

Nomination to the:

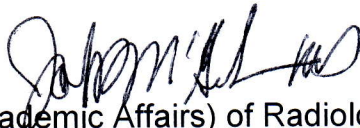
SARTA MEDSTART CLAIRE POMEROY AWARD

Person being Nominated:

John M. Boone, Ph.D.
Professor and Vice Chair (Research) of Radiology
UC Davis School of Medicine

Nominator:

John P. McGahan, M.D.
Professor and Vice Chair (Academic Affairs) of Radiology
UC Davis School of Medicine



Date: March 18, 2010

I am nominating Dr. John Boone for the Sarta Medstart Clare Pomeroy Award. I am nominating him for his invention of breast CT, which is likely to change the field of breast imaging. He had the idea of developing a low dose CT scanner for early detection of breast cancer and was awarded \$ 4,777,000 NIH grant between 2002 – 2007. Using the monies from this grant, Dr. Boone was able to assemble a team of investigators to determine the feasibility of constructing a low dose CT scanner for early detection of breast cancer. He successfully designed and fabricated a working CT breast scanner which was the first working breast CT scanner in the world. The first breast CT patient was imaged in 2004, and since then over 300 patients have been scanned on Dr. Boone's two breast CT systems. This pioneering technology was developed at UC Davis. Currently Dr. Boone has a number of other grants as is either Principal or Co-investigator in conjunction with his pioneering work on breast CT scanner for early detection of breast cancer including a \$5,600,000 ROI grant from the NIH.

In 2005 Dr. Boone and his associates published a number of important physics-based peer reviewed manuscripts on the "Evaluation of X-ray Scatter Properties in a Dedicated Cone-Beam Breast CT Scanner" in the Medical Physics Journal. Dr. Boone published his first article on the use of CT in the breast in humans in 2006 on "Computed Tomography for Imaging the Breast" in Journal of Mammary Gland Biology of Neoplasia. He also published a number of other important articles regarding breast CT. He has shown that CT of the breast is more accurate than conventional mammography in detecting mass-based breast cancer. In addition, breast CT used with the administration of IV contrast has been shown to be useful in early detection of breast cancer in both mass and micro-calcification lesions. Contrast CT may detect tumor reoccurrence and is able to evaluate response to therapy. His work has shown that while breast CT is more sensitive in detecting breast cancer in the average size breast that the radiation dose from CT is no greater than that from the conventional mammography. This was one of initial concerns in developing this technology. It is important to detect early breast cancer as long term survival increases with the detection of smaller cancers. Also of importance is the fact that this technology lends itself to potentially better treatment of breast cancer. Breast conservation is important in developing therapies for breast cancer. Dr. Boone is working on a mechanism to biopsy suspicious lesions with breast CT image guidance. He is also looking at percutaneous therapy methods of treatment of breast cancer, thus avoiding cosmetically deforming surgery.

Dr. Boone's development of the first breast CT scanner in the world is an outstanding contribution which will lead to the early detection and better treatment of breast cancer. Dr. Boone's work is note worthy, not only locally but also on a national and international level. In addition to international recognition of his contribution in the scientific and clinical breast imaging communities, Dr. Boone's breast Ct system has brought attention to UC Davis with local television coverage, front page coverage in the Sacramento Bee, NPR and other media coverage. I strongly recommend that his pioneering work be recognized by the Sarta MedStart Clare Pomeroy Award.