



病人教育

UWMC 造影服務部



CT 掃描劑量

你暴露於輻射的風險

本手冊解釋在電腦斷層 (CT) 掃描過程中輻射帶來的小風險。

我的醫生為何建議我做 CT 掃描？

電腦斷層 (CT) 可以幫助診斷某些疾病和健康狀況。從 CT 掃描獲得的資訊有助於你和你的醫生決定是否對這些疾病進行治療。

會有哪些健康風險？

你從 CT 掃描所接受到的輻射量是非常小的。CT 輻射導致將來患上癌症的概率非常低。

即使風險很低，我們還是十分謹慎，只在需要時才為病人做 CT 掃描。當一個人做了許多次 CT 掃描後，風險就會增加。這可能會在暴露於 CT 掃描輻射的許多年以後患上癌症。

很多東西都會導致癌症，癌症相當普遍（25% 的人，或 100 個人中有 25 個人在其一生的某段時間中會患上癌症）。如果患上癌症，很難知道它是由 CT 掃描的輻射還是由其他東西引起的。

你的醫生將決定你是否需要做 CT 掃描。你的醫生知道，只有在 CT 掃描可以提供有關你的健康的有用資訊或有助於診斷你的疾病時，才應該為你做 CT 掃描。

UWMC 和 SCCA 的輻射安全

華盛頓大學醫學中心 (UWMC) 和西雅圖癌症照護聯盟 (SCCA) 以其優秀的放射科而全國聞名。醫護人員兢兢業業，儘量確保病人獲得最好的，最低輻射量的 CT 掃描。UWMC 和 SCCA 致力於保護你的安全，以及其醫護人員、公眾和環境的安全。

有任何問題嗎？

你的問題很重要。如果你有任何問題或疑慮，請致電你的醫生或其他保健服務提供者。診所醫護人員也可以隨時提供幫助。

- ❑ UWMC
造影服務部：
206-598-6200
- ❑ SCCA
放射科：
206-288-7200

在 UWMC 和 SCCA，低劑量 CT 是使用盡可能最低的輻射劑量來產生高品質的圖像。這種安全標準稱為 ALARA，即代表劑量是“合理抑低 (As Low As Reasonably Achievable)”。此外，UWMC 和 SCCA 還監控每次 CT 掃描的輻射劑量。

這些標準和一些新的 CT 方法已將 CT 輻射減低達 60%。這種輻射劑量要比病人在許多其他醫療機構所接受的輻射量低很多。

風險比較

你從 CT 掃描接受到的輻射量是非常小的。這種輻射量被認為對健康只有微小的風險。

事實確實如此，即使 CT 經常使用的輻射量是低劑量 X 光檢查（比如胸部 X 光照片檢查）的 100 至 300 倍。但 CT 掃描所用的輻射量等於你在我們的自然環境中 1 至 3 年內所接受的輻射量。

在人的一生中，因 CT 掃描導致癌症死亡的風險約為二千分之一（2,000 個人中有 1 個）。這種概率相當於在美國約 2 年中駕車行駛 35,000 英里時出現車禍至死的風險。

提供更多資訊的網站

- **RadiologyInfo.org**

www.radiologyinfo.org/en/safety

這個網站是由美國放射學會 (ACR) 和北美放射學會 (RSNA) 為病人建立的。它提供了有關病人安全、輻射的好處和風險，以及 CT 掃描中的輻射暴露等資訊。

- **美國食品藥品監督管理局 “輻射性產品”**

www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/MedicalImaging/MedicalX-Rays/UCM115317#4

這個網頁是由美國食品藥品監督管理局 (FDA) 創建的。它介紹 CT 如何工作，以及解釋它的用途、風險和好處。

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CT Scan Doses

Your risks of exposure to radiation

This handout explains the small risk from radiation during *computed tomography* (CT) scans.

Why is my doctor recommending a CT scan?

Computed tomography (CT) can help diagnose certain diseases and health conditions. The information from a CT scan can help you and your doctor decide whether or not to treat these diseases or conditions.

What health risks are involved?

The radiation you get from a CT scan is very small. The risk of developing a cancer in the future from CT is very low.

Even with this low risk, we are careful to do CT only when it is needed. When a person has many CT scans, the risk can increase. This could produce a cancer many years after the radiation exposure from the CT scans.

Many different things cause cancer, and cancer is fairly common (25% of people, or 25 out of 100, get cancer sometime during their lifetime). If a cancer develops, it is hard to know if it was caused by radiation from a CT scan or by something else.

Your doctor will decide whether your CT scan is needed. Your doctor knows that a CT scan should be done only if it will provide useful information about your health or help diagnose your condition.

Radiation Safety at UWMC and SCCA

University of Washington Medical Center (UWMC) and Seattle Cancer Care Alliance (SCCA) are known nationwide for their excellent radiology departments. Staff work to make sure that patients get the best CT scans with the lowest radiation dose possible. UWMC and SCCA are committed to your safety and to the safety of their staff, the public, and the environment.

Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns. Clinic staff are also available to help.

- Imaging Services at UWMC:
206-598-6200
- Radiology Department at SCCA:
206-288-7200

Low-dose CT at UWMC and SCCA produces high-quality images using the lowest dose of radiation possible. This safety standard is known as ALARA, which stands for doses that are “As Low As Reasonably Achievable.” Both UWMC and SCCA also monitor the radiation dose of every CT scan.

These standards and new CT methods have reduced CT radiation up to 60%. This is a much lower radiation dose than patients receive in many other health care facilities.

Comparing Risks

The radiation you receive from CT scans is very small. It is thought of as a very minor health risk.

This is true even though CT often uses 100 to 300 times more radiation than a low-dose X-ray such as a chest X-ray. A CT scan provides the same amount of radiation you could get from our natural environment in 1 to 3 years.

In a lifetime, the risk of dying from a cancer caused by a CT scan of the abdomen and pelvis is about 1 in 2,000. This is about the same as the risk of dying from a car accident when driving 35,000 miles in about 2 years in the United States.

Websites to Learn More

- **RadiologyInfo.org**

www.radiologyinfo.org/en/safety

This website for patients was created by the American College of Radiology (ACR) and the Radiological Society of North America (RSNA). It gives information about patient safety, radiology benefits and risks, and radiation exposure in CT scans.

- **U.S. Food and Drug Administration “Radiation-Emitting Products”**

www.fda.gov/Radiation-EmittingProducts/RadiationEmittingProductsandProcedures/MedicalImaging/MedicalX-Rays/UCM115317#4

This webpage was created by the Food and Drug Administration (FDA). It describes how CT works and explains its uses, risks, and benefits.

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