BACKGROUND: Axial spondyloarthritis (axSpA) is characterised by inflammation of the sacroiliac joints (SIJ) and the spine. Secukinumab (SEC) treatment was clinically efficacious and reduced SIJ bone marrow oedema as detected by magnetic resonance imaging (MRI) in patients (pts) with non-radiographic (nr)-axSpA within 52 weeks in the PREVENT (NCT02696031) study.1

OBJECTIVES: To report radiographic progression and the course of inflammation as assessed by X-ray and MRI of SIJ and spine over 2 years in the PREVENT study.

METHODS: Study design and key endpoints have been reported earlier.1 In total, 555 pts were randomised (1:1:1) to receive SEC 150 mg, with (LD) or without loading (NL) doses, or placebo (PBO). Switch to open-label (OL) SEC or standard of care (SoC) was permitted after Week (Wk) 20. All pts (except those who switched to SoC) received OL SEC from Wk 52. Radiographs of the spine and SIJ were collected at baseline (BL) and Wk 104; MR images of the spine and SIJ were collected at BL, Wk 16, 52, and 104. Spinal radiographs were scored using the modified Stoke Ankylosing Spondylitis Spine Score (mSASSS) and SIJ radiographs according to modified New York criteria (mNYC). Pts whose screening SI joint radiographs fulfilled mNY criteria during the eligibility reading session were excluded from the study. Spinal MRI images were assessed for signs of inflammation with the Berlin score. SIJ bone marrow oedema was assessed according to the Berlin Active Inflammatory Lesions Scoring. All images were evaluated in blinded fashion independently by 2 central readers. All data are reported from the Wk 104 reading session and are presented as observed.

RESULTS: The vast majority (>98%) of pts treated with SEC 150 mg (pooled LD and NL) showed no structural progression, defined as change in total mSASSS score ≤ smallest detectable change (SDC) of 0.76 (80% agreement level) over 2 years. At BL, 62 pts (43 in SEC, 19 in PBO) presented with ≥1 syndesmophyte (≥1 vertebral unit scored by ≥1 reader). Among these pts, 9 in SEC (20.9%) and 7 in PBO (36.8%) groups had developed ≥1 new syndesmophyte by Wk 104. Among 237 SEC and 117 PBO pts without syndesmophytes at BL, only 4 pts on SEC (1.7%) and 4 pts on PBO (3.4%) developed ≥1 new syndesmophyte by Wk 104. SIJ radiographs showed that 88% of pts on SEC and 86% on PBO had no progression in SIJ (defined as change ≤ SDC (0.46) in total mNYC score) by Wk 104. No patient had an increase in total mNYC score of 2 or more. When screening radiographs of eligible pts were scored alongside post-BL images in the final reading campaign, approximately 25% of pts (68/277 and 34/139 in the SEC and PBO groups, respectively) were evaluated as mNY-positive at screening (pts were considered mNY-positive if ≥1 reader evaluated them as mNY-positive). Of these, 11/68 pts in the SEC (16.2%) and 5/34 in the PBO (14.7%) groups were evaluated as mNY-negative at Wk 104. In the SEC and PBO groups, 202 (96.7%) and 102 (97.1%) pts who were mNY-negative at screening stayed negative through Wk 104, respectively. Only 7 pts in the SEC (3.3%) and 3 in the PBO (2.9%) groups who were mNY-negative at BL were scored as mNY-positive at Wk 104. In both groups, fewer pts progressed from mNY-negative to mNY-positive than had a change in the opposite direction (from positive to negative), resulting in an overall negative net progression. Spinal inflammation on MRI (Berlin score) was low at BL with a mean of 0.62 in SEC and 1.07 in PBO groups with no meaningful change up to Wk 104 (mean of 0.56, SEC). SEC reduced SIJ bone marrow oedema score versus PBO at Wk 16 and Wk 52 with sustained reduction through Wk 104 in the overall patient population, with greater reduction in pts with BL score >2 (Figure 1).

Conclusion: Most pts initially randomised to SEC or PBO showed no radiographic progression through 2 years. There was some discrepancy between SIJ efficacy and efficacy reads. SEC reduced SIJ inflammation (bone marrow oedema) on MRI in pts with active nr-axSpA.

REFERENCES:

Figure. Mean change in SIJ bone marrow oedema score by MRI in the overall population and in patients with baseline score >2 through Week 104.

Data presented as observed. Secukinumab (pooled) included patients who continued on secukinumab to Week 104. Placebo included only patients randomised to placebo who remained on placebo to Week 52. At each time point, only patients with a value at both baseline and that time point are included. MRI magnetic resonance imaging; N, total number of randomised patients; n, number of evaluable patients; SIJ, sacroiliac joint.

Disclosure of Interests: Juergen Braun Speakers bureau: Abbvie (Abbott), Amgen, BMS, Boehringer, Celgene, Celltrion, Centocor, Chugai, Medac, MSD (Schering-Plough), Novartis, Pfizer (Wyeth), Roche, Sanofi-Aventis, UCB Pharma, Eli Lilly, Consultant of: Abbvie (Abbott), Amgen, BMS, Boehringer, Celltrion, Centocor, Chugai, Medac, MSD (Schering-Plough), Mundipharma, Novartis, Pfizer (Wyeth), Roche, Sanofi-Aventis, UCB, Eli Lilly, Grant/research support from: Abbvie (Abbott), Amgen, BMS, Boehringer,
Background: While data on real-life SEC retention rate in patients (pts) with axSpA is accumulating, there are no data on predictive factors for this retention. Presence of objective sign of inflammation (OSI) is known to be predictive of anti-TNF efficacy and their retention in axSpA.

Methods: French retrospective study collecting between October 2019 and September 2020 data from axSpA pts a) having initiated and received at least one dose of SEC between August 11th 2016 and August 31st 2018, b) at least one a year follow-up period. Retention of SEC at 1 year was assessed by Kaplan Meier (KM) method.

Results: In total, 906 pts from 47 centers (male: 42.2%, mean age: 46.2 ± 11.7 years, mean disease duration: 9.3 ± 9.1 years), were included in the analysis. At initiation of SEC, 86.3% of pts had ≥ 1 OSI and respectively 8.0%, 14.9% and 77.1% were in 1st, 2nd and 3rd line (L) of biologic/ targeted synthetic DMARD. The 1 year KM survival rate for SEC was 59% (95% CI: 55%-62%) overall, 58% (54%-62%) and 63% (53%-73%) for pts with or without OSI, and was numerically greater in 1st L vs 2nd and 3rd L (70% [59%-81%], 62% [54%-70%], 57% [53%-61%] respectively). In multivariate analysis absence of OSI, lack of prior exposure to anti-TNF inhibitors, absence of IBD, and absence of history of depression were associated with better SEC retention at 1 year (Table 1).

Conclusion: The overall retention of SEC at 1 year in daily practice at the time of its launch in France was 59% for axSpA patients and OSI, prior exposure to TNF inhibitors, IBD and history of depression were identified as predictive factors of SEC retention.

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