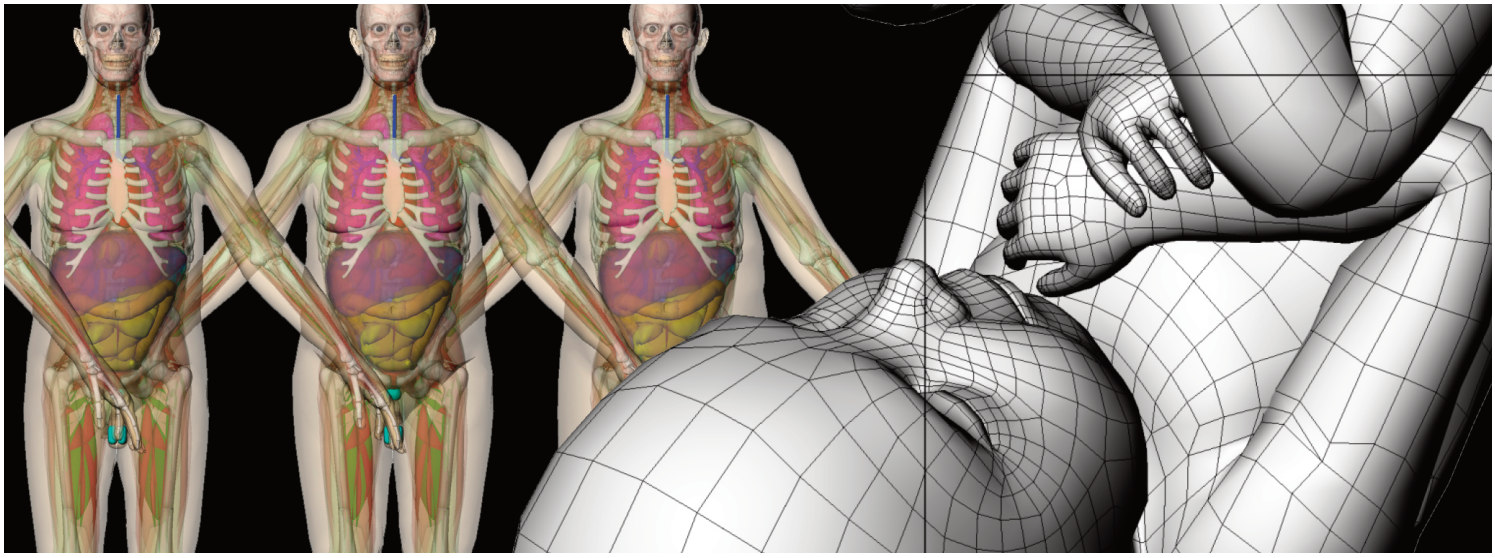
VirtualDose™

A product of Virtual Phantoms, Inc.

Reduce Medical CT Radiation Dose - Increase Patient Safety

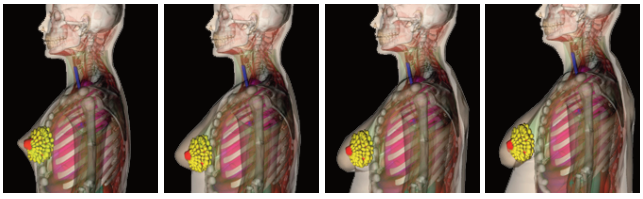


VirtualDose™ solves the need for accurate Xray CT radiation dose tracking and reporting by providing anatomically correct 3D patient modeling.

VirtualDose is a radiation dose tracking and reporting software tool for radiologists, radiological technologists, medical physicists, regulators, manufacturers and researchers who are interested in tracking and managing CT radiation dose. Thanks to the use of a family of 3D anatomically correct patient models, revolutionary GPU-based Monte Carlo simulation, and innovative "Software as a Service" design, VirtualDose permits users to obtain accurate patient-based CT dosimetry information to greatly improve patient safety.

Accurate Imaging with Less Radiation

Using thoroughly-tested, anatomically accurate 3D models of virtual patients at varying weights, at ages from newborn to age 15 and adult females in varying



gestational stages of pregnancy, VirtualDose delivers the radiation dosimetry tool you've been waiting for. It replaces crude, stylized patient models with modern 3D "virtual patients" to:

- **Improve accuracy in organ doses**
- **Minimize potential radiation risk of patients undergoing CT examinations**
- **Monitor patient doses over time**
- **Analyze CT dose trends in your radiology department**
- **Optimize CT protocols**
- **Provide detailed CTDI, DLP, and organ dose as well as the latest ICRP effective dose report**
- **Demonstrate compliance with state regulations**
- **Supply research data needed for CT dose research**

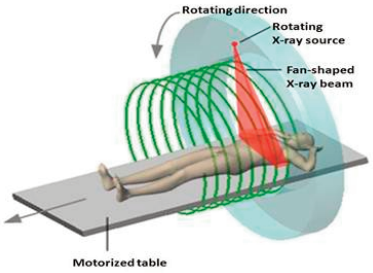
VirtualDose enables users to assess organ doses, in addition to the CTDI and DLP data that are provided by the CT scanner. A comprehensive library of patient models covers both males and females of various ages and body weights. It is ready for use with the latest CT scanners and utilizes both ICRP-60 and ICRP-103 standards on effective dose.

We use the third-generation mesh and NURBS-based deformable patient models, including:

- **Adults at various body weight and heights**
- **Overweight and obese adults**
- **Children at different ages and body sizes**
- **Pregnant female at three gestational stages**

Easy to Use, Web-Based

Our easy-to-use radiation dosimetry tool is accessed via the Web. There is no software to install or maintain locally. Your hospital or research center establishes an account and then uses the software with patient DICOM files to calculate radiation dose based on actual patient information and CT protocols. You can maintain records for each patient over time in our online database.



VirtualDose delivers:

The world's largest library of patient phantoms

•

Monte Carlo based organ dose data from validated CT scanner models for each patient

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An intuitive, easy-to-use graphical user interface design

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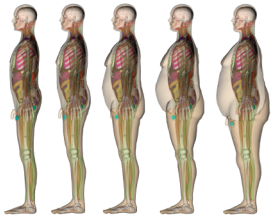
A Web-based solution for easy access and software upgrades

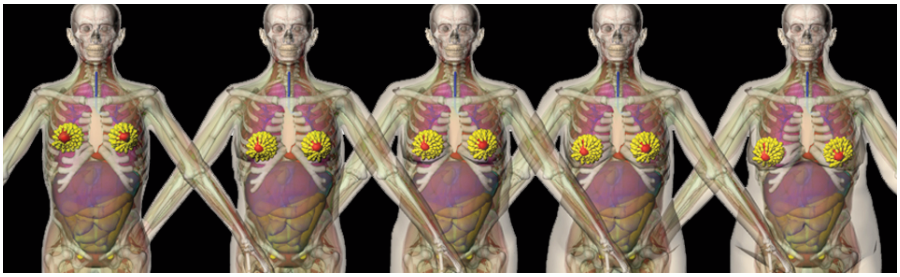
•

Breakthrough accuracy and speed using the revolutionary GPU technology for Monte Carlo calculations



Solving a Growing Problem

Although CT imaging has been proven extremely effective as a diagnostic tool, repeated exposure to ionizing radiation is known to associate with a potential risk of adverse effects. In light of rapidly increasing use of CT scanners in recent years, national and international organizations have issued warnings about the consequences of unjustified CT radiation doses and, in the U.S., California and Texas have passed the first laws requiring hospitals to record the CT radiation dose for each patient. To address the growing problem, American Board of Radiology (ABR) has launched two public campaigns called Image Wisely and Image Gently. This trend toward increasing regulation in CT exposure is expected to accelerate in the near future. Tools such as VirtualDose are essential in the management of CT dose.



Researched and Respected

VirtualDose is the product of many years of research by a globally renowned team of faculty members from Rensselaer Polytechnic Institute (RPI), in collaboration with researchers from the University of Florida (UF). Led by nuclear engineering professor Dr. George Xu, a fellow of American Association of Medical Physicists, American Nuclear Society and Health Physics Society, the research effort has received significant funding from the National Institutes of Health and National Science Foundation. In 2009, the team founded Virtual Phantoms, Inc. and launched an NIH-sponsored commercialization project. Through 2013, clinical testing of VirtualDose has involved more than 10 major hospitals across the U.S., producing favorable results and enthusiastic responses from all participants. Virtual Phantoms, Inc. has launched an aggressive national marketing plan. An exclusive license with Rensselaer Polytechnic Institute has been signed for the "virtual patient" technology. An OEM agreement with a public company has been signed to bundle VirtualDose in their line of products.

INQUIRE TODAY

Regional sales representatives and OEM licensing opportunities are sought. Find out more by contacting Virtual Phantoms, Inc. at **www.virtualphantoms.com**

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