



使用碘-123 做甲状腺癌的测试 资讯，如何准备及安全注意事项

此讲义是为将要接受放射性碘造影以测试甲状腺癌的患者而撰写的。

碘-123 是什么？

碘-123 是一种有放射性的碘。它是用来寻索甲状腺癌的。

什么是甲状腺癌测试？

甲状腺癌测试可以帮助医生了解患者体内是否有甲状腺癌。如在检查中发现了甲状腺癌，可以用另一治疗剂量的放射性碘即碘-131 做治疗。

如何做此测试？

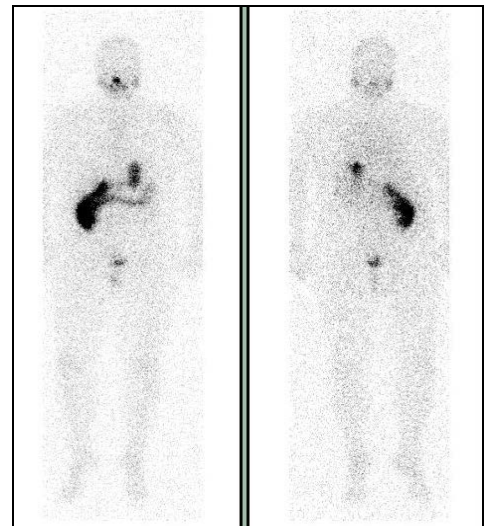
会要求患者服用一小粒含有碘-123 诊断剂量（4 毫克）的胶囊。肠道将迅速吸收碘，并进入血液。

甲状腺癌细胞及甲状腺组织都会吸收碘。当碘-123 在体内移动时，它将进入甲状腺和任何甲状腺癌细胞。

然后，我们将使用一个特殊的相机来拍摄身体的图像。这台相机可以检测到碘-123 发出的伽马射线（像 X 射线）。

在图像中显示的暗区，即为甲状腺和甲状腺癌细胞吸收或分泌出的碘-123。这告诉我们是否有下列情况：

- 残留的甲状腺组织（切除甲状腺后残留的少量组织）。
- 甲状腺癌细胞的部位



图像中的深色区域显示了人体吸收或释放 I-131 的地方。

测试的过程如何？

这项测试有两部分，分别在两天做：

- 第一天，服用含有碘-123 的胶囊。
- 第二天，我们将扫描患者的头部、颈部和身体。扫描身体时患者需仰卧在检查台上约 1 至 2 小时。

做此测试有那些副作用？

碘-123 的副作用是非常罕见的。但在服用胶囊的当天，会有低可能性的恶心。

碘-123 进入身体后会发生什么？

大部分未被甲状腺组织吸收的碘-123，经尿液和粪便排出体外。其余的即渐渐消失。

我应该如何做准备？

造影

如患者在过去的 3 个月内做过 CT 扫描，请告诉护理团队。这项测试可能会影响到治疗计划。

低碘饮食

患者须在本次测试前一周内遵从低碘饮食。有关说明，请上网 www.thyca.org/pap-fol/lowiodinediet。如不使用互联网，请向我们索取一份打印件。

药物

- 如是 "戒断型" 患者：
 - 至少在测试的 **6 周前** 停止服用人造甲状腺素（synthroid（左旋甲状腺素 Levothyroxine））。
 - 在测试的 **3 周前** 停止服用赛庚啉（利甲状腺素 cytomel Liothyronine）。
- 如是服用 "甲状腺激素 Thyrogen rTSH" 的患者：
 - 可继续服用您的甲状腺药物。
 - 服用碘-123 胶囊之前，在 2 个不同的日子接受甲状腺激素 (Thryogen rTSH) 针剂。
 - 在第一次接受甲状腺激素 (Thryogen rTSH) 针剂之前需做血液测试。

在服用碘-123 的当天

- 在就诊前后的 2 小时内，除了喝水，**不要**吃任何食物或喝任何东西。我们建议多喝水
- 在服用诊断剂量之前，需先抽血检查血液的指标和甲状腺激素水平。

育龄妇女

- 如患者怀孕了或认为可能怀孕了，就**必须**告诉护理团队。如果怀孕了，我们建议不要进行这次甲状腺癌测试。
- 如患者在甲状腺癌测试后接受 I-131 治疗，**必须在服用放射性碘之前做血液妊娠测试。因为 I-131 可能会伤害未出生的婴儿。**即使已经做了子宫切除术或已经提前绝经，我们仍需做这测试。这项测试是在服用 I-123 剂量的当天进行。在患者接受 I-131 治疗的当天，可能会再次做此项检查。
- **患者须告诉我们是否在哺乳期。**如是母乳喂养，即不能注射放射性碘。辐射会聚集在乳液中并传递给孩子。这也会使乳房组织受到乳汁中 I-131 的额外辐射。在此次测试后接受碘-131 治疗的妇女患者：
 - 患者在接受碘 -131 剂量前的 3 个月，就必须停止母乳喂养。
 - 治疗后不能再恢复母乳喂养目前喂养的宝宝。可以母乳喂养未来的新生儿。

服用碘-123 后

服用-123 胶囊后。：

- 两小时内**不要**吃任何食物，也不要喝任何东西，只喝水。空腹有助于身体对碘的吸收。
- 在服药后 2 小时后可以开始恢复低碘饮食。
- 在接下来的 24 小时内，继续多喝水。液体有助于冲洗出体内多余的碘-123。也可以喝其他属低碘饮食类的液体。
- 在服用诊断剂量后第二天必须回到核医科做扫描。
- **在诊断性扫描及任何碘治疗时，请遵照低碘饮食规则。**在接受碘-131 治疗时，也需要在治疗后的几天内继续这饮食规则（参见第 4 页的 "扫描后"）。

扫描的前一晚

在服用碘-123 剂量后，必须排空粪便，以清除粪便中可能存在的碘-123。含有碘-123 的粪便可能会在扫描过程中出现 *假阳性*（不正确的）读数。

为了确保粪便完全排空，请在扫描前一天晚上使用 **非处方泻药**（无需处方即可购买）。确保使用不含碘的产品。可以尝试的品牌包括 Miralax、Bisacodyl、Milk of Magnesia、Magnesium Citrate 和 Dulcolax 栓剂。如不能服用泻药，请告诉护理团队。

扫描后

- 如无需接受 **I-131** 治疗，可以在最后一次扫描后恢复正常饮食。
- 如接着做碘-131 治疗，则必须等到吞服碘-131 胶囊后 3 天才能恢复正常饮食。

有关安全的注意事项

多喝水，帮助排出体内的碘-123。

谁会看甲状腺癌测试扫描？什么时候能拿到结果？

核医科的医生将阅读甲状腺癌测试的扫描结果。这位医生还将审查患者提供的任何其他扫描结果。

如在甲状腺癌测试后做碘-131 治疗；

- 核医科医生也可能会和患者讨论一些测试结果。
- 我们可能需要在治疗前做更多的造影。如发生这种情况，治疗可能会推迟 1 天。

如**没有**安排紧接着做碘-131 治疗，推荐做这项测试的医疗机构会在 3 天左右提供测试结果。

需要更多的资讯

要了解有关如何使用放射性碘-123 做甲状腺癌测试请上甲状腺癌协会网站：www.thyca.org。

与谁联系

诊所或部门	上班时间	下班后及周末假日
UWMC - Montlake Imaging Services 华大医疗中心—蒙特湖院区 造影科	206.598.6200	请致电 206.598.6190， 请传呼接线生传呼核医 科的当值住院医师。
UWMC - Montlake Nuclear Medicine 华大医疗中心—蒙特湖院区 核医科	206.598.4240	
Seattle Cancer Care Alliance Endocrine Clinic 西雅图癌症中心内分泌科	206.288.1160	请致电 206.598.6190， 请传呼接线生传呼核医 科的当值住院医师。

您有疑问吗？

我们很重视您的提问。当您有疑问或顾虑时，请致电您的医生或医护提供者。

请参阅本讲义“与谁联系”所提供的华大医疗中心及西雅图癌症中心的电话号码及下班后的联系方式。

Thyroid Cancer Survey Using I-123

Information, instructions, and precautions

This handout is for patients who will receive radioactive iodine for imaging to help look for thyroid cancer.

What is I-123?

I-123 is a type of radioactive iodine. It is used to find thyroid cancer.

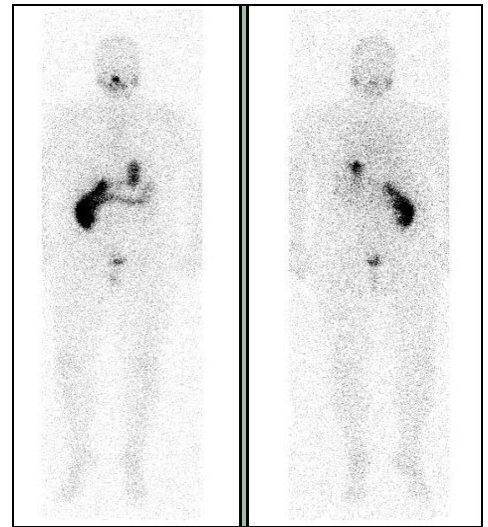
What is a thyroid cancer survey?

A *thyroid cancer survey* helps your doctors see if there is any thyroid cancer in your body. If thyroid cancer is found during your survey, you may have it treated with a *therapeutic dose* of I-131, another radioactive iodine.

How does it work?

We will ask you to swallow a small capsule that contains a *diagnostic dose* (4 millicuries) of I-123. Your intestines will absorb the iodine quickly, and it will enter your bloodstream.

Both thyroid cancer cells and thyroid tissue absorb iodine. As the I-123 moves through your body, it will go to your thyroid and to any thyroid cancer cells.



Dark areas in these images show where the body absorbed or excreted I-123.

We will then use a special camera to take images of your body. This camera can detect *gamma rays* (like X-rays) that the I-123 gives off. The I-123 that is absorbed or excreted by your thyroid and thyroid cancer cells will show up as dark areas in the images. This will tell us if you have any:

- *Residual* thyroid tissue (small amounts that stay after your thyroid is removed)
- Areas where there are thyroid cancer cells

What will happen during the survey?

This survey has 2 parts, on 2 separate days:

- On the first day, you will swallow the capsule that contains I-123.
- The next day, we will take pictures of your head, neck, and body. You will lie on your back on an exam table for about 1 to 2 hours while the camera scans your body.

What are the side effects of the survey?

Side effects from I-123 are very rare. But there is a small risk of nausea on the day you swallow the capsule.

What happens to I-123 after it enters my body?

Most of the I-123 your thyroid tissue does not absorb leaves your body in your urine and stool. The rest will simply decay over time.

How do I prepare for the survey?

Imaging

Tell your care team if you have had a CT scan in the last 3 months. If you have, this survey may interfere with your treatment plan.

Low-iodine Diet

You must be on a **low-iodine diet** for 1 week before this survey. For instructions, please visit www.thyca.org/pap-fol/lowiodinediet. If you do not use the internet, ask us for a printed copy.

Medicines

- **If you are a “withdrawal” patient:**
 - Stop taking synthroid (Levothyroxine) for **at least 6 weeks before** your survey.
 - Stop taking cytomel (Liothyronine) for **3 weeks before** your survey.
- **If you are a “Thyrogen rTSH” patient:**
 - You may keep taking your thyroid medicines.
 - Before you take the I-123 capsule, you will receive Thyrogen rTSH injections on 2 different days.
 - You will have a blood draw before your first dose of rTSH.

On the Day You Take Your Dose of I-123

- Do **not** eat any food or drink anything but water for 2 hours before and after your appointment. We suggest you drink lots of water.
- You will have a blood draw just before you receive your diagnostic dose. The lab will check your blood counts and thyroid hormone levels.

For Women of Childbearing Age

- You **must** tell your care team if you are pregnant or think you might be pregnant. If you are pregnant, we advise you **not** to have this thyroid cancer survey.
- If you will receive I-131 therapy after your thyroid cancer survey, **you must have a blood pregnancy test before you take the radioactive iodine. This is because I-131 can harm an unborn baby.** We will need to do this test even if you have had a hysterectomy or have been through early menopause. This test will be done the day you take your I-123 dose. It may be done again on the day of your I-131 therapy.
- **Tell us if you are breastfeeding.** If you are breastfeeding, we **cannot** give you radioactive iodine. The radiation would collect in your breast milk and pass to your child. It would also expose your breast tissue to extra radiation from the I-131 in the milk. Women who have I-131 therapy after this survey:
 - Must stop breastfeeding for 3 months before they take the I-131 dose.
 - Cannot resume breastfeeding with their current infant after treatment. They may breastfeed future newborns.

After Taking Your Dose of I-123

After you swallow the I-123 capsule:

- For 2 hours, do **not** eat any food or drink anything but water. An empty stomach helps your body absorb the iodine.
- Starting 2 hours after your dose, you can resume the low-iodine diet.
- For the next 24 hours, keep drinking lots of water. Fluids help flush the extra I-123 from your body. You may also drink other fluids that are allowed on the low-iodine diet.

- Remember to return to the Nuclear Medicine department for a scan the day **after** you take your diagnostic dose.
- **Stay on your low-iodine diet while you are having your diagnostic scans and any iodine therapy.** If you are having I-131 therapy, you will need to stay on this diet for a few days after your therapy (see “After Your Scan” on page 4).

The Night Before Your Scan

After you have taken your dose of I-123, you must empty your bowels to remove any I-123 that may be in your stool. Stool that contains I-123 could give a *false positive* (incorrect) reading during your scan.

To make sure your bowels empty all the way, **use an over-the-counter laxative** (one you can buy without a prescription) the night before your scan. Be sure to use a product that does **not** contain iodine. Brands to try include Miralax, Bisacodyl, Milk of Magnesia, Magnesium Citrate, and Dulcolax suppositories. Please tell your care team if you cannot take laxatives.

After Your Scan

- **If you are NOT having I-131 therapy**, you can resume your normal diet after your final scan.
- **If you ARE having I-131 therapy**, you must wait to resume your normal diet until 3 days after you swallow the I-131 capsule.

Safety Precautions

Drink lots of water to help flush the I-123 out of your body.

Who reads the thyroid cancer survey scan? When will I get the results?

A Nuclear Medicine doctor will read your thyroid cancer survey scan. This doctor also will review any other scan results that you bring with you.

If you will have I-131 therapy after your thyroid cancer survey:

- The Nuclear Medicine doctor may also talk with you about some of the findings of your survey.
- We may need to do more imaging before your therapy. If this occurs, your therapy might be delayed 1 day.

If you are **not** scheduled for I-131 therapy right away, the provider who referred you for this test will give you your survey results within about 3 days.

To Learn More

To learn more about a thyroid cancer survey using I-123 radioactive iodine, visit the Thyroid Cancer Association website at www.thyca.org.

Who to Call

Clinic or Department	During office hours	After hours and on weekends and holidays
UWMC - Montlake Imaging Services	206.598.6200	Call 206.598.6190 and ask to page the Nuclear Medicine Resident on call.
UWMC - Montlake Nuclear Medicine	206.598.4240	
Seattle Cancer Care Alliance Endocrine Clinic	206.288.1160	Call 206.598.6190 and ask to page the Nuclear Medicine Resident on call.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

See “Who to Call” on this page for UWMC and SCCA numbers and how to get help after hours.