Darzalex™ (daratumumab) – New Orphan Drug Approval

- On November 16, 2015, the FDA announced the approval of Genmab and Janssen Biotech's Darzalex (daratumumab) for the treatment of patients with multiple myeloma who have received at least 3 prior lines of therapy including a proteasome inhibitor (PI) and an immunomodulatory agent (IMiD) or who are double-refractory to a PI and IMiD.
    - This indication is approved under accelerated approval based on response rate.
- Multiple myeloma is a blood cancer that occurs when malignant plasma cells grow uncontrollably in the bone marrow. The National Cancer Institute estimates there will be 26,850 new cases of multiple myeloma and 11,240 related deaths in the U.S. this year.
- Darzalex is a human monoclonal antibody that binds with high affinity to the CD38 molecule, which is highly expressed on the surface of multiple myeloma cells. It is believed to induce tumor cell death through apoptosis and multiple immune-mediated mechanisms.
    - Darzalex was granted breakthrough therapy designation, priority review, and orphan drug designation.
- The safety and efficacy of Darzalex were demonstrated in two open-label studies.
    - In one study of 106 patients receiving Darzalex, 29% of patients experienced a complete or partial reduction in their tumor burden, which lasted for an average of 7.4 months.
    - In the second study of 42 patients receiving Darzalex, 36% had a complete or partial reduction in their tumor burden.
- Warnings and precautions for Darzalex include infusion reactions, interference with serological testing, and interference with determination of complete response.
- The most common adverse events (≥ 20%) with Darzalex use were infusion reactions, fatigue, nausea, back pain, pyrexia, cough, and upper respiratory tract infection.
- The recommended intravenous dose of Darzalex is 16 mg/kg body weight.
    - The dosing schedule is weekly on weeks 1 – 8, every two weeks on weeks 9 – 24, and then every four weeks on week 25 onwards until disease progression.
    - To reduce the risk of infusion reactions, patients should be pre-medicated with a corticosteroid, antipyretic, and an antihistamine.
    - An oral corticosteroid should be administered on the first and second day after all infusions to reduce the risk of delayed infusion reactions.
- Janssen Biotech plans to launch Darzalex by the end of November 2015. Darzalex will be available as 100 mg/5 mL and 400 mg/20 mL vials.