## Rinvoq™ (upadacitinib) – New drug approval

- On August 16, 2019, AbbVie announced the FDA approval of Rinvoq (upadacitinib), for the treatment of adults with moderately to severely active rheumatoid arthritis (RA) who have had an inadequate response or intolerance to methotrexate (MTX).
    - Use of Rinvoq in combination with other Janus kinase (JAK) inhibitors, biologic disease modifying anti-rheumatic drugs (DMARDs), or with potent immunosuppressants such as azathioprine and cyclosporine is not recommended.
- Rinvoq is a small molecule JAK inhibitor.
- The efficacy of Rinvoq 15 mg once daily was demonstrated in five, randomized, double-blind studies in patients with moderately to severely active RA. Other dosages of upadacitinib were also evaluated in the studies; however, the FDA approved dose is 15 mg once daily.
    - Patients treated with Rinvoq 15 mg, alone or in combination with conventional DMARDs (cDMARDs), achieved higher ACR response rates compared to MTX monotherapy or placebo, respectively, at the primary efficacy time point.

| Study name/ population | Duration | Medications | Primary endpoint | Results<br>% response,<br>% change vs. placebo |
|---|---|---|---|---|
| RA-I/ naïve to MTX (N = 947) | 24-wks | Rinvoq 15 mg or MTX | ACR50 at week 12 | MTX = 28%<br>Rinvoq 15 mg = 52%;<br>Change = 24 (95% CI: 16, 31) |
| RA-II/ inadequate response to MTX (N = 648) | 14-wks | Rinvoq 15 mg or MTX | ACR20 at week 14 | MTX = 41%<br>Rinvoq 15 mg = 65%;<br>Change = 26 (95% CI: 17, 36) |
| RAIII/ inadequate response to DMARDs (N = 661) | 12-wks | Rinvoq 15 mg or placebo added to cDMARDs | ACR20 at week 12 | Placebo = 36%<br>Rinvoq 15 mg = 64%;<br>Change = 28 (95% CI: 19, 37) |
| RA-IV/ inadequate response to MTX (N = 1,629) patients) | 48-wks | Rinvoq 15 mg, active comparator, or placebo added to MTX | ACR20 at week 12 | Placebo = 36%<br>Rinvoq 15 mg = 71%;<br>Change = 34 (95% CI: 29, 39) |
| RA-V/ inadequate response to biologics (N = 699) | 12-wks | Rinvoq 15 mg or placebo added to cDMARDs | ACR20 at week 12 | Placebo = 28%<br>Rinvoq 15 mg = 65%;<br>Change = 36 (95% CI: 69, 46) |

- Rinvoq carries a boxed warning for serious infections, malignancy, and thrombosis.
- Additional warnings and precautions of Rinvoq include gastrointestinal perforations, laboratory parameters, embryo-fetal toxicity, and vaccination.
- The most common adverse reactions (≥ 1%) with Rinvoq use were upper respiratory tract infections, nausea, cough, and pyrexia.

Continued . . .

- The recommended dose of Rinvoq is 15 mg orally once daily with or without food.
    - — Rinvoq may be used as monotherapy or in combination with MTX or other nonbiologic DMARDs.
- The list price of Rinvoq will be $59,000 per year.
- AbbVie plans to launch Rinvoq in late August 2019. Rinvoq will be available as 15 mg extended-release tablets.