Positron Corporation: Recipient of the 2010 North American Molecular Imaging Systems New Product Innovation Award

“We accelerate growth.”
Award Description

The Frost & Sullivan Award for New Product Innovation Award is presented each year to the company that has demonstrated excellence in new products and technologies within its industry. The recipient company has shown innovation by launching a broad line of emerging products and technologies.

Research Methodology

To choose a recipient of this Award, the analyst team tracks all new product launches, R&D spending, products in development, and new product features and modifications. This is accomplished through interviews with the market participants and extensive secondary and technology research. All new product launches and new products in development in each company are compared and evaluated based on degree of innovation and customer satisfaction. Companies are then ranked by number of new product launches and new products in development.

Measurement Criteria

In addition to the methodology described above, there are specific criteria used to ascertain final competitor ranking in this industry. The recipient has excelled by substantially increasing one or more of the following criteria:

- Significance of new product(s) in its industry
- Competitive advantage of new product(s) in its industry
- Product innovation in terms of unique or revolutionary technology
- Product acceptance in the marketplace
- New products value-added services provided to customers
- Number of competitors with similar product(s)
Frost & Sullivan’s Global Research Platform

Frost & Sullivan is entering its 49th year in business with a global research organization of 1,800 analysts and consultants who monitor more than 300 industries and 250,000 companies. The Company’s research philosophy originates with the CEO’s 360 Degree Perspective,* which in turn serves as the foundation of its TEAM Research** methodology. This unique approach enables us to determine how best-in-class companies worldwide manage growth, innovation, and leadership. Based on the findings of this Best Practices research, Frost & Sullivan is proud to present the 2010 North American New Product Innovation Award in Cardiac Molecular Imaging Systems to Positron Corporation.

SIGNIFICANCE OF THE NEW PRODUCT INNOVATION AWARD

Key Industry Challenges Addressed

The nuclear cardiology imaging scene has been dominated by single photon emission computed tomography (SPECT), until recently, when the imaging world was flipped upside down by the announcement of SPECT reimbursement cuts by the Centers for Medicare and Medicaid Services (CMS); combined with the world shortage of the molybdenum-99 isotope. Many in the industry are looking for new technologies to improve their diagnostic accuracy, improve patient outcomes, reduce patient radiation exposure all while adding to their bottom line. The elusive solution to this dire situation may lie in an already well established, underutilized imaging modality: PET.

For over 25 years, Positron has been the leader in enabling physicians to provide high quality Positron Emission Tomography, or PET, images with their proven technology. Positron offers the latest in PET cardiac imaging with the addition of the Attrius®, PET scanner, to their product portfolio. The Attrius® was developed to be optimized for molecular imaging of the heart, making it the ideal solution for cardiologists and hospitals looking to add high accuracy and cost effective technology.

While PET is a more costly procedure than SPECT imaging, the use of PET in cardiac nuclear medicine has been shown to reduce long-term costs and resolve clinically complicated cases. The accuracy of PET helps reduce the need for unnecessary angiograms. It can also reduce bypass surgeries by more accurately diagnosing risk stratifying patients that may require the invasive procedure from those that might benefit from alternative therapies. This modality has also been shown to quantitatively monitor therapy, which helps provide a personalized medicine plan for each patient. PET, specifically without a CT, has shown to have the lowest radiation exposure for the assessment of coronary disease.

Taking advantage of these trends, Positron strategically introduced the industry’s first cardiac optimized PET scanner. Positron’s Attrius® scanner is designed to provide a significantly lower cost of ownership as compared to PET/CT modalities and does not need additional space for electronics. It has a much smaller footprint, fewer boards, easier access to the detector modules, less power consumption, and automated tuning features imbedded within it. The product can easily integrate into practices of all sizes.
The table limit was increased to 450lbs, permitting larger patients to be imaged. The table is also capable of loading patients from the front or back, improving the position options for imaging. Further, Positron’s cardiac PET scanner is one of the highest 2D sensitivity systems on the market today. It features more uniformity achieved in its slice sensitivity, consistency in the quantitation from slice-to-slice, and the ability to more accurately define the locale of a lesion or perfusion defect. The system is designed to provide concurrent acquisition, reconstruction, image processing and display, as well as, other functions such as data archiving, without interference. The Attrius® includes many key features in its design: uniform spatial resolution in all three planes; true dynamic and gated 82Rb acquisition capability; and a unique staggered detector design for optimal quantitative results.

The Attrius® also includes a robust, cardiac specific, imaging software package designed to ensure effortless interpretation for today’s most challenging clinical cases for nuclear cardiologists who value high quality PET imagery at an affordable price. Additional features include heart disease specific software with the ability to monitor therapy, coronary artery overlay display, open architecture for new protocol development and customization and motion correction software.

Impact of New Product Innovation Award on Key Stakeholders

The New Product Innovation Award is a prestigious recognition of Positron Corporation’s accomplishments in the Integrated Cardiac Imaging Tools sector. An unbiased, 3rd party recognition can provide a profound impact in enhancing the brand value and thereby accelerating the growth of Positron Corporation’s diagnostic process potential in cardiology. As captured in Chart 1 below, by researching, ranking, and recognizing those who deliver excellence and best practices in their respective endeavors, Frost & Sullivan hopes to inspire, influence, and impact three specific constituencies:

Investors

Investors and shareholders always welcome unbiased and impartial third party recognition. Similarly, prospective investors and shareholders are drawn to companies with a well-established reputation for excellence. Unbiased validation is the best and most credible way to showcase an organization worthy of investment.

Customers

3rd party industry recognition has been proven to be the most effective way to assure customers that they are partnering with an organization that is leading in its field.

Employees

This Award represents the creativity and dedication of Positron Corporation’s executive team and employees. Such public recognition can boost morale and inspire your team to continue its best-in-class pursuit of a strong competitive position for Positron Corporation’s Cardiac Molecular Imaging Systems.

© 2010 Frost & Sullivan
Key Benchmarking Criteria for New Product Innovation Award

For the New Product Innovation Award, the following criteria were used to benchmark Positron Corporation’s performance against key competitors:

- Innovative Element of the Product
- Leverage of Leading Edge Technologies
- Value Added Features/Benefits
- Increased Customer Value
- Customer Acquisition/Penetration Potential

Decision Support Matrix and Measurement Criteria

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Matrix (DSM). The DSM is an analytical tool that compares companies’ performance relative to each other with an integration of quantitative and qualitative metrics. The DSM features criteria unique to each award category and ranks importance by assigning weights to each criterion. The relative weighting reflects current market conditions and illustrates the associated importance of each criterion according to Frost & Sullivan. Fundamentally, each DSM is distinct for each market and award category. The DSM allows our research and consulting teams to objectively analyze each company’s performance on each criterion relative to its top competitors and assign performance ratings on that basis. The DSM follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are shown in Chart 2.

This exercise encompasses all criteria, leading to a weighted average ranking of each company. Researchers can then easily identify the company with the highest ranking. As a final step, the research team confirms the veracity of the model by ensuring that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.
Best Practice Award Analysis for Positron Corporation

The Decision Support Matrix, shown in Chart 4, illustrates the relative importance of each criterion for the New Product Innovation Award and the ratings for each company under evaluation. To remain unbiased while also protecting the interests of the other organizations reviewed, we have chosen to refer to the other key players as Competitor 1 and Competitor 2.
Criterion 1: Innovative Element of the Product

Clinical applications of cardiac positron emission tomography have made dramatic advances over the past three years, particularly in myocardial perfusion imaging. Some of these advances include cardiac-specific PET technology, specialized software, and profound biological insights into myocardial perfusion which goes far beyond the traditional binary interpretation of perfusion images as normal or abnormal requiring arteriographic confirmation. With the introduction of Positron Corporation’s Attrius® cardiac PET scanner, the issues surrounding sensitivity of PET imaging like size of detector, distance from patient, detector encoding scheme, parallelism of the electronics, and packing fraction are greatly reduced.

The Positron Attrius® scanner’s design is optimized for cardiac imaging unlike their competition with PET/CT. The Positron Attrius® was created with a lower price tag, smaller footprint, reduced radiation exposure to the patient, improved workflow, provisions for rapid quantitation and improved serviceability.

Criterion 2: Leverage of Leading Edge Technologies

Positron’s quantitative cardiac specific therapy monitoring software was initially developed in partnership with an industry leading cardiologist with the primary goal of permitting easy interpretation of even the most complex clinical cases. The Attrius® product is equipped with a robust, cardiac specific, imaging software which can execute on multiple processors to provide concurrent acquisition, reconstruction, image processing, and display, as well as other key functions including data archiving, without interference. Positron’s leading edge hardware and software truly sets them apart from their competition.

Criterion 3: Value Added Features/Benefits

Positron Corporation’s Attrius® cardiac PET scanner is one of the highest 2D sensitivity systems on the market today. It features more uniformity achieved in its slice sensitivity, consistency in the quantitation from slice-to-slice, and the ability to more accurately define the locale of a lesion or perfusion defect. Furthermore, Positron’s unique, shorter septa detector design enables it to achieve dynamic performance efficiency. As a result, Attrius® boasts cooler operating conditions for improved electronic reliability versus the competition. Additional features include heart disease specific software including the ability to monitor therapy, coronary artery overlay display, open architecture for new protocol development and customization and motion correction software. The Attrius®, when added to a medical practice or hospital will add benefit to all parties along the treatment paradigm.

Criterion 4: Increased Customer Value

Positron’s Attrius® scanner is designed to provide a significantly lower cost of ownership as compared to PET/CT modalities. Positron’s rapid segmented attenuation correction scanning allows for scan times competitive to that of PET/CT. Moreover, the Attrius® product’s gantry design minimizes the floor space required for installation. This in turn enables PET to be installed in clinics wherever floor space is a premium.
Overall, Positron is committed to leading this new quantitative dimension in PET imaging by designing the Attrius® product line with fewer boards, easier access to the detector modules, and boards due to the flexible rear nosecone shield design, fewer power supplies, fewer lighter gauge cables, and automated tuning features imbibed within it. The Attrius® was designed with a small footprint, allowing the system to fit into a 15’ x 20’ space. The table limit was increased to 450 lbs, permitting larger patients to be imaged. The table is also capable of loading patients from the front or back, improving the position options for imaging.

**Criterion 5: Customer Acquisition/Penetration Potential**

The cardiac PET market is expanding evidenced by large and mid-sized pharmaceutical companies developing single-dose F-18-based cardiac perfusion agent in response to renewed interest. PET is becoming more in demand than PET/CT with a lower cost of entry. New scanners, such as Positron’s, are updated to today’s standards. With the newly-minted FDA approval, Positron can now ramp up production and sales to cardiology offices and hospitals. The device seems well timed given the current urgency to curb costs, reduce patient radiation exposure and demonstrate effectiveness as the U.S. considers health care reform options. The product line is manufactured in Shenyang, China, through their joint venture with Neusoft Medical Systems. Their manufacturing facility has a large capacity which enables Positron to meet even the highest demand for the product.

Positron’s Attrius® is the only dedicated PET available today for the thousands of cardiologists and hospitals looking for a solution to today’s imaging challenges.

**The CEO 360 Degree Perspective™ – Visionary Platform for Growth Strategies**

The CEO’s 360 Degree Perspective model provides a clear illustration of the complex business universe in which CEOs and their management teams live today. It represents the foundation of Frost & Sullivan’s global research organization and provides the basis on which companies can gain a visionary and strategic understanding of the market. The 360 degree perspective is also a “must-have” requirement for the identification and analysis of best-practice performance by industry leaders.

The 360 degree model enables our clients to gain a comprehensive, action-oriented understanding of market evolution and its implications for their companies’ growth strategies. As illustrated in Chart 5 below, the following six-step process outlines how our researchers and consultants embed the 360 degree perspective into their analyses and recommendations:
Critical Importance of TEAM Research

Frost & Sullivan’s TEAM Research methodology represents the analytical rigor of our research process: it offers a 360 degree view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan’s research methodologies. Our experience has shown over the years that companies too often make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Frost & Sullivan contends that the successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices and demographic analyses. In that vein, the letters T, E, A and M reflect our core technical, economic, applied (financial and best practices) and market analyses. The integration of these research disciplines into the TEAM Research methodology provides an evaluation platform for benchmarking industry players and for creating high-potential growth strategies for our clients.
About Positron Corporation

Positron Corporation, a molecular imaging company is focused on nuclear cardiology applications. The company utilizes its proprietary product line to provide unique solutions to the Nuclear Medicine community ranging from imaging to radiopharmaceutical distribution. Positron’s product line includes Attrius®, a PET imaging device; the PULSE®, a SPECT imaging device; the Nuclear Pharm-Assist®, an automated radiopharmaceutical distribution device; and the Tech-Assist®, a radiopharmaceutical injection shield. As a prominent player in the cardiac imaging industry, Positron maintains associations and relationships with multiple associations including the Academy of Molecular Imaging, American College of Cardiology American Society of Nuclear Cardiology and Society of Nuclear Medicine. Positron founded in 1983, is headquartered in Indianapolis, Indiana. www.positron.com.