

Nuclear Medicine Usage Grows, Led by PET

An estimated 1,129,900 clinical PET studies were performed in the United States in 2005, according to a report released in August by IMV Medical Information Division, a market research and consulting firm in Des Plaines, IL. These studies were performed in 1,725 hospital and nonhospital sites, using dedicated PET/CT or PET units, mobile units, or nuclear medicine cameras with coincidence detection. "PET/CT scanners have become the preferred technology for PET imaging, as the integration of functional PET images with anatomical visualization of CT has allowed more accurate and faster diagnosis," said Lorna Young, senior director, Market Research at IMV. "While the proportion of PET/CT scanners (vs. PET scanners) installed to date is about 55%, over 90% of the units installed in 2005 were PET/CT scanners." The study indicated that the PET imaging market is experiencing double-digit growth, with the number of patient studies increasing more than 60% since 2003, for an average annual growth rate of 26.5% over the 2-year period.

The researchers noted, however, that because PET is still relatively new, many sites are only beginning to use the technology. Although 1,725 sites offer PET imaging, nearly 1,000 of these use mobile service providers, typically for 1 or 2 days per week. A total of 735 sites own 1 or more fixed PET or PET/CT scanners.

The IMV report describes trends in PET and PET/CT patient studies by procedure type, apparatus type, manufacturer and year of installation, planned purchases, radiopharmaceutical utilization and expenditures by supplier, and site operations characteristics. Among the findings included in the report are:

- Ninety-three percent of patient studies performed on PET or PET/CT scanners are for oncologic indications and 7% are for cardiac and neurologic indications;
- Sixty percent of fixed PET and PET/CT scanners are installed in nonhospital locations, with 40% installed in hospitals; and
- The 5 states with the highest PET and PET/CT patient study volume are California, Florida, Texas, New York, and Pennsylvania.

Overall Nuclear Medicine Growth

These results were part of a larger IMV report and accompanying database on nuclear medicine utilization that pointed to significant differences in utilization be-

tween hospital and nonhospital sites. According to the report, an estimated 19.7 million nuclear medicine procedures were performed during 17.2 million patient visits in the United States in 2005 in more than 7,200 hospital and nonhospital sites. This represents a 15% increase from 2002 to 2005, from 14.9 to 17.2 million patient visits, for an average annualized rate of 5% per year over the period.

More than half (57%) of non-PET imaging patient visits were for cardiovascular studies, including cardiac perfusion. "Nuclear medicine utilization (not including PET procedures) has been driven by cardiovascular applications, which have grown from 35% of 1992 procedures to 57% in 2005," said Young. "Although both hospitals and nonhospitals are equally likely to perform cardiovascular procedures, hospital sites are more likely to perform tumor localizations, radionuclide therapy, bone scans, and liver, respiratory and renal studies."

The report describes trends in nuclear medicine patient visits by procedure type, radiopharmaceutical and pharmacologic stress agent utilization, planned purchases, networking, site operations characteristics, and apparatus, including manufacturer and year of installation. The report also covers adoption trends in new technologies, including SPECT/CT. Among the findings included are:

- An average of 1.8 nuclear imaging cameras are installed per site;
- Two-thirds of the cameras in nonhospital locations were installed during or after 2000, compared with only 45% of those installed in hospital sites;
- Replacement is rapid, with more than two-thirds of purchase activity at nuclear medicine sites targeted at replacement units; and
- Nuclear medicine sites are expanding their network capability to transmit images for both cardiology and radiology applications, such as images from catheterization labs, CT, MR imaging, echocardiography, and general ultrasound.

The 2005 edition of the IMV *Nuclear Medicine Census Database*, *Nuclear Medicine Market Summary Report*, and *2005/2006 PET Market Summary Report* are available for licensing and/or purchase at www.imvlimited.com.

IMV Medical Information Division, Inc.