

# I-123 MIBG Scan

## What is an I-123 MIBG Scan?

An I-123 MIBG scan is a test used for cancer detection. It is performed in the Nuclear Medicine department and uses a special kind of camera called a gamma camera. This camera does not give off radiation. We perform the study by giving your child an intravenous radiopharmaceutical “tracer”. This is a medicine combined with a small amount of radioactive material. It travels to the area of your child we need to see and is imaged by a gamma camera.

Radiopharmaceuticals are carefully tested. The risk of side effects is extremely small. Most radiopharmaceuticals used in nuclear medicine studies give low radiation exposure. Radiation exposure from Nuclear Medicine procedures is minimized by strictly adhering to ALARA (As Low as Reasonably Achievable). <http://snmmi.files.cms-plus.com/Patients/Nuclear%20Medicine%20and%20Radiation%20Safety%20Factsheet.pdf>

## Why is this exam performed?

An I-123 MIBG scan localizes and identifies certain types of cancer.

## What to expect

If your child does not require medication to sleep for the exam, one parent or guardian may be with your child in the exam room. It may be helpful to make arrangements for other siblings. For safety reasons, you will not be permitted to accompany your child if you are pregnant.

Preparing your child is key to the success of this study. To help prepare your child, our Child Life Specialists will help ease your child’s fear and anxiety. Please let a staff member know if you are interested in a Child Life consultation at no additional cost.

For those children requiring medication to sleep for the test, you will be able to stay with your child until he or she is off to sleep. Any child receiving sedation for the exam can:

- Eat food up to 8 hours before to your arrival time.
- Consume milk, formula, and food thickener up to 6 hours before your arrival time.
- Be given breast milk up to 4 hours prior to your arrival time.
- Drink clear liquids up to 1 hour prior to your arrival time (water, Pedialyte, Sprite, 7-up, or apple juice). Orange juice is not permitted.
- Take prescribed medications with a small sip of water (if needed) prior to arrival time unless otherwise specified.
- **If these instructions are not followed, the exam may be rescheduled or cancelled due to the risk posed to your child.**

Injections are scheduled on Tuesday, Wednesday or Thursday afternoons. The imaging portion of the exam is then performed on the following day.

You will meet with a Nurse Practitioner and/or the doctor who will be providing the sedation medication. You will have the opportunity to ask questions, discuss risks, and will be asked to sign your consent.

Your child and the accompanying adult will be taken to the procedure room by a technologist and asked to change in to a gown. The technologist will ask why the study is being done and explain it to your child.

### For this 90 minute exam:

- An intravenous line, also known as an IV, is required to administer the radiopharmaceutical and additional medications. An IV is a tiny tube that is used to give the body medicine. Your child might feel a pinch or a poke when it goes in the vein, however, we have ways to manage the pain associated with it.

- As your child will have to hold still for the test, we use “seatbelts” to help. “Seatbelts” can be Velcro straps, swaddle blankets, or tape straps. “Seatbelts” will also be used to make sure your child is safe during the procedure. They can be quickly removed in the event of an emergency.
- We administer SSKI drops prior to the injection of the tracer. Three drops will be placed under the tongue. These drops protect your child’s thyroid from the radioactive portion of the I-123 tracer. We will provide apple juice or Sprite after the administration.
- The technologist will inject the tracer thorough the IV line. This line can be removed after the injection, or with the approval of the ordering physician, kept overnight to be used the following day.
- Upon return the following day, your child will lie on his/her back on the exam table, beneath the gamma camera. The table will move slowly under the camera during the exam. Although the camera will be close, it will not touch your child.
- SPECT/CT pictures will be taken during the procedure. This camera will rotate around your child to create a 3D image. Each area being imaged will take approximately 25 minutes. Your child will need to be still for the entire exam.
- We have television in all the exam rooms which may be used if your child is not sedated. You can also bring a tablet with your child’s favorite movies.
- You will be provided discharge instructions at the conclusion of your appointment.

## If your child received anesthesia

Your child may be sleepy and unsteady from the anesthetic for several hours. Your child may have a red face or be slightly swollen around the face and eyes. This should improve within 24 hours. Your child may wake up feeling hungry. When he or she is wide awake, the recovery nurse will give clear liquids such as Pedialyte, apple juice, Sprite or water. If your child does not throw up during the next 30 minutes, he or she can eat normally.

To prevent accidents, closely monitor him or her for the next 24-48 hours. Walk with your child, holding hands even if he or she seems to walk without trouble. It is also important to help your child in the bathroom.

The sedative and the test may disrupt your child’s routine. You may notice a change in behavior for the rest of the day. Some children may become cranky. Some children sleep for hours. Others need to stay up late because they slept for the test. Be patient. Things will be back to normal the next day.

## When to seek help

Call 911 if your child has difficulty breathing and looks very pale or has blue lips or nails or a very high fever (greater than 103°F).

Call your child’s doctor if your child has any of the following:

- Red blood in the urine, pain
- Throws up more than three times
- Seems confused or dizzy the next day, is harder to wake up than usual
- Has a sore throat that gets worse or does not go away in two days
- Has a fever of over 101°F for more than 24 hours
- Develops any allergies such as hives, itching or a rash

## Receiving your I-123 MIBG and Scan results

Call your doctor for a follow up appointment as instructed. You can also call the doctor who ordered the study for the results 24 to 48 hours after the test. If you have any additional questions or concerns, please don’t hesitate to call Radiology Nursing at 832-826-5371.

If you would like a CD of your child’s study, please call the film library at 832-822-1202. The Radiologist’s report will also be included on the CD.