

**PRINCIPAL INVESTIGATOR:** Julius Strauss, MD

**STUDY TITLE:** Phase II Trial of Combination Immunotherapy in Subjects with Advanced Small Bowel and Colorectal Cancers

**STUDY SITE:** NIH Clinical Center

Cohort: *Affected Participants*

Consent Version: *11/19/2021*

## WHO DO YOU CONTACT ABOUT THIS STUDY?

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## KEY INFORMATION ABOUT THIS RESEARCH

This consent form describes a research study and is designed to help you decide if you would like to be a part of the research study.

You are being asked to take part in a research study at the National Institutes of Health (NIH). This section provides the information we believe is most helpful and important to you in making your decision about participating in this study. Additional information that may help you decide can be found in other sections of the document. Taking part in research at the NIH is your choice.

You are being asked to take part in this study because you have been diagnosed with advanced metastatic or refractory/recurrent small bowel and/or colorectal cancer.

The purpose of this research study is to determine if a new combination of immunotherapy drugs is effective in participants with advanced small bowel and colorectal cancers. These immunotherapy drugs are designed to help the immune system fight cancer.

The CV301 vaccines (MVA-BN-CV301 and FPV-CV301), M7824, N-803, and NHS-IL12 are considered investigational, which means that the use of this combination has not been approved by the U.S. Food and Drug Administration (FDA) to treat advanced small bowel and colorectal cancers. However, the FDA has given us permission to use this combination in this study.

M7824 has been tried in other types cancers. Recently, the manufacturer of the drug closed 3 large studies because the drug was not shown to help those patients more than standard therapies. In addition, in some cases it seemed like the drug might make the cancer grow faster. However, the type of cancer treated in those studies was not the same as your cancer.

There are other drugs that may be used to treat your disease, and these can be prescribed/given by your regular cancer doctor, even if you are not in this study.

## PATIENT IDENTIFICATION

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If you decide to join this study, here are some of the most important things that you should know that will happen:

- We will first perform some tests and procedures to find out if you meet the study requirements. We will also confirm the status of your disease. You must have already received treatment for this cancer unless you are not eligible to receive standard therapy or you decline standard treatment.
- You will receive a combination of the following drugs: CV301 (MVA-BN-CV301 and FPV-CV301), M7824, and N-803 for up to one year. Depending on when you enroll on the study, you will also receive NHS-IL12 along with the other drugs. Each treatment will be given in the Oncology Outpatient Center and will take approximately 2-4 hours. This allows time to give the treatment and monitor you before and after.
  - CV301 will be given by injection under the skin. On Day 1 and Day 15 MVA-BN-CV301 will be given. FPV-CV301 will be given on Day 29 and every 4 weeks on Arm 1 and every 6 weeks on Arm 2A and 2B.
  - M7824 will be given by intravenous infusion (a needle inserted into a vein allowing the solution to be administered over a period of time) every two weeks. The infusion will take approximately one hour, but could take more or less time.
  - N-803 will be given by injection under the skin every two weeks or every four weeks depending on the group you are assigned to.
  - NHS-IL12 will be given by injection under the skin every four weeks.
- You may experience side effects from taking part in this study. Some can be mild or very serious, temporary, long-lasting, or permanent, and may include death. Examples of some of the side effects that you may have include: fatigue, nausea, vomiting, diarrhea, chills, anemia, increased blood sugar, flu-like symptoms, and poor oral intake in combination, which must be treated with increased intake of fluids to prevent dehydration. It is possible that anemia and/or bleeding may be so severe that you require a blood transfusion. You cannot join this study if you are not willing to have a blood transfusion. A more complete list of possible side effects is described later in this consent. It is important that you read and understand the possible risks. Call your study doctor right away if you experience this.
- You will be seen regularly during the study. You will have clinical, laboratory, and imaging tests to see how you are doing and to see if your disease is responding to treatment. We will also collect required samples from you (such as blood and tumor biopsies) for both clinical and research purposes.
- After the study treatment has ended, we will contact you for long term follow-up every 3 months for one year and then every 6 months after the first year to ask about any adverse events, further treatment of your tumor, and your survival for the rest of your life.

Just as we do not know what side effects you might have, we cannot know if you may benefit from taking part in this study. If you do not benefit, this study and the results from our research will help others in the future.

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You are free to stop participating in the trial at any time. If you decide to stop, the study doctor may ask you to agree to certain tests to make sure it is safe for you to stop.

The remaining document will now describe the research study in more detail. This information should be considered before you make your choice. Members of the study team will talk with you about the information in this document. Some people have personal, religious, or ethical beliefs that may limit the kinds of medical or research interventions in which they would want to participate. Take the time you need to ask any questions and discuss this study with NIH staff, and with your family, friends, and personal health care providers.

If the individual being asked to participate in this research study is not able to give consent for themselves, you, as the Legally Authorized Representative, will be their decision-maker and you are being asked to give permission for this person to be in this study. For the remainder of this document, the term “you” refers to you as the decision-maker and/or the individual being asked to participate in this research.

### IT IS YOUR CHOICE TO TAKE PART IN THE STUDY

You may choose not to take part in this study for any reason. If you join this study, you may change your mind and stop participating in the study at any time and for any reason. In either case, you will not lose any benefits to which you are otherwise entitled. However, to be seen at the NIH, you must be taking part in a study or are being considered for a study. If you do choose to leave the study, please inform your study team to ensure a safe withdrawal from the research.

### WHY IS THIS STUDY BEING DONE?

The purpose of this research study is to determine if a new combination immunotherapy is effective in shrinking tumors in participants with advanced small bowel and colorectal cancers.

We are asking you to join this research study because you have been diagnosed with advanced metastatic or refractory/recurrent small bowel and/or colorectal cancer.

The CV301 vaccines (MVA-BN-CV30 and FPV-CV301), M7824, N-803, and NHS-IL12 are considered investigational, which means that the use of this combination has not been approved by the U.S. Food and Drug Administration (FDA) to treat advanced small bowel and colorectal cancers.

### WHAT WILL HAPPEN DURING THE STUDY?

Below is a description of what will be asked of you and what will occur if you decide to take part in this study.

#### Before you begin the study

To determine if you can be a part of this study, you will need to have the following tests and procedures. These will be done under a separate protocol:

- Medical history and physical examination including height, weight, and vital signs;
- CT scan of the chest, abdomen and pelvis and/or MRI;

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- Brain CT/MRI;
- Routine blood tests;
- Pregnancy test for women who are able to have children;
- Hepatitis B and C screening tests;
- As part of this study, we will test you for infection with HIV, the virus that causes AIDS. If you are infected with HIV and have a detectable viral load, you will not be able to take part in this study. We will tell you what the results mean, how to find care, how to avoid infecting others, how we report HIV infections, and the importance of informing your partners at possible risk because of your HIV infection;
- Urine tests;
- Confirmation of your disease. If there is no available tumor sample or pathology report, a biopsy will be performed to confirm the diagnosis.

### Structural MRI

Magnetic resonance imaging (MRI) uses a strong magnetic field and radio waves to take pictures of the body. If you have a history of metastases to your brain or if we are concerned that you may have metastases to your brain, we will obtain pictures of your brain for this study. The MRI scanner is a metal cylinder surrounded by a strong magnetic field. During the MRI, you will lie on a table that can slide in and out of the cylinder. We will place soft padding or a coil around your head. You will be in the scanner about 30 minutes. You may be asked to lie still for up to 30 minutes at a time. While in the scanner you will hear loud knocking noises, and you will be fitted with earplugs or earmuffs to muffle the sound. You will be able to communicate with the MRI staff at all times during your scan, and you may ask to be moved out of the machine at anytime.

It is very important for the experiment that you do not move your head or body inside the scanner. We will use padding around your head to help keep it in place.

We may place a bar in your mouth to help keep your head still.

### During the study

Once we know that you are eligible and you sign the consent document agreeing to participate in the study, you may need to have some of the tests that were done at screening repeated depending on how much time has passed. Your study team will let you know if any of the above tests need to be repeated.

During your participation you will receive a combination of the following drugs: CV301 vaccine (MVA-BN-CV301 and FPV-CV301), M7824, and N-803. Depending on when you enroll on the study, you will also receive NHS-IL12 along with the other drugs. Your specific combination depends on the group you are assigned to and may be different from other participants on this study. Your specific combination of these drugs will depend on the group you are assigned to as described above in **Key Information About This Research**.

- You will receive the CV301 vaccines by injection under the skin. On Day 1 and Day 15 MVA-BN-CV301 will be given. FPV-CV301 will be given on Day 29 and every 4 weeks on Arm 1 and every 6 weeks on Arm 2A and 2B.

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- You will receive M7824 by IV infusion every two weeks. The infusion will take approximately one hour, but could take more or less time. Before your M7824 infusion you may receive standard pre-medication of an antihistamine and acetaminophen (Tylenol).
- You will receive N-803 by injection under the skin every two weeks or every four weeks depending on the group you are assigned to.
- You may receive NHS-IL12 by injection under the skin every four weeks.

Please let us know about any herbal and over-the-counter medications that you are taking as there may be interactions between these and the study drugs. We can prevent side effects and other negative outcomes only if you let us know.

We will continue to take standard assessments, such as physical exam, weight, vital signs, EKG, collection of blood for testing, pregnancy test for women of childbearing age, and scans for the evaluation of your tumor, during your participation.

In addition to the tests that we will conduct to determine whether you are having side effects or if you are responding to the study therapy, we will also collect samples from you for purposes of research only. The samples are being tested to look at the effects of therapy on your immune system and markers of tumor activity, including collecting and testing tumor cells.

The samples included for these studies include:

- Blood Tests: collected before you have taken any study drug, weeks 1, 3, 5, 7, and every 6 weeks thereafter and at some restaging visits if your study doctor thinks your blood needs to be tested. The total amount of blood we will draw for research in this study will be less than 550ml (about 2 cups and 5 tablespoons).
- Tumor Biopsy (optional): collected before you have taken any study drug and at first restaging.
- CT Scans: every 8 weeks.

In this study we will perform genetic testing on your DNA and RNA. DNA (also called deoxyribonucleic acid) in the cells carries genetic information and passes it from one generation of cells to the next – like an instruction manual. RNA (ribonucleic acid) carries instructions from your DNA to the parts of the cells that makes proteins. We will perform limited genetic testing on certain immune cells in your blood and tumor samples to characterize changes in the DNA of a particular molecule located on the immune cell. We will perform further genetic testing on your blood samples, looking at how much RNA you have for certain panels genes. This helps us to learn how active the genes are.

### **When you are finished with treatment**

#### *End of Treatment Visit*

If you stop participation in the study before the completion of one year of treatment, then you will be asked to come into the clinic on the day of or within 7 days of the decision to stop treatment for the following tests and procedures: physical examination including weight and vital signs; EKG; routine blood tests to measure blood chemistry and complete blood count; pregnancy test if you



are a woman who can have children; and scans if you stop study therapy before your disease worsens.

### *Safety Visit*

After your treatment ends or if you stop participation in the study for any reason you will be asked to come into the clinic for a 28 day follow-up visit or telephone call following your last dose of study drug(s).

During the visit the following tests and procedures will be given: physical examination including weight and vital signs; EKG; and routine blood tests; and pregnancy test if you are a woman who can have children.

### *Long Term Follow-up*

If your disease has progressed while being treated then you will be followed by phone or email for your survival, any adverse events, and further treatment of your tumor.

If your disease did not progress while being treated then you will receive tumor scans until progression of your disease and will be followed by phone or email for your survival, any adverse events, and further treatment. If you completed one year of treatment then you may be asked to complete an additional year of treatment at the time of your disease progression.

## **HOW LONG WILL THE STUDY TAKE?**

If you agree to take part in this study, the treatment portion is expected to last for approximately one year.

You will be seen multiple times during treatment. You will be asked to come to the NIH every two weeks. Visits usually take about 5-6 hours, but will take no longer than 8 hours.

## **HOW MANY PEOPLE WILL PARTICIPATE IN THIS STUDY?**

We plan to have approximately 80 people participate in this study at the NIH.

## **WHAT ARE THE RISKS AND DISCOMFORTS OF BEING IN THE STUDY?**

### **Risks from Study Therapy**

#### ***Side effects of CV301 (MVA-BN-CV301 and FPV-CV301)***

#### ***MVA-BN-CV301 (Prime Vaccine)***

The most common side effects associated with MVA-BN and other MVA-BN-derived vaccines that you may experience include mild to moderate flu-like symptoms such as:

- Fever
- Chills
- Muscle or joint ache
- Tiredness (Fatigue)
- Headache

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- Nausea
- Increased body temperature
- Changes in appetite

In addition, you may experience some localized reactions at the site where the vaccine is injected under your skin (subcutaneously). These injection site reactions may include any or all of the following:

- Swelling
- Localized pain
- Hardness of a small area of skin around the injection site (Induration)
- Redness
- Itching

### ***FPV-CV301 (Boost Vaccine)***

The most common side effects that you may experience from the use of fowlpox vaccines are mild and may include the following:

- Fever
- Tiredness (Fatigue)
- Muscle or joint ache
- Headache
- Flu-like symptoms
- Nausea
- Dizziness

In addition, you may experience some localized reactions at the site where the boosting vaccine is injected under your skin (subcutaneously). These injection site reactions may include any or all of the following:

- Swelling
- Localized pain
- Hardness of a small area of skin around the injection site (Induration)
- Redness
- Itching



***Side effects of M7824***

Common side effects (occurring in more than 5% of patients):

- Fatigue (tiredness and lack of energy)
- Nausea
- Diarrhea
- Constipation
- Vomiting
- Swelling of you lower legs or hands
- Fever
- Decreased appetite
- Loss of body fluids (dehydration)
- Skin growths called keratoacanthomas that resemble skin cancer. These usually go away after treatment and can leave a scar.
- Rash, blisters, skin discoloration and other skin abnormalities.
- Bleeding has been frequently observed in patients receiving M7824. Patients may experience bleeding in different organs such as gums, nose, ears, eyes, vagina, breasts, blood in the urine, stool, or bleeding in the internal organs or skull, coughing up or vomiting blood. Occasionally, this bleeding can be serious and potentially life threatening and require you to receive a blood transfusion. If you experience any bleeding on this trial, please tell the study team immediately. Tell your doctor if you've had a life-long problem of frequent or excessive bleeding or bruising, or if you take aspirin or prescription medication to thin your blood.
- Shortness of breath
- Cough
- Anemia: low number of red blood cells that can cause tiredness and shortness of breath. May require a transfusion.
- Abdominal pain
- Headache
- Itching

Occasional side effects (occurring in less than 5% of patients):

- Chills (feeling cold)
- Blood clots that form throughout the body, blocking small blood vessels. Symptoms may include chest pain, shortness of breath, leg pain, problems speaking, or problems moving parts of the body
- Easy bruising
- Reaction to other drugs such as rash, anaphylaxis, and changes in blood

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- Infusion-related reaction, including dizziness or fainting (low blood pressure), flushing, rash, fever, shortness of breath or sick to your stomach, or pain at the site of infusion. Although usually reversible with treatment, it can be severe or life threatening.
- Back pain
- Cancerous growth on the skin that can be removed
- Stroke
- Slow wound healing
- Thickening of the skin, nails

There is a risk of tumor lysis syndrome due to tumor shrinkage. This complication is caused by the breakdown products of dying cells and includes elevated blood potassium, elevated blood phosphorus, elevated blood uric acid and elevated urine uric acid, low blood calcium, and consequent acute kidney failure. This might happen in any tumor type although some tumors are more prone than others.

In addition to the above, we have seen a few cases of nodular regenerative hyperplasia. This is when small growths, or nodules, occur in the liver. These usually do not cause symptoms but can occasionally be associated with high blood pressure in the vein to the liver which could over time lead to liver damage.

Allergic reactions or reactions in the context with the infusions might occur during treatment.

Although M7824 is a fully human protein the risk cannot be completely excluded. In general, these reactions are mild to moderate and can be handled with appropriate drugs, but in very rare cases severe to life-threatening and even fatal reactions might occur, which require advanced cardiac life support.

In addition, immune-mediated side effects might be possible. These side effects are caused by over activity of your body's immune-system. The immune system normally protects you from things that are harmful; such as infections, foreign substances, and sometimes from cancer. If the immune system is overactive, it can attack normal parts of the body because it mistakenly recognizes them as foreign/harmful.

Examples of these side effects are listed below. In rare cases, immune-related side effects can be life-threatening or fatal.

Types of immune related side effects:

- Inflammation of the lungs (pneumonitis): symptoms may include but are not limited to a new or worsening cough, shortness of breath possibly with fever. Preliminary data suggested that there may be the tendency of higher frequency and severity in Japanese patients compared with non-Japanese patients: tell your study doctor right away if you have any of these symptoms as it may need to be treated urgently.
- Hypothyroidism (decreased function of the thyroid gland)
- Hyperthyroidism (increased function of thyroid gland)

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- Thyroiditis (inflammatory disease of the thyroid gland)
- You may develop inflammation of the liver called hepatitis. Signs and symptoms of this include yellowing of the skin or whites of the eyes, dark urine, severe nausea and vomiting, pain in the upper right side of your abdomen, skin itchiness, not feeling hungry and bleeding or bruising more easily than normal.
- Thrombocytopenia (decrease of the blood platelets)
- Uveitis (inflammation in the eye)
- Diabetes mellitus (high blood sugar levels)
- Problems with your adrenal glands (Adrenal Insufficiency): may cause stomach pains, vomiting, muscle weakness and fatigue, depression, low blood pressure, weight loss, kidney problems, and changes in mood and personality. These complications may be permanent and may require hormone replacement.
- Myositis (inflammation of the muscles characterized by pain and tenderness)
- Myasthenia gravis (weakness in the skeletal muscles)
- Inflammation of the intestine (colitis). It may cause abdominal pain and diarrhea with or without blood. Fever may be present. It may require you to receive additional fluids. If left untreated, in rare occasions this may lead to a tear in the wall of the intestine which can be serious and life threatening.
- Autoimmune encephalitis is a type of brain inflammation where the body's immune system attacks healthy cells and tissues in the brain or spinal cord.
- Myocarditis (inflammation of the heart muscle)
- Pemphigoid (fluid-filled blisters that can be itchy)
- Kidney problems: you may have an increase of creatinine levels in a blood test (creatinine is a protein marker that measures kidney function) but not have any symptoms or feel unwell. Uncommonly a patient may experience nephritis which is an inflammation of the kidneys that stops the kidneys from working properly.
- Problems with the pituitary gland (hypopituitarism): Hypopituitarism refers to decreased output of hormones from the pituitary gland in the brain and may be caused by inflammation of the pituitary gland (hypophysitis). Symptoms may include headaches, thirstiness, and trouble seeing or double vision, leakage of breast milk or irregular periods in women. These complications may be permanent and may require hormone replacement.
- Pancreatitis (inflammation of the pancreas)
- Liver problems: Increases in the blood level of substances called enzymes found within your liver cells. The enzyme changes are unlikely to make you feel unwell, however, if these blood enzyme levels become very high, your study doctor may need to stop the study medication.
- Nervous system problems: symptoms can include unusual weakness of legs, arms, or face, numbness, or tingling in hands or feet. In rare situations, there is the potential for the inflammation of the nervous system to be severe.

If any of these side effects occur, you must inform your study doctor immediately.

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***Side effects of N-803***

Not many studies have been done with ALT-803 in humans. However, some reported side effects, which were mostly not serious, have included:

- Fast heart rate
- Dry eyes
- Nausea
- Vomiting
- Fever
- Fatigue
- Abnormal liver enzymes
- Flushing
- Itching rash
- Stomach pain
- Joint pain
- Headache
- Blood in the urine
- Muscle pains
- Altered taste
- Redness, soreness, or swelling at the injection site 2 to 3 days after injection
- Shortness of breath
- Constipation
- Chills
- Leg swelling
- Low blood pressure
- Cough
- Sweats
- Muscle twitching
- Diarrhea
- Hypertension
- Anorexia
- Atrial Fibrillation
- Neutropenia / Febrile Neutropenia

***Side effects of NHS-IL12***

NHS-IL12 is in the early stages of development and the potential side effects are not completely known.

Common side effects (occurring in more than 10% of patients):

- Decreased white blood cells (including lymphocytes and neutrophils)
- Hyperglycemia (increased blood sugar)
- Increased aspartate aminotransferase and alanine aminotransferase (liver enzymes)

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- Anemia (decreased red blood cells)
- Fever
- Flu-like symptoms
- Increased alkaline phosphatase (an enzyme found in the blood)
- Thrombocytopenia (decreased platelets)
- Fatigue (tiredness)
- Hypoalbuminemia (decreased albumin levels in the blood)
- Hypophosphatemia (decreased phosphate levels in the blood)

If you suffer any of these side effects (or any others not listed) or you think you are experiencing a side effect during this study, you must tell your study doctor immediately.

Any side effects or other health issues occurring during the study will be followed up by the study doctor.

It is possible that the symptoms of your condition will not improve during the study or may even worsen. Treatment with this study drug may also involve risks to your future health that we currently do not know about.

### ***Other Risks***

#### ***Risk from Blood Collection***

Risks of blood draws include pain and bruising in the area where the needle is placed, lightheadedness, and rarely, fainting. When large amounts of blood are collected, low red blood cell count (anemia) can develop.

#### ***Risks from Biopsy***

Care will be taken to minimize risks that may happen during collection of a tumor sample. This procedure usually causes only brief discomfort at the site from which the biopsy is taken. You may experience some bruising around the biopsy site. Rarely, infection or bleeding may occur at the needle site.

Tumor biopsies will be done by a specialist using the CT scanner or ultrasound machine to guide the biopsy needle into the tumor to ensure accuracy. To collect the optional research biopsies, you may be exposed to 2 CT scans. Your radiation exposure from this procedure is below the guidelines allowed for research subjects at the NIH. See What are the risks of radiation from being in the study? below for more details.

#### ***CT Scan Risk***

CT scans create low levels of radiation, which has a small potential to cause cancer and other defects. However, the risk associated with one scan is small.

#### ***Risks Due to Contrast Agents for CT***

You may receive a contrast agent as part of your CT scan. Contrast agents can cause allergic reactions and kidney damage. Allergic reactions can include mild itching associated with hives but



can also result in a serious life-threatening emergency from difficulty breathing. If this occurs, it is treatable.

### ***Risks for MRI***

People are at risk for injury from the MRI magnet if they have some kinds of metal in their body. It may be unsafe for you to have an MRI scan if you have pacemakers or other implanted electrical devices, brain stimulators, some types of dental implants, aneurysm clips (metal clips on the wall of a large artery), metal prostheses (including metal pins and rods, heart valves, and cochlear implants), permanent eyeliner, tattoos, an implanted delivery pump, or shrapnel fragments. Welders and metal workers may have small metal fragments in the eye. You will be screened for these conditions before having any MRI scan. If you have a question about metal in your body, you should inform the staff. You will be asked to complete an MRI screening form before each MRI scan you have.

In addition, all magnetic objects (like watches, coins, jewelry, and credit cards) must be removed before entering the MRI scan room.

People with fear of confined spaces may become anxious during an MRI. Those with back problems may have back pain or discomfort from lying in the scanner. The noise from the scanner is loud enough to damage hearing, especially in people who already have hearing loss. Everyone having a research MRI scan will be fitted with hearing protection. If the hearing protection comes loose during the scan, you should let us know right away.

There are no known long-term risks of MRI scans.

### ***Risks of Gadolinium enhanced MRI***

During part of the MRI you will receive gadolinium, a contrast agent, through an intravenous (iv) catheter. It will be done for research and medical purposes.

It is not known if MRI with contrast is completely safe for a developing fetus. Therefore, all women of childbearing potential will have a pregnancy test performed no more than 24 hours before each MRI scan with contrast. The scan will not be done if the pregnancy test is positive.

The risks of an IV catheter include bleeding, infection, or inflammation of the skin and vein with pain and swelling.

Mild symptoms from gadolinium infusion occur in fewer than 1% of those who receive it and usually go away quickly. Mild symptoms may include coldness in the arm during the injection, a metallic taste, headache, and nausea. In an extremely small number, fewer than one in 300,000 people, more severe symptoms have been reported including shortness of breath, wheezing, hives, and lowering of blood pressure. You should not receive gadolinium if you previously had an allergic reaction to it. You will be asked about such allergic reactions before gadolinium is given.

People with kidney disease are at risk for a serious reaction to gadolinium contrast called “nephrogenic systemic fibrosis (NSF)”. This condition always involves the skin and can also involve the muscles, joints and internal organs. NSF has resulted in a very small number of deaths. A blood test of your kidney function may be done within the month before an MRI scan with

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gadolinium contrast. You will not receive gadolinium for a research MRI scan if your kidney function is below the safe level.

Most of the gadolinium contrast leaves the body in the urine. However, the FDA has issued a safety alert that indicates small amounts of gadolinium may remain in the body for months to years. The effects of the retained gadolinium are not clear. At this time, retained gadolinium has not been linked to health risks in people whose kidneys work well. Some types of gadolinium contrast drugs are less likely to remain in the body than others. In this study, we will use the gadolinium contrast drugs that are less likely to remain in the body. We will also give you additional information called a “Medication Guide.” Upon request, we will give you individual information about retained gadolinium we see on your studies.

### **What are the risks related to pregnancy?**

If you are able to become pregnant, we will ask you to have a pregnancy test before starting this study. You will need to practice an effective form of birth control before starting study treatment, during study treatment, and for 2 months after you finish study treatment (the restricted period).

If you become pregnant, there may be unknown risks to the fetus or unborn child, or risks that we did not anticipate. There may be long-term effects of the treatment being studied that could increase the risk of harm to a fetus. You must tell the study doctor if your birth control method fails during the restricted period. If you think or know you have become pregnant during the restricted period, please contact the study team as soon as possible.

If you are a sexually active person with a partner able to become pregnant, it is important that your partner not become pregnant during the restricted period. There may be unknown risks to a fetus or risks we did not anticipate. You and your partner must agree to use birth control if you want to take part in this study. If you think your partner has become pregnant during the restricted period, please contact the study team as soon as possible. If you and your partner plan for your partner to become pregnant after the restricted period, please discuss this with the study team.

Acceptable birth control options for you and your partner include:

- abstinence;
- hormonal contraceptives or therapies (such as birth control pills, injections, or implants);
- barrier methods (such as a condom or diaphragm) used with a spermicide;
- an intrauterine device (IUD);
- surgical sterilization (tubal ligation or vasectomy).

### **What are the risks of radiation from being in the study?**

During your participation in this research study, you will be exposed to radiation from CT scans and CT guided biopsies (optional). The amount of radiation exposure you will receive from these procedures is equal to approximately 9.4 rem. A rem is a unit of absorbed radiation.





Note: The 2 CT guided biopsies are optional and depend on your decision to agree to the biopsies and their location with your study doctor. Of the 9.4 rem, you will receive around 1.6 rems from the optional CT guided biopsies.

Every day, people are exposed to low levels of radiation that come from the sun and the environment around them. The average person in the United States receives a radiation exposure of 0.3 rem per year from these sources. This type of radiation is called “background radiation.” This study will expose you to more radiation than you get from everyday background radiation. No one knows for sure whether exposure to these low amounts of radiation is harmful to your body.

The CT scans and CT guided biopsies that you get in this study will expose you to the roughly the same amount of radiation as 31.3 years’ worth of background radiation. Being exposed to too much radiation can cause harmful side effects such as an increase in the risk of cancer. The risk depends on how much radiation you are exposed to. Please be aware that about 40 out of 100 people (40%) will get cancer during their lifetime, and 20 out of 100 (20%) will die from cancer. The risk of getting cancer from the radiation exposure in this study is 0.9 out of 100 (0.9%) and of getting a fatal cancer is 0.5 out of 100 (0.5%).

You may not participate in this study if you are pregnant. If you are capable of becoming pregnant, we will perform a pregnancy test before exposing you to radiation. You must tell us if you may have become pregnant within the previous 14 days because the pregnancy test is unreliable during that time.

### WHAT ARE THE BENEFITS OF BEING IN THE STUDY?

You might not benefit from being in this study.

However, the potential benefit to you might be a reduction in the bulk of your tumor which may or may not have favorable impact on symptoms and/or survival.

### Are there any potential benefits to others that might result from the study?

There is a need for beneficial treatments in patients with metastatic or refractory/recurrent small bowel and colorectal cancers as they are incurable and standard therapies often do not work. In the future, other people might benefit from this study because of the knowledge gained from the outcome of this trial.

### WHAT OTHER OPTIONS ARE THERE FOR YOU?

Before you decide whether or not to be in this study, we will discuss other options that are available to you. Instead of being in this study, you could:

- choose to be treated with surgery, radiation or with drugs already approved by the FDA for your disease;
- choose to take part in a different study, if one is available;
- choose not to be treated for cancer but you may want to receive comfort care to relieve symptoms.

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You should discuss with your doctor your other choices and their risks and benefits.

## DISCUSSION OF FINDINGS

### New information about the study

If we find out any new information that may affect your choice to participate in this study, we will get in touch with you to explain what we have learned. This may be information we have learned while doing this study here at the NIH or information we have learned from other scientists doing similar research in other places.

## EARLY WITHDRAWAL FROM THE STUDY

Your doctor may decide to stop your therapy for the following reasons:

- if he/she believes that it is in your best interest
- if your disease worsens or comes back during treatment
- if you have side effects from the treatment that your doctor thinks are too severe
- if you become pregnant
- if MVA-BN-CV301, FPV-CV301, M7824, N-803, and/or NHS-IL12 becomes unavailable
- if new information shows that another treatment would be better for you
- if you do not follow the study rules
- if the study is stopped for any reason

In this case, you will be informed of the reason therapy is being stopped.

After therapy is stopped we would like to see you for a safety visit 28 days after your last dose.

You can stop taking part in the study at any time. However, if you decide to stop taking part in the study, we would like you to talk to the study doctor and your regular doctor first.

If you decide at any time to withdraw your consent to participate in the trial, we will not collect any additional medical information about you. However, according to FDA guidelines, information collected on you up to that point may still be provided to Bavarian Nordic, Inc., EMD Serono, Inc., ImmunityBio, Inc., or designated representatives.

## STORAGE, SHARING AND FUTURE RESEARCH USING YOUR SPECIMENS AND DATA

### Will Your Specimens or Data Be Saved for Use in Other Research Studies?

As part of this study, we are obtaining specimens and data from you. We will remove all the identifiers, such as your name, date of birth, address, or medical record number and label your specimens and data with a code so that you cannot easily be identified. However, the code will be linked through a key to information that can identify you. We plan to store and use these specimens and data for studies other than the ones described in this consent form that are going on right now, as well as studies that may be conducted in the future. These studies may provide additional information that will be helpful in understanding bowel and colorectal cancers or other

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diseases or conditions. This could include studies to develop other research tests, treatments, drugs, or devices, that may lead to the development of a commercial product by the NIH and/or its research or commercial partners. There are no plans to provide financial compensation to you if this happens. Also, it is unlikely that we will learn anything from these studies that may directly benefit you.

I give permission for my coded specimens and data to be stored and used for future research as described above.

\_\_\_\_\_ Yes      \_\_\_\_\_ No

Initials              Initials

### **Will Your Specimens or Data Be Shared for Use in Other Research Studies?**

We may share your coded specimens and data with other researchers. If we do, while we will maintain the code key, we will not share it, so the other researchers will not be able to identify you. They may be doing research in areas that are similar to this study or in other unrelated areas. These researchers may be at NIH, other research centers and institutions, or commercial entities.

I give permission for my coded specimens and data to be shared with other researchers and used by these researchers for future research as described above.

\_\_\_\_\_ Yes      \_\_\_\_\_ No

Initials              Initials

If you change your mind and do not want us to store and use your specimens and data for future research, you should contact the research team member identified at the top of this document. We will do our best to comply with your request but cannot guarantee that we will always be able to destroy your specimens and data. For example, if some research with your specimens and data has already been completed, the information from that research may still be used. Also, for example, if the specimens and data have been shared already with other researchers, it might not be possible to withdraw them.

In addition to the planned use and sharing described above, we might remove all identifiers and codes from your specimens and data and use or share them with other researchers for future research at the NIH or other places. When we or the other researchers access your anonymized data, there will be no way to link the specimens or data back to you. We will not contact you to ask your permission or otherwise inform you before we do this. We might do this even if you answered "no" to the above questions. If we do this, we would not be able to remove your specimens or data to prevent their use in future research studies, even if you asked, because we will not be able to tell which are your specimens or data.

NIH policies require that your clinical and other study data be placed in an internal NIH database that is accessible to other NIH researchers for future research. Usually, these researchers will not have access to any of your identifiers, such as your name, date of birth, address, or medical

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record number; and your data will be labeled with only a code. We cannot offer you a choice of whether your data to be placed in this database or not. If you do not wish to have your data placed in this database, you should not enroll in this study.

### **Will Your Genomic Data Be Shared Outside of This Study?**

As part of this research study, we will put your genomic data in a large database for broad sharing with the research community. These databases are commonly called data repositories. The information in this database will include but is not limited to genetic information, race and ethnicity, and sex. If your individual data are placed in one of these repositories, they will be labeled with a code and not with your name or other information that could be used to easily identify you, and only qualified researchers will be able to access them. These researchers must receive prior approval from individuals or committees with authority to determine whether these researchers can access the data.

Summary information about all of the participants included in this study (including you) is being placed in a database and will be available through open access. That means that researchers and non-researchers will be able to access summary information about all the participants included in the study, or summary information combined from multiple studies, without applying for permission. The risk of anyone identifying you with this information is very low.

NIH policies require that genomic data be placed in a repository for sharing. Therefore, we cannot offer you a choice of whether your data will be shared. If you do not wish to have your data placed in a repository, you should not enroll in this study.

### **How Long Will Your Specimens and Data be Stored by the NIH?**

Your specimens and data may be stored by the NIH until they are no longer of scientific value or if you withdraw consent for their continued use, at which time they will be destroyed. Your specimens and data may be stored by the NIH indefinitely.

### **Risks of Storage and Sharing of Specimens and Data**

When we store your specimens and data, we take precautions to protect your information from others that should not have access to it. When we share your specimens and data, we will do everything we can to protect your identity, for example, when appropriate, we remove information that can identify you. Even with the safeguards we put in place, we cannot guarantee that your identity will never become known or someone may gain unauthorized access to your information. New methods may be created in the future that could make it possible to re-identify your data or samples.

## **COMPENSATION, REIMBURSEMENT, AND PAYMENT**

### **Will you receive compensation for participation in the study?**

Some NIH Clinical Center studies offer compensation for participation in research. The amount of compensation, if any, is guided by NIH policies and guidelines.

You will not receive compensation for participation in this study.



**Will you receive reimbursement or direct payment by NIH as part of your participation?**

Some NIH Clinical Center studies offer reimbursement or payment for travel, lodging or meals while participating in the research. The amount, if any, is guided by NIH policies and guidelines.

On this study, the NCI will cover the cost for some of your expenses. Some of these costs may be paid directly by the NIH and some may be reimbursed after you have paid. The amount and form of these payments are determined by the NCI Travel and Lodging Reimbursement Policy. You will be given a summary of the policy which provides more information.

**Will taking part in this research study cost you anything?**

NIH does not bill health insurance companies or participants for any research or related clinical care that you receive at the NIH Clinical Center.

- If some tests and procedures are performed outside the NIH Clinical Center, you may have to pay for these costs if they are not covered by your insurance company.
- Medicines that are not part of the study treatment will not be provided or paid for by the NIH Clinical Center.
- Once you have completed taking part in the study, medical care will no longer be provided by the NIH Clinical Center.

**CONFLICT OF INTEREST (COI)**

The National Institutes of Health (NIH) reviews NIH staff researchers at least yearly for conflicts of interest. This process is detailed in a COI Guide. You may ask your research team for a copy of the COI Guide or for more information. Members of the research team who do not work for NIH are expected to follow these guidelines or the guidelines of their home institution, but they do not need to report their personal finances to the NIH.

The NIH and the research team for this study are using:

- MVA-BN-CV301 and FPV-CV301 developed by Bavarian Nordic, Inc.,
- M7824 and NHS-IL12 developed by EMD Serono, Inc.
- N-803 developed by ImmunityBio, Inc.

through a joint study with your study team and these companies. These companies also provide financial support for this study.

**CLINICAL TRIAL REGISTRATION AND RESULTS REPORTING**

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.

**CONFIDENTIALITY PROTECTIONS PROVIDED IN THIS STUDY**

Some of your health information, and/or information about your specimen, from this study will be kept in a central database for research. Your name or contact information will not be put in

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the database. Your test results will be identified by a unique code and the list that links the code to your name will be kept separate from your sample and health information. Your information may be given out if required by law. For example, certain states require doctors to report to health boards if they find a disease like tuberculosis. However, the researchers will do their best to make sure that any information that is released will not identify you.

### **Will your medical information be kept private?**

We will do our best to make sure that the personal information in your medical record will be kept private. However, we cannot guarantee total privacy. Organizations that may look at and/or copy your medical records for research, quality assurance, and data analysis include:

- The National Cancer Institute and other government agencies, like the Food and Drug Administration (FDA), which are involved in keeping research safe for people.
- National Institutes of Health Intramural Institutional Review Board.
- The study Sponsor (NCI Center for Cancer Research) or their agent(s).
- Qualified representatives from Bavarian Nordic, Inc., the pharmaceutical company who produces MVA-BN-CV301 and FPV-CV301, or their agent(s).
- Qualified representatives from EMD Serono, Inc., the pharmaceutical company who produces M7824 and NHS-IL12, or their agent(s).
- Qualified representatives from ImmunityBio, Inc., the pharmaceutical company who produces N-803, or their agent(s).

The researchers conducting this study and the NIH follow applicable laws and policies to keep your identifying information private to the extent possible. However, there is always a chance that, despite our best efforts, your identity and/or information about your participation in this research may be inadvertently released or improperly accessed by unauthorized persons.

In most cases, the NIH will not release any identifiable information collected about you without your written permission. However, your information may be shared as described in the section of this document on sharing of specimens and data, and as further outlined in the following sections.

Further, the information collected for this study is protected by NIH under a Certificate of Confidentiality and the Privacy Act.

### **Certificate of Confidentiality**

To help us protect your privacy, the NIH Intramural Program has received a Certificate of Confidentiality (Certificate). With this certificate, researchers may not release or use data or information about you except in certain circumstances.

NIH researchers must not share information that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings, for example, if requested by the court.

The Certificate does not protect your information when it:

1. is disclosed to people connected with the research, for example, information may be used for auditing or program evaluation internally by the NIH; or



2. is required to be disclosed by Federal, State, or local laws, for example, when information must be disclosed to meet the legal requirements of the federal Food and Drug Administration (FDA); or
3. is for other research; or
4. is disclosed with your consent.

The Certificate does not prevent you from voluntarily releasing information about yourself or your involvement in this research.

The Certificate will not be used to prevent disclosure to state or local authorities of harm to self or others including, for example, child abuse and neglect, and by signing below you consent to those disclosures. Other permissions for release may be made by signing NIH forms, such as the Notice and Acknowledgement of Information Practices consent.

### Privacy Act

The Federal Privacy Act generally protects the confidentiality of your NIH medical records we collect under the authority of the Public Health Service Act. In some cases, the Privacy Act protections differ from the Certificate of Confidentiality. For example, sometimes the Privacy Act allows release of information from your medical record without your permission, for example, if it is requested by Congress. Information may also be released for certain research purposes with due consideration and protection, to those engaged by the agency for research purposes, to certain federal and state agencies, for HIV partner notification, for infectious disease or abuse or neglect reporting, to tumor registries, for quality assessment and medical audits, or when the NIH is involved in a lawsuit. However, NIH will only release information from your medical record if it is permitted by both the Certificate of Confidentiality and the Privacy Act.

### Policy Regarding Research-Related Injuries

The NIH Clinical Center will provide short-term medical care for any injury resulting from your participation in research here. In general, no long-term medical care or financial compensation for research-related injuries will be provided by the NIH, the NIH Clinical Center, or the Federal Government. However, you have the right to pursue legal remedy if you believe that your injury justifies such action.

### Problems or Questions

If you have any problems or questions about this study, or about your rights as a research participant, or about any research-related injury, contact the Principal Investigator, Julius Strauss, MD, [julius.strauss@nih.gov](mailto:julius.strauss@nih.gov), 240-858-3999. You may also call the NIH Clinical Center Patient Representative at 301-496-2626, or the NIH Office of IRB Operations at 301-402-3713, if you have a research-related complaint or concern.

### Consent Document

Please keep a copy of this document in case you want to read it again.





**Adult Research Participant:** I have read the explanation about this study and have been given the opportunity to discuss it and to ask questions. I consent to participate in this study.

\_\_\_\_\_  
Signature of Research Participant

\_\_\_\_\_  
Print Name of Research Participant

\_\_\_\_\_  
Date

**Legally Authorized Representative (LAR) for an Adult Unable to Consent:** I have read the explanation about this study and have been given the opportunity to discuss it and to ask questions. I am legally authorized to make research decisions on behalf of the adult participant unable to consent and have the authority to provide consent to this study. As applicable, the information in the above consent was described to the adult participant unable to consent who agrees to participate in the study.

\_\_\_\_\_  
Signature of LAR

\_\_\_\_\_  
Print Name of LAR

\_\_\_\_\_  
Date

**Investigator:**

\_\_\_\_\_  
Signature of Investigator

\_\_\_\_\_  
Print Name of Investigator

\_\_\_\_\_  
Date

**Witness should sign below if either:**

1. A short-form consent process has been used to enroll a non-English speaking subject or
2. An oral presentation of the full consent has been used to enroll a blind or illiterate subject

\_\_\_\_\_  
Signature of Witness

\_\_\_\_\_  
Print Name of Witness

\_\_\_\_\_  
Date

**NIH ADMINISTRATIVE SECTION TO BE COMPLETED REGARDING THE USE OF AN INTERPRETER:**

\_\_\_\_ An interpreter, or other individual, who speaks English and the participant's preferred language facilitated the administration of informed consent and served as a witness. The investigator obtaining consent may not also serve as the witness.

\_\_\_\_ An interpreter, or other individual, who speaks English and the participant's preferred language facilitated the administration of informed consent but did not serve as a witness. The name or ID code of the person providing interpretive support is: \_\_\_\_\_.

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