WVU010518 ICF Site Version Date 10/24/2018

Principal Investigator	Malcolm Mattes, MD
Department	Radiation Oncology
Protocol Number	WVU010518 (IRB #1803047835)
Study Title	Methionine Deprivation to Potentiate Hypofractionated Radiation Therapy
Lay Title	Dietary Intervention to Lung Cancer's Response to Radiation Therapy
Co-Investigator(s)	Patrick Ma, MD, Ghulam Abbas, MD, Jeremiah Hayanga, MD, Mohammed Almubarak, MD, Aaron Provenzano, MD
Sponsor	WVU Cancer Institute Mary Babb Randolph Cancer Center

Contact Persons

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In the event you experience any side effects or injury related to this research, you should contact Dr. Mattes at (304) 598-4706. After hours, contact the Radiation Oncology Doctor on call at (304-598-4000). If you have any questions, concerns, or complaints about this research, you can contact Dr. Mattes (304)-598-4706.

For information regarding your rights as a research subject, to discuss problems, concerns, or suggestions related to the research, to obtain information or offer input about the research, contact the Office of Research Compliance at (304) 293-7073.

In addition if you would like to discuss problems, concerns, have suggestions related to research, or would like to offer input about the research, contact the Office of Research Integrity and Compliance at 304-293-7073.

Introduction

You, _____, have been asked to participate in this research study, which has been explained to you by _____. This study is being conducted by Dr. Malcolm Mattes in the Department of Radiation Oncology at West Virginia University with funding provided by the WVU Cancer Institute Mary Babb Randolph Cancer Center.

Purpose of the Study

It has been explained to you that you have a cancer involving the lung, liver, adrenal gland or lymph nodes in your chest. You have been invited to participate in this research study, which involves the use of an experimental diet along with standard-of-care stereotactic body radiation therapy or intensity modulated radiation therapy to treat your cancer. This form of radiation is commonly used to treat cancers like yours, and the goal of the experimental diet is to take away an essential nutrient that the cancer cells need to grow, which we think will decrease the chance of the cancer returning after treatment. The goal of this study is to determine whether the addition of the experimental diet is safe to use in combination with radiation therapy. You should be aware that this is not the first time that the diet has been used in humans, as it has been shown to be safe in cancer patients alone and in combination with chemotherapy. However, this study is the first time that this diet has been tested in humans in combination with radiation therapy. WVU expects to enroll approximately 15 subjects in this study.

Description of Procedures

All patients enrolled in this clinical trial will undergo standard imaging and bloodwork prior to treatment. No further biopsy is necessary to participate in this study. All patients in the study will receive 3-5 radiation treatments to a lung, liver, or adrenal tumor or lymph nodes in your chest over a 1-3 week period. The diet will start 2 weeks before the radiation therapy and extending for approximately 1-2 weeks after the radiation therapy (for a **total of 6 weeks**). The purpose of the diet is to reduce the amount of methionine that you eat. Methionine is mainly found in food that comes from animals, and as such the experimental diet is similar to a vegan diet, but with some additional restrictions. You will meet with a dietician before beginning the study so that she can counsel you on foods that you can and cannot eat while on the experimental diet. She will also teach you how to keep a log of everything you eat while on the experimental diet, and give you a supplement to eat during the course of the diet to help avoid any side effects from the diet. You will meet again with the dietician on the day you start the radiation therapy, on the day you complete the radiation therapy, and on the last day of the experimental diet. The purpose of these meetings is to review your dietary log, answer any questions you have, and to treat any side effects from the diet that you might be experiencing.

This study requires three to four additional blood samples be collected from you: the first before you start the diet, the second approximately two weeks after starting the diet, the third approximately four weeks after starting the diet, and depending on the results of these prior tests, you may be asked for a fourth blood sample on the day you complete the experimental diet. The purpose of these blood samples is to monitor the methionine levels in your body at baseline and while on the diet, as well as any other changes in your protein metabolism. You will be asked to avoid eating for four hours prior to these blood draws (drinking water is okay).

After you complete the radiation treatments and the 6 week diet, you will be asked to return to the WVU radiation oncology department at approximately three month intervals for at least one year so that we can monitor for any long term side effects of treatment and treat them as they develop. We will also perform standard imaging tests to make sure that the cancer does not return.

There are anticipated circumstances under which your participation may be stopped by the investigator without regard to your consent, particularly if your physician determines that continuing treatment is not in your best interest. You may also withdraw from the study at any time.

Risks and Discomforts

The amount of radiation used for diagnostic purposes (x-rays and scans to assess your disease) that you are exposed to in this study is considered standard of care for your disease. The risks of these procedures will be explained to you by your doctor and staff involved in your care. Risks from radiation exposure are cumulative (they increase) over time. Radiation therapy may also involve risks to an unborn child. For this reason, women who are pregnant will not be accepted in this study. If you are a woman who could become pregnant, you will not be allowed to participate in this study until you have had a pregnancy test and the test has indicated that you are not pregnant. You must use a medically approved method of birth control while you are on this study. Men who are able to father a child should never have unprotected sex with a woman of childbearing potential while in this study because radiation therapy may cause genetic damage to semen or sperm.

The most common side effect of the experimental diet is weight loss. This may be associated with fatigue. The purpose of giving you the dietary supplement in this study is to meet your body's nutritional needs, maintain your energy level, and reduce the risk of weight loss while you are on the diet. If you do lose some weight, most patients will gain it back after completing the 6 week time period of the diet. Other rare side effects from the experimental diet may include decreased platelets (which can put you at risk for bleeding) or decreased white blood cells (which can put you at risk for infection). There are no expected side effects from the Vitaflo Cooler and Express dietary supplements, with the exception that they contain fish oil, milk, and soy, which may cause an allergic reaction. Please let the investigator know if you have had an allergy to these items.

Available evidence does not suggest that the combination of radiation therapy with the experimental diet leads to increased rates of toxicity or unexpected side effects. However, you should be aware that it is possible that unknown or more severe side effects from the radiation therapy may arise due to the addition of the experimental diet in this study.

In addition, having blood drawn may cause bruising, bleeding, or in rare cases infection. Having contrast agents for imaging tests may impair your kidney function.

Alternatives

You do not have to participate in this study. Participation in this study is voluntary. You are free to withdraw your consent to participate in this study at any time.

Refusal to participate or withdrawal will involve no penalty to you and will not affect your future care, or your employee status, if applicable, at West Virginia University.

Alternatives that could be considered in your case include standard of care radiation therapy without the experimental diet, surgical resection of your tumor, systemic therapy, no treatment, or taking part in an alternative clinical trial.

Benefits

Possible benefits that may result from your participation include the improvement of your health, but since it is not known whether the addition of the experimental diet to radiation therapy will be effective in your case, it is possible that you may not receive any benefit or your condition may worsen. The knowledge gained from this study may eventually benefit others.

Financial Considerations

You may wish to consult your insurance carrier prior to entering this study. The cost of the dietary supplement and additional blood tests will be covered by the study sponsor. However, all other treatments, tests, and procedures you will undergo as part of this study will be billed to your insurance company (e.g. doctor visits, radiation treatments, imaging tests, and standard bloodwork). The portion of these costs that you will be responsible for personally will depend on your agreement with your insurance provider. No treatments will be undertaken by your physicians unless authorization is received by your insurance provider. There may be some additional expenses related to this study, such as transportation, parking, or meals. There are no special fees for participating in this study, and you will not be paid for participating in this study.

There is no money set aside to help treat you if you get hurt or sick in this study. The study doctor and WVU Medicine or its partners do not have special funds to pay for research study injuries if they occur.

Patient Reimbursement

All patients will be offered a $50 food voucher to compensate for any additional food costs that may be involved in adhering to the experimental diet. Additional food or travel reimbursement may also be offered to patients on trial, however, due to the limited travel funds available, this additional reimbursement will be reviewed on case by case basis by the Principal Investigator.

Voluntary Compensation

If you are injured as a result of this research, treatment will be available. Responsibility for this treatment will be borne by you and/or your insurance company. In the event that you are physically injured as a result of participating in this research, care will be available. You will, however, be responsible for the charges for the care. There is no commitment to provide any compensation for research-related injury. You should realize, however, that you have not released this institution from liability for negligence. Please contact the investigator, Dr. Malcolm Mattes at 304-598-4706 if you are injured or for further information.

Confidentiality

Any information about you that is obtained as a result of your participation in this research will be kept as confidential as legally possible. Your research records and test results, just like hospital records, may be subpoenaed by court order or may be inspected by the study sponsor or federal regulatory authorities (including the FDA if applicable) without your additional consent.

In addition, there are certain instances where the researcher is legally required to give information to the appropriate authorities. These would include mandatory reporting of infectious diseases, mandatory reporting of information about behavior that is imminently dangerous to your child or to others, such as suicide, child abuse, etc.

In any publications that result from this research, neither your name nor any information from which you might be identified will be published without your consent.

HIPAA

We know that information about you and your health is private. We are dedicated to protecting the privacy of that information. Because of this promise, we must get your written authorization (permission) before we may use or disclose your protected health information or share it with others for research purposes.
You can decide to sign or not to sign this authorization section. However, if you choose not to sign this authorization, you will not be able to take part in the research study. Whatever choice you make about this research study will not have an effect on your access to medical care.

Persons/Organizations Providing the Information

- Patient/West Virginia University Medicine

Persons/Organizations Receiving the Information

- The research site(s) carrying out this study. This includes UHA or UHA Affiliated, WVU, WVU Medicine, or the covered entities under the purview of West Virginia University, collaborating institutions, affiliate institutions, and component institutions. It also includes each site's research staff and medical staff.
- Health care providers who provide services to you as part of this research study.
- Laboratories and other people and groups that look into your health information as part of this study in agreement with the study protocol.
- The United State Department of Health and Human Services (which includes the National Institutes of Health (NIH), Food and Drug Administration (FDA)) and other groups that have the right to use the information as required by law.
- The members and staff of any Institutional Review Board (IRB) that oversees this research study.
- West Virginia University Office of Research Compliance and Office of Sponsored Programs.
- West Virginia University Clinical Trials Research Unit.

The Following Information Will Be Used

- Information from your existing medical records and new information about you that is created or collected during the study such as: history and physicals, clinic visit notes, nursing and staff notes, laboratory results, x-rays, EKG results, demographic data, pulmonary tests, imaging scans and study forms.

The Information is Being Disclosed for the Following Reasons

- Review of your data for quality assurance purposes
- Publication of study results (without identifying you)
- Other research purposes such as reviewing the safety or effectiveness of the study drug and other products or therapies; conducting performance reviews of the study drug; evaluating other products or therapies for patients; developing a better understanding of disease; improving the design of future clinical trials

You May Cancel this Authorization at Any Time by Writing to the Principal Investigator

Malcolm Mattes, MD

West Virginia University School of Medicine
Department of Radiation Oncology
1 Medical Center Drive, PO Box 9234
Morgantown, WV 26506

If you cancel this authorization, any information that was collected already for this study cannot be withdrawn. Once information is disclosed, according to this authorization, the recipient may re-disclose it and then the information may no longer be protected by federal regulations.

You have a right to see and make copies of your medical records. You will not be able to see or copy your records related to the study until the sponsor has completed all work related to the study. At that time you may ask to see the study doctor's files related to your participation in the study and have the study doctor correct any information about you that is wrong.

This authorization will expire at the end of the study unless you cancel it before that time.

Voluntary Participation

Participation in this study is voluntary. You are free to withdraw your consent to participate in this study at any time.

Refusal to participate or withdrawal will involve no penalty to you. Refusal to participate or withdrawal will not affect your future care, or your employee status at West Virginia University.

In the event new information becomes available that may affect your willingness to participate in this study, this information will be given to you so that you can make an informed decision about whether or not to continue your participation.

You have been given the opportunity to ask questions about the research, and you have received answers concerning areas you did not understand.

Upon signing this form, you will receive a copy.

I willingly consent to participate in this research.

Signature of Subject of Subject's Legal Representative	Printed Name	Date	Time
_____	_____	_____	_____

The participant has had the opportunity to have questions addressed. The participant willingly agrees to be in the study.

Signature of Investigator or Co-Investigator	Printed Name	Date	Time