

Virtual Environment Radiation Therapy Training

Case Study from Birmingham City University

VERT™ is a virtual environment of a radiation therapy treatment room. VERT™ was installed in a purpose built skills suite at Birmingham City University (BCU) in 2007 and the team adopted the system soon after its commercial release. Lecturers are very pleased with the system and have been impressed with the power of VERT™ as a highly visual tool for training and education. Since 2007 the team have been busy integrating this highly innovative tool into the curriculum for their degree course in radiation therapy. The system is employed in many areas of the curriculum as described below.

System Description

Birmingham have an Immersive VERT™ system installed with 4.9 m wide x 2.1m high screen. The system is a dual channel, active 3D stereoscopic rear projection system with a 1:1 scale giving a life size virtual linac. Models of Siemens, Varian and Elekta linacs are available with corresponding hand pendant controls.



A student receives training at BCU

Image taken by Matt Wain, courtesy of Christie Digital

VERT™ - Student Experience

"A recent exam question was based on pituitary technique, I responded not just on what I had heard but more from what I had seen on VERT™. Having VERT™ all the way through training would be so useful"

3rd Year Student, BCU



VERT™ as a tool for radiation therapy technique

VERT™ is used as a highly visual aid during technique lectures to explain and enhance understanding of therapy technique. This visualization of the techniques significantly enhances students understanding.

Customer Comment

"If you imagine our foundation module as a stone arch, VERT™ is the keystone. We didn't know what we were missing until we got VERT™, how did we ever do the radiotherapy course without it?"

Mark Holland, Senior Lecturer BCU





Customer Comment

"The VERT™ system is starting to transform the way we teach students. They are able to learn to use the linac at their own pace, in a stress free environment where they can learn from any mistakes."

Julie Hall, Senior Lecturer, Birmingham City University

VERT™ as an integral part of the tuition or treatment planning

Students spend sessions in the VERT™ suite in groups reviewing plans made on the treatment planning system within the skills lab. VERT™ provides the opportunity to see the plan and critically appraise whether the plan could be potentially used for treatment. The students can learn from each other.

VERT™ for radiation therapy fundamentals

Students receive 4 sessions on the VERT™ system prior to going into the clinic. The students are excited about their initial and subsequent clinical placements but also experience some trepidation and nervousness. Becoming familiar with the components of the linac, driving the virtual machine with the real hand pendant and developing basic psycho-motor skills really helps with this.



Image courtesy of Birmingham City University

VERT™ as an aid to student recruitment

VERT™ really wows prospective students, they get very animated when seeing VERT™. It really opens peoples eyes up to radiotherapy as a career and has even resulted in prospective diagnostic students doing therapy.

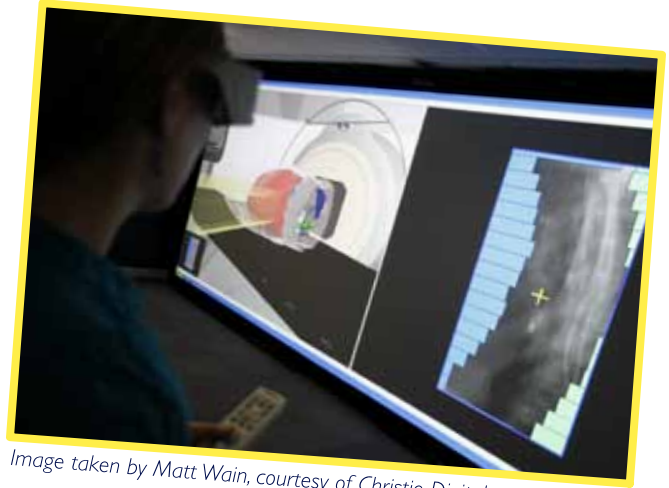


Image taken by Matt Wain, courtesy of Christie Digital

VERT™ as a training aid for skin apposition technique

Understanding the principles of successfully setting up skin apposition techniques can be time intensive. The applicator is very close to the patient and this can cause anxiety for the patient, the students and the supervising therapists. Developing the skills to set up patients in a timely manner is important in the clinic. Students using VERT™ are able to practice this technique in a safe, non-pressured environment. Further learning in the real clinical environment is enhanced as students feel more confident and competent practically following VERT™ training.

