must use an approved form of birth control during this study. Examples of birth control you may use are:

- Norplant
- IUD (intrauterine device)
- Depo-Provera
- Birth Control Pills
- Birth Control Patch
- Sterilization

The birth control methods listed below are less effective. They may be used if combined with other birth control methods:

- Condoms
- Jellies or foam
- Withdrawal
- Sponge
- Diaphragm
- Rhythm
- Cervical cap

Ask your doctor for more details about the proper birth control method for you. If you become pregnant during this study, you must tell your doctor right away. Your doctor will discuss your treatment and the effect on the pregnancy.

Risks for men:
Radiation can harm male sperm. If you are a male, you should not father a baby until after 6 months following your last radiation treatment. To do so may hurt your unborn baby. Use an effective method of birth control during this time. Effective forms of birth control are listed above). If your partner becomes pregnant during this study, you must tell your doctor right away.

Other unexpected risks:
You may have side effects that we do not expect or know to watch for now. Call the study leader if you have any symptoms or problems.

Could you be helped by being in this study?

We cannot promise that you will be helped by being in this study.

You may benefit from being in this study. You may receive pain relief from your bone metastasis sooner than from standard of care treatment and you may have less side effects from your radiation than from standard of care treatment from being in this study. However, these are questions that the study is trying to answer and there is no guarantee that this will occur. In addition, information researchers obtain from this study may help others in the future.

What are your other choices if you do not join this study?

You do not have to be in this study to be treated for your illness or condition. You can get the usual standard of care radiation treatment even if you choose not to be in this study. The usual treatment would include standard treatment planning which often requires more planning time. The usual treatment could also include focused or less focused radiation treatments.

Will you be paid for being in this study?

You will not get any money for being in this study.

Will being in this study cost you any money?

The following procedures/tests, which are being done only for research purposes, will be provided at no cost to you or your health insurance: administration of the quality of life questionnaires.

You and/or your insurance company must pay for the tests and procedures related to the study. You and/or your insurance will not be charged beyond the standard radiation treatment rates for the tests and procedures in the study. In addition, you and/or your health insurance may also have to pay for other drugs or treatments that are given to help you control any side effects. You will have to pay for any costs not covered by your health plan. You may be responsible for any co-payments or deductibles. You may wish to ask for an estimate of your financial costs. You may also wish to check with your insurance company before the study starts. Ask what they will cover and if they require you to get their permission before you decide to be in the study.

What if you are hurt in this study?

If you are hurt as a result of being in this study, we have no plans to pay you for lost wages, disability, or discomfort. If you are hurt in the study in a way that is unexpected, the sponsor or your insurance company may pay for your treatment. If they do not pay, you will be treated free of charge at the University of Virginia. If you have questions about what will be covered if you are hurt in the study, talk to the study leader. You do not give up any legal rights by signing this form.

What happens if you leave the study early?

You can change your mind about being in the study any time. You can agree to be in the study now and change your mind later. If you decide to stop, please tell us right away. You do not have to be in this study to get services you can normally get at the University of Virginia.

Even if you do not change your mind, the study leader can take you out of the study. Some of the reasons for doing so may include

a) Your study physician is concerned about your health
b) Your disease gets worse
c) The side effects of the treatment are too dangerous for you
d) New information shows the treatment will not work or is not safe for you
e) You do not follow your doctor's instructions
f) The study sponsor closes the study for safety, administrative or other reasons

If you decide to stop being in the study, we will ask you to complete the pain and quality of life questionnaires. These are the same questionnaires as described in the screening visits.

How will your personal information be shared?

The UVa researchers are asking for your permission to gather, use and share information about you for this study. If you decide not to give your permission, you cannot be in this study, but you can continue to receive regular medical care at UVA.

If you sign this form, we may collect any or all of the following information about you:

- Personal information such as name, address, date of birth, social security number
- Your medical records and test results from before, during and after the study from any of your doctors or health care providers (including mental health care and substance abuse records, and HIV/AIDS records)
- Information needed to bill others for your care

Who will see your private information?

- The researchers to make sure they observe the effects of the study and understand its results
- People or committees that oversee the study to make sure it is conducted correctly
- People who pay for the study, University of Virginia Department of Radiation Oncology, UVA Cancer Center , Centers for Medicare and Medicaid Services, Center for Medicare and Medicaid Innovation, including insurance companies
- Tax reporting offices (if you are paid for being in the study)
- People who evaluate study results, which can include sponsors that make the drug or device being studied, researchers at other sites conducting the same study, and government agencies that provide oversight such as the Food and Drug Administration (FDA)

The information collected from you might be published in a medical journal. This would be done in a way that protects your privacy. No one will be able to find out from the article that you were in the study.

A description of this clinical trial will be available on *http://www.ClinicalTrials.gov*, as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

What if you sign the form but then decide you don't want your private information shared?

You can change your mind at any time. Your permission does not end unless you cancel it. To cancel it, please send a letter to the researchers listed on this form. Then you will no longer be in the study. The researchers will still use information about you that was collected before you ended your participation. UVa researchers will do everything possible to protect your privacy.

A copy of this consent form will be put in your medical record. (This is not the same as the record of this research study.) This means that everyone who is allowed to see your records will be able to find out that you are in this study. This is done so your regular doctors will know what treatment you are getting in the study. If you have other health problems during the study, they will be able to treat you properly.

Please contact the researchers listed below to:

- Obtain more information about the study
- Ask a question about the study procedures or treatments
- Report an illness, injury, or other problem (you may also need to tell your regular doctors)
- Leave the study before it is finished
- Express a concern about the study

Paul W. Read, MD
Department of Radiation Oncology
University of Virginia Medical Center
Charlottesville, VA 22908
PO Box 800383
Phone: 434-924-5191

What if you have a concern about a study?

You may also report a concern about a study or ask questions about your rights as a research subject by contacting the Institutional Review Board listed below.

University of Virginia Institutional Review Board for Health Sciences Research
PO Box 800483
Charlottesville, Virginia 22908
Telephone: 434-924-2620

When you call or write about a concern, please give as much information as you can. Include the name of the study leader, the IRB-HSR Number (at the top of this form), and details about the problem. This will help officials look into your concern. When reporting a concern, you do not have to give your name.

Signatures

What does your signature mean?

Before you sign this form, please ask questions about any part of this study that is not clear to you. Your signature below means that you understand the information given to you about the study and in this form. If you sign the form it means that you agree to join the study.

Consent From Adult

PARTICIPANT (SIGNATURE)	PARTICIPANT (PRINT)	DATE

To be completed by participant if 18 years of age or older.

If an interpreter is involved in the consent process because the potential subject does not speak English well or at all, the participant should NOT sign on the line above – leave this line blank. Instead, the participant should sign the Short Form written in the language they can understand.

Person Obtaining Consent

By signing below you confirm that you have fully explained this study to the potential subject, allowed them time to read the consent or have the consent read to them, and have answered all their questions.

PERSON OBTAINING CONSENT (SIGNATURE)	PERSON OBTAINING CONSENT (PRINT)	DATE

Interpreter

By signing below you confirm that the study has been fully explained to the potential subject in a language they understand and have answered all their questions.

INTERPRETER (SIGNATURE)	INTERPRETER (PRINT)	DATE

If an interpreter was used to explain this study to a potential subject, the interpreter must sign and date the line above.