Denosumab Demonstrated Superiority Over Zometa(R) in Pivotal Phase 3 Head-to-Head Trial in Prostate Cancer Patients With Bone Metastases

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--Denosumab Trial Met Primary and All Secondary Endpoints by Significantly Delaying Time to First Skeletal Related Event and Significantly Reducing First-and-Subsequent Skeletal Related Events Compared to Zometa

--Second Phase 3 Advanced Cancer Trial to Demonstrate Denosumab Superiority Versus Zometa

THOUSAND OAKS, Calif., Feb 08, 2010 /PRNewswire via COMTEX/ -- Amgen (Nasdaq: AMGN) today announced that a pivotal, Phase 3, head-to-head trial evaluating denosumab versus Zometa(R) (zoledronic acid) in the treatment of bone metastases in 1,901 men with advanced prostate cancer met its primary and secondary endpoints. Denosumab demonstrated superiority over Zometa for both delaying the time to the first on-study skeletal related event (SRE) (fracture, radiation to bone, surgery to bone or spinal cord compression) (hazard ratio 0.82, 95 percent CI: 0.71, 0.95), and reducing the rate of multiple SREs (hazard ratio 0.82, 95 percent CI: 0.71, 0.94). Both results were statistically significant.

Overall rates of adverse events and serious adverse events, including infections, were generally similar between the two arms. Osteonecrosis of the jaw was infrequent (22 patients receiving denosumab as compared with 12 patients receiving Zometa) and there was no statistically significant difference between treatment arms. As with previous studies in advanced cancer patients, hypocalcemia was more frequent in the denosumab arm. Both overall survival and the time to cancer progression were balanced between treatment arms.

"These Phase 3 results demonstrate the ability of denosumab to delay bony complications in patients suffering from metastatic prostate cancer," said Roger M. Perlmutter, M.D., Ph.D., executive vice president of Research and Development at Amgen. "Denosumab has shown remarkable consistency in reducing the serious complications of bone metastases. Today's results greatly enhance our understanding of the efficacy of denosumab in multiple different tumor types."

This study is the final of three pivotal trials in a total of over 5,700 advanced cancer patients investigating the potential of denosumab to treat bone metastases. Results from the previous two trials were presented in September 2009. These three studies will form the basis of the clinical evidence package for denosumab in advanced cancer, which will be submitted to regulatory authorities later this year.

Full efficacy and safety data for the prostate cancer study will be submitted to the American Society for Clinical Oncology, for possible presentation at their meeting in early June. Additionally, results are expected in the second half of the year from a study investigating whether denosumab may prolong bone metastasis-free survival in prostate cancer patients.

Study Design

This study was an international, Phase 3, randomized, double-blind study comparing denosumab with Zometa in the treatment of bone metastases in patients with advanced prostate cancer. Patients enrolled in the study were randomized in a one-to-one ratio to receive either 120 mg of denosumab subcutaneously every four weeks (Q4W) or Zometa administered intravenously as at least a 15 minute infusion at a dose of 4 mg every four weeks as per the labeled instructions. The study consisted of 1,901 patients, mean age of 71, who have bone metastases from hormone-refractory prostate cancer.

In clinical trials testing new medications for bone metastases, treatment success has been measured by whether the bone complications, or SREs, caused by the bone metastases are reduced or delayed. The primary and secondary endpoints of the denosumab bone metastases studies use a composite endpoint of four SREs - fracture, radiation to bone, surgery to bone, and spinal cord compression - to measure the effectiveness of denosumab versus Zometa.

The primary endpoint was to evaluate if denosumab is non-inferior to Zometa with respect to the first on-study SRE in patients with advanced prostate cancer and bone metastases. Secondary endpoints were to evaluate if denosumab was superior to Zometa with respect to the first on-study SRE, as well as first-and-subsequent on-study SREs, and to assess the safety and tolerability of denosumab compared with Zometa.

About Denosumab and Amgen's Research in Bone Biology

Denosumab is the first fully human monoclonal antibody in late stage clinical development that specifically targets RANK Ligand, the essential regulator of osteoclasts (the cells that break down bone). With more than 19,000 patients in trials across indications worldwide, the denosumab development program is the largest ever initiated by Amgen. This broad and deep development program demonstrates Amgen's commitment to researching and delivering pioneering medicines to patients with unmet medical needs. Amgen is studying denosumab in numerous tumor types across the spectrum of cancer induced bone disease. Over 11,000 patients have been enrolled in the denosumab oncology clinical trials testing the drug for bone loss and destruction associated with cancer treatment-induced bone loss in breast and prostate cancers, for the prevention of skeletal related events due to the spread of cancer to the bone in multiple myeloma and multiple solid tumors, and for its potential to delay bone metastases in prostate cancer.

Bone Metastases: Impact and Prevalence

Bone metastases, cancer cells that separate from tumors and migrate to bone tissue where they settle and grow, occur in more than 1.5 million people worldwide.(1) With improvements in cancer care, including earlier diagnosis and new treatment options, leading to increases in survival rates(2), the number of patients developing metastatic disease secondary to a primary cancer is increasing. Bone metastases are a significant problem for patients with certain types of advanced cancer, with incidence rates of nearly 100 percent in myeloma patients and as high as 75 percent in breast and prostate cancer patients.

With bone metastases the growing cancer cells weaken and destroy the bone around the tumor. The damage the tumor has caused to the bone can

result in a number of serious complications, collectively called SREs. All are serious complications for advanced cancer patients.

The economic burden of U.S. patients with bone metastases is significant and is estimated to be $12.6 billion annually.(3) Patients with bone metastases who experience an SRE incur significantly higher medical costs compared with those who do not experience an SRE.(4)

Bone Metastases in Prostate Cancer

Nearly 50 percent of castrate-resistant patients with prostate cancer who are not treated for bone metastases experience an SRE, suffering intractable pain and functional impairment.(5,6) SREs pose significant incremental healthcare costs for patients and for the system. Patients with cancer pain are among the most difficult to treat and require much time and effort from physicians and their healthcare team.(7)

About Amgen

Amgen discovers, develops and delivers innovative human therapeutics. A biotechnology pioneer since 1980, Amgen was one of the first companies to realize the new science's promise by bringing safe and effective medicines from lab, to manufacturing plant, to patient. Amgen therapeutics have changed the practice of medicine, helping millions of people around the world in the fight against cancer, kidney disease, rheumatoid arthritis, and other serious illnesses. With a deep and broad pipeline of potential new medicines, Amgen remains committed to advancing science to dramatically improve people's lives. To learn more about our pioneering science and our vital medicines, visit www.amgen.com.

Forward-Looking Statements

This news release contains forward-looking statements that are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described. All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements, including estimates of revenues, operating margins, capital expenditures, cash, other financial metrics, expected legal, arbitration, political, regulatory or clinical results or practices, customer and prescriber patterns or practices, reimbursement activities and outcomes and other such estimates and results. Forward-looking statements involve significant risks and uncertainties, including those discussed below and more fully described in the Securities and Exchange Commission (SEC) reports filed by Amgen, including Amgen's most recent annual report on Form 10-K and most recent periodic reports on Form 10-Q and Form 8-K. Please refer to Amgen's most recent Forms 10-K, 10-Q and 8-K for additional information on the uncertainties and risk factors related to our business. Unless otherwise noted, Amgen is providing this information as of Feb. 8, 2010 and expressly disclaims any duty to update information contained in this news release.

No forward-looking statement can be guaranteed and actual results may differ materially from those we project. Discovery or identification of new product candidates or development of new indications for existing products cannot be guaranteed and movement from concept to product is uncertain; consequently, there can be no guarantee that any particular product candidate or development of a new indication for an existing product will be successful and become a commercial product. Further, preclinical results do not guarantee safe and effective performance of product candidates in humans. The complexity of the human body cannot be perfectly, or sometimes, even adequately modeled by computer or cell culture systems or animal models. The length of time that it takes for us to complete clinical trials and obtain regulatory approval for product marketing has in the past varied and we expect similar variability in the future. We develop product candidates internally and through licensing collaborations, partnerships and joint ventures. Product candidates that are derived from relationships may be subject to disputes between the parties or may prove to be not as effective or as safe as we may have believed at the time of entering into such relationship. Also, we or others could identify safety, side effects or manufacturing problems with our products after they are on the market. Our business may be impacted by government investigations, litigation and products liability claims. We depend on third parties for a significant portion of our manufacturing capacity for the supply of certain of our current and future products and limits on supply may constrain sales of certain of our current products and product candidate development.

In addition, sales of our products are affected by the reimbursement policies imposed by third-party payors, including governments, private insurance plans and managed care providers and may be affected by regulatory, clinical and guideline developments and domestic and international trends toward managed care and healthcare cost containment as well as U.S. legislation affecting pharmaceutical pricing and reimbursement. Government and others' regulations and reimbursement policies may affect the development, usage and pricing of our products. In addition, we compete with other companies with respect to some of our marketed products as well as for the discovery and development of new products. We believe that some of our newer products, product candidates or new indications for existing products, may face competition when and as they are approved and marketed. Our products may compete against products that have lower prices, established reimbursement, superior performance, are easier to administer, or that are otherwise competitive with our products. In addition, while we routinely obtain patents for our products and technology, the protection offered by our patents and patent applications may be challenged, invalidated or circumvented by our competitors and there can be no guarantee of our ability to obtain or maintain patent protection for our products or product candidates. We cannot guarantee that we will be able to produce commercially successful products or maintain the commercial success of our existing products. Our stock price may be affected by actual or perceived market opportunity, competitive position, and success or failure of our products or product candidates. Further, the discovery of significant problems with a product similar to one of our products that implicate an entire class of products could have a material adverse effect on sales of the affected products and on our business and results of operations.

The scientific information discussed in this news release related to our product candidates is preliminary and investigative. Such product candidates are not approved by the U.S. Food and Drug Administration (FDA), and no conclusions can or should be drawn regarding the safety or effectiveness of the product candidates. Only the FDA can determine whether the product candidates are safe and effective for the use(s) being investigated. Further, the scientific information discussed in this news release relating to new indications for our products is preliminary and investigative and is not part of the labeling approved by the U.S. Food and Drug Administration (FDA) for the products. The products are not approved for the investigational use(s) discussed in this news release, and no conclusions can or should be drawn regarding the safety or effectiveness of the products for these uses. Only the FDA can determine whether the products are safe and effective for these uses. Healthcare professionals should refer to and rely upon the FDA-approved labeling for the products, and not the information discussed in this news release.

ZOMETA is a registered trademark of Novartis Oncology.

*Editors Note: The FDA has provisionally approved the trade name Prolia(TM) for the proposed indications of treatment and prevention of osteoporosis in postmenopausal women, and treatment and prevention of bone loss in patients undergoing hormone ablation for prostate or breast cancer. The Prolia(TM) trade name is only for these indications and may not apply for other indications of denosumab.

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(Logo: http://www.newscom.com/cgi-bin/prnh/20081015/AMGENLOGO)

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