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Portland's Providence St. Vincent Medical Center Introduces the iMRI

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Providence St. Vincent, located at 9135 SW Barnes Road, Portland, Oregon, became the first medical center on the West Coast to introduce a fully integrated operating room with a movable iMRI. Joining sixteen other facilities worldwide, Providence St. Vincent Medical Center (PSVMC) introduced the world's most advanced

neurosurgical imaging system (the IMRISneuro) and began a successful surgical schedule the first week in October, 2009.

According to Dr. Oisin O'Neill. neurosurgeon at Providence the Brain Institute. the iMRI has already improved quality patient care and will change the outcome for hundreds of thousands of patients

over its lifetime. "Everyone has been delighted with the way the new intraoperative MRI has performed," O'Neill explains. "It has helped us remove tumors perfectly."

The iMRI allows physicians to take real-time, three-dimensional images of the brain during surgery, enhancing the ability to completely remove tumors in deep areas of the brain. Before the installation of the iMRI, patients were moved to another room for imaging; the ceiling-mounted iMRI permits surgeons to safely image patients in the operating room – and navigate more precisely during surgery as well.



Side View of the iMRI

According to neurosurgeon Daniel Rohrer, MD, medical director of Cranial Services, Providence Brain Institute, the almost 8-ton magnet gives surgeons the capability to update navigation during surgery, enhancing the removal of tumors and confirming that no complications exist prior to the patients exit from the operating suite. The large-bore 1.5 Tesla mobile MRI is further integrated with microscopy and three-dimensional image guidance, and allows surgical access to the patient which is never compromised. "This device will allow us to deliver the safest, most appropriate surgery to our patients

at Providence St. Vincent," says Rohrer. "The ability to confirm the precision of our tumor removal offers a huge improvement to the post-surgical outcome for many patients."

According to Bonnie W. Smith, administrative director of the Providence Brain Institute, the decision to install the iMRI continued their

focus on building a nationally recognized "center of excellence." She explains that after completing much due diligence, the decision to install this state-of-the-art technology, to be utilized by specialty trained neurosurgeons, offers the opportunity to provide clinical services poised to be recognized nationally. "This all-donor supported project provides Providence Brain Institute the ability to add to our other leading-edge technologies – such as the Gamma Knife Perfexion and the neuro-biplane laboratory – to provide the highest level of patient care in the Pacific Northwest."

ent – the iMRI will balance its cost with tremendous social good."
The installation of the iMRI at PS-VMC continues the 153-year commitment of Providence Health in providing the best medical treatment and patient outcome, says chief executive Janice Burger. Smith agrees and cites the intraoperative suite as a treatment modality that will bring countless practicing surgeons from west of the

mounted gantry (rail). All equipment in the room is non-ferrous, which eliminates the need to remove equipment being used to assist or treat the patient during the imaging procedure. The surgeon can view generated digital images on a monitor in the operating suite and determine if the surgery is proceeding correctly.

Dr. Pankaj Gore, neurosurgeon and co-medical director of Cra-



Front View of the iMRI

Rohrer says that the iMRI will be used predominately for cranial and cervical surgeries - initially for tumor removal and intracranial surgery for the treatment of epilepsy. "Our surgeons will have the capability to do the best job for the patient during the first surgery," Rohrer says. "Other centers using this technology report their surgeons have changed their decision-making process during surgery anywhere from 35 - 40%. If we can cut back on re-ops, incur fewer post-surgical complications and perform our work to the highest standards of safety for the pattraining. "We will act as a "luminary site," explains Smith. "PS-VMC is already recognized as one of the best hospitals in the country and this neurological suite will only further enhance our reputation"

According to Rohrer the surgical suite that houses the iMRI is the most advanced neurological suite in the United States. It includes the newest systems which enhance work flow during surgery; the iMRI, housed in a holding room adjacent to the fully-shielded operating suite, is positioned over the patient by way of a ceiling

nial Services at Providence Brain Institute cites the preparation and training of the staff members at Providence St. Vincent Medical Center's Departments of Surgery and Radiology as key to the success of the iMRI. "As expected," he concludes, "the introperative MRI is proving to be a very useful technology. Three cases have been performed so far in the suite and all have been extremely successful."

Providence St. Vincent Medical Center is renowned for it's many centers of excellence. For more information, visit www.providence. org/oregon