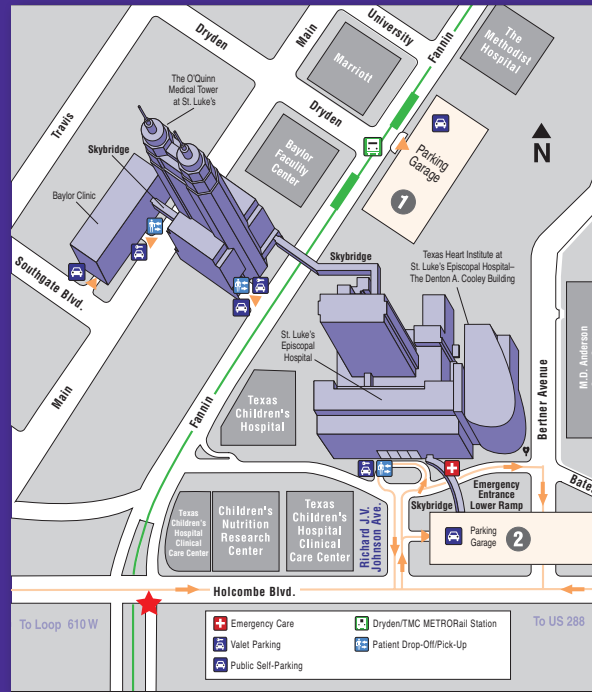


# ST. LUKE'S COMMITMENT

The Department of Diagnostic and Therapeutic Radiology at St. Luke's Episcopal Hospital is committed to providing clinically diagnostic images at **'As Low As Reasonably Achievable' (ALARA) radiation dose.**



ST. LUKE'S®

*Faithful, Loving Care®*

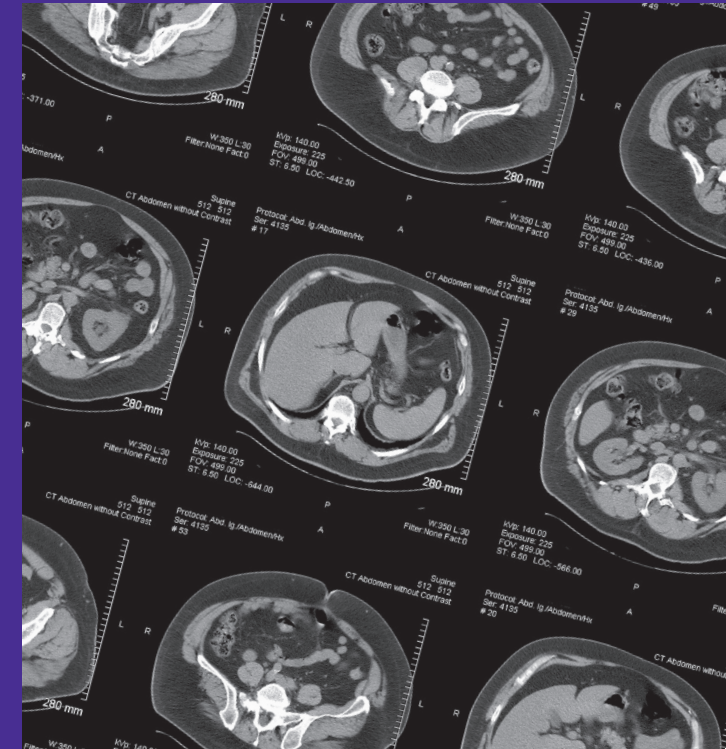
St. Luke's Episcopal Hospital

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 ST. LUKE'S® Episcopal Hospital



What to know about  
**X-ray Radiation Dose**

Department of Diagnostic  
& Therapeutic Radiology

# SEEING WITHIN

X-ray and computed tomography (CT) images provide the ability to see within the human body to help your physician determine the right treatment plan. Recent technological advances in CT imaging offer life-saving capabilities; however, along with such opportunity comes the responsibility to use the technology safely.

St. Luke's understands the concerns patients and their physicians have regarding radiation exposure, especially from CT exams. Patient safety is our top priority. A team of radiologists and radiologic imaging technologists work together to minimize patient radiation dose without compromising diagnostic image quality.

## X-RAYS DEFINED

X-rays are a form of radiation similar to light or radio waves. Unlike light waves, X-rays can penetrate the body. An X-ray beam that has passed through the body casts a shadow on a film or other device to create a picture or image. Specially trained doctors (radiologists) interpret these images to diagnose diseases or provide guidance in placing devices, such as stents in the body.

## RADIATION DOSE

We are surrounded by natural sources of radiation. A typical U.S. resident receives about 3 mSv (milliSievert) of radiation dose per year. Individuals who live at high altitudes or fly frequently are exposed to slightly higher naturally occurring radiation levels.

The relative risk of one imaging procedure versus another takes into account the radiation sensitivity of the body part being exposed to an "effective dose" of radiation. An effective dose of radiation is measured in units of mSv.

Information about the relative radiation levels for various imaging procedures are provided by scientific bodies such as American College of Radiology (ACR). For an example, see Table 1 in the document published by ACR at [www.acr.org/secondarymainmenucategories/quality\\_safety/app\\_criteria/trlinformation.aspx](http://www.acr.org/secondarymainmenucategories/quality_safety/app_criteria/trlinformation.aspx).

## MINIMIZING PATIENT RADIATION DOSE

At St. Luke's, we care about patient radiation safety and minimize radiation exposure by:

- Using radiation-free alternative imaging modalities, such as MRI and ultrasound, when clinically appropriate.
- Ensuring typical dose levels for CT exams are at or below the published guidelines by the American College of Radiology (ACR).
- Adjusting radiation doses for CT exams for patients based on weight, clinical history, age and other factors.
- Ensuring CT equipment is ACR accredited.
- Employing registered radiographers and radiographers specialized in CT imaging.

