Kisqali® (ribociclib) – New drug approval

- On March 13, 2017, Novartis announced the FDA approval of Kisqali (ribociclib), indicated in combination with an aromatase inhibitor as initial endocrine-based therapy for the treatment of postmenopausal women with hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative advanced or metastatic breast cancer.

- According to the American Cancer Society, 252,710 women will be diagnosed with invasive breast cancer in the U.S. in 2017. About 40,610 women will die from breast cancer.

- Kisqali is a selective cyclin-dependent kinase inhibitor, a class of drugs that help slow the progression of cancer by inhibiting two proteins called cyclin-dependent kinase 4 and 6 (CDK4/6). These proteins, when over-activated, can enable cancer cells to grow and divide too quickly.

- Ibrance® (palbociclib) is another CDK 4/6 inhibitor that has been FDA approved for the treatment of HR-positive, HER2-negative advanced or metastatic breast cancer in combination with letrozole as initial endocrine based therapy in postmenopausal women, or Faslodex® (fulvestrant) in women with disease progression following endocrine therapy.

- The efficacy of Kisqali was based on the MONALEESA-2 trial that randomized 668 postmenopausal women with HR-positive, HER2-negative advanced or metastatic breast cancer to Kisqali plus letrozole vs. letrozole alone. The primary efficacy outcome was progression-free survival (PFS).

    - Kisqali plus letrozole reduced the risk of progression or death by 44% vs. letrozole alone (median PFS not reached (NR) [95% CI: 19.3 months, NR] vs. 14.7 months [95% CI: 13.0, 16.5 months]; HR = 0.556 [95% CI: 0.429, 0.720]; $p < 0.0001$).
    - At a subsequent analysis with additional 11-month follow-up and progression events, a median PFS of 25.3 months for Kisqali plus letrozole vs. 16.0 months for letrozole alone was observed.
    - Overall survival data is not yet mature and will be available at a later date.

- Warnings and precautions of Kisqali include QT interval prolongation, hepatobiliary toxicity, neutropenia, and embryo-fetal toxicity.

- The most common adverse reactions (≥ 20%) with Kisqali use were neutropenia, nausea, fatigue, diarrhea, leukopenia, alopecia, vomiting, constipation, headache, and back pain.

- The recommended dose of Kisqali is 600 mg (three 200 mg tablets) taken orally, once daily for 21 consecutive days followed by 7 days off treatment resulting in a complete cycle of 28 days.

    - If administering with letrozole, letrozole 2.5 mg should be taken once daily throughout the 28-day cycle. Refer to the letrozole drug label for additional information.
    - If using Kisqali with another aromatase inhibitor, refer to individual aromatase inhibitor drug labels for dosing information.

- Per Novartis, Kisqali will have a flexible pricing structure: a 28-day supply of the 600 mg dose, 400 mg dose and 200 mg dose will cost $10,950, $8,760 and $4,380, respectively.

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- Novartis plans to launch Kisqali in the next few days. Kisqali will be available as 200 mg film-coated tablets.