Efficacy and safety of Telitacicept in patients with Sjögren's disease

Results from a Phase 3, Randomized, Double-blind, Placebo-controlled Study (18C022)

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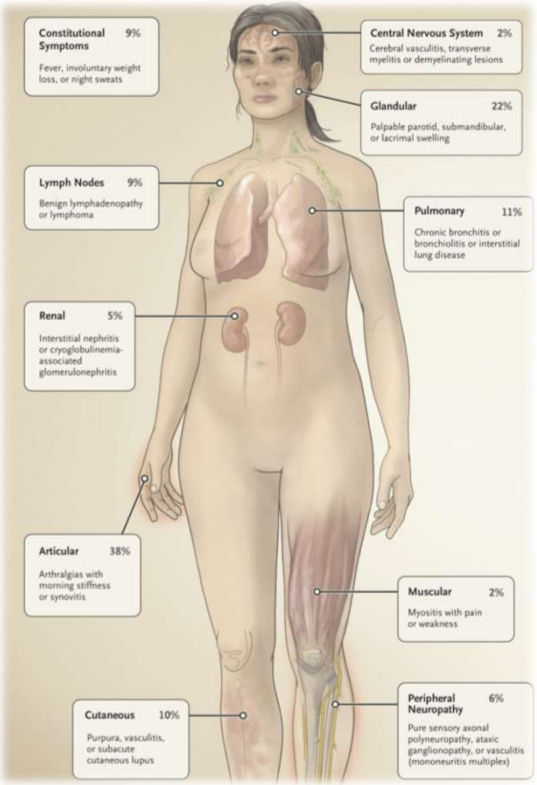
Faculty Disclosure

- All authors have no relevant financial relationship(s) with ineligible companies to disclose.

Unmet Clinical Needs in Sjögren's Disease

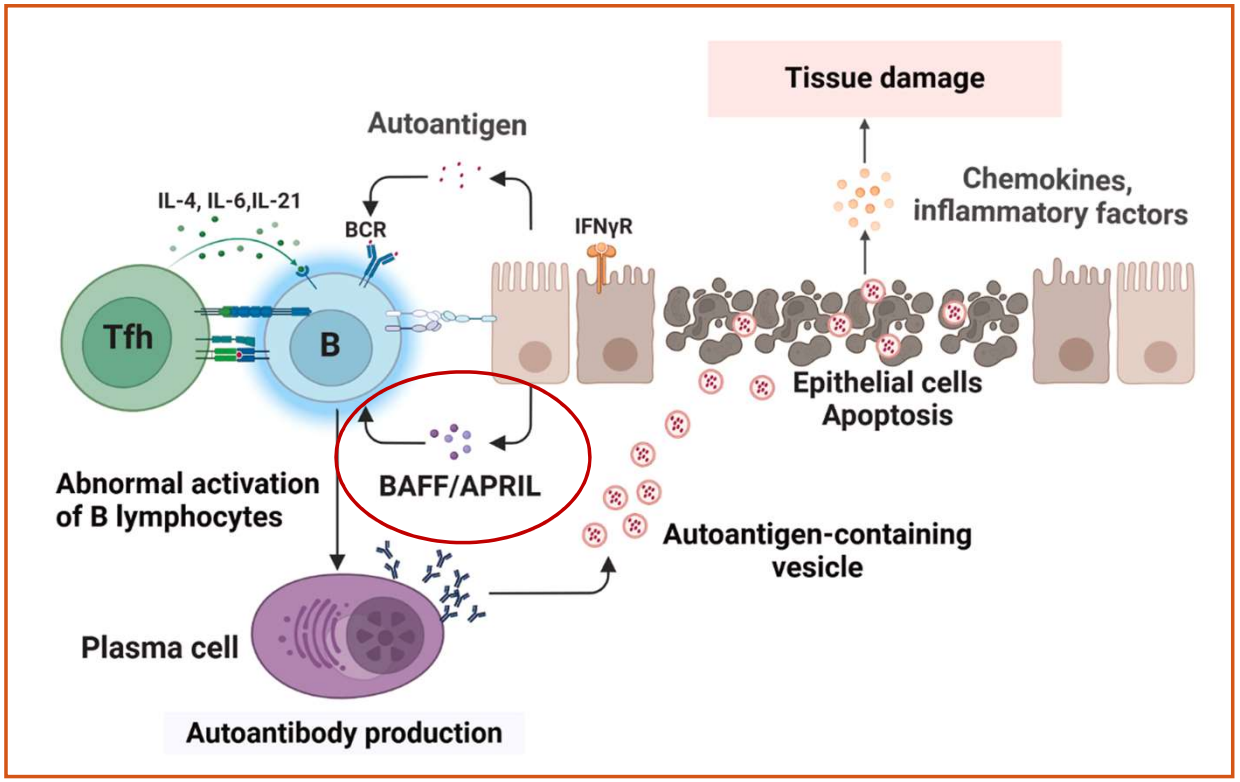
- **Common systemic autoimmune disease with substantial morbidity**
- **No approved biologic therapies or disease-modifying therapies**
- **Persistent burden of dryness, fatigue and pain**
- **Unmet need for targeted therapies**



Mariette X, et al. N Engl J Med. 2018;378:931–939.
Patel V, et al. Curr Opin Immunol. 2026;100:102743.

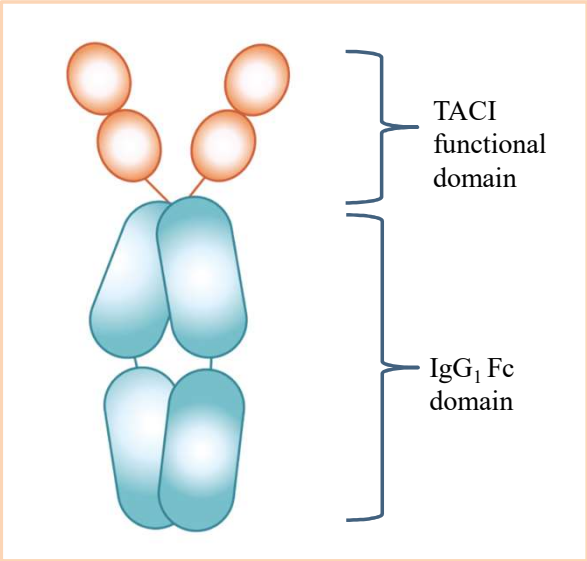
B Cells and BAFF/APRIL in SjD

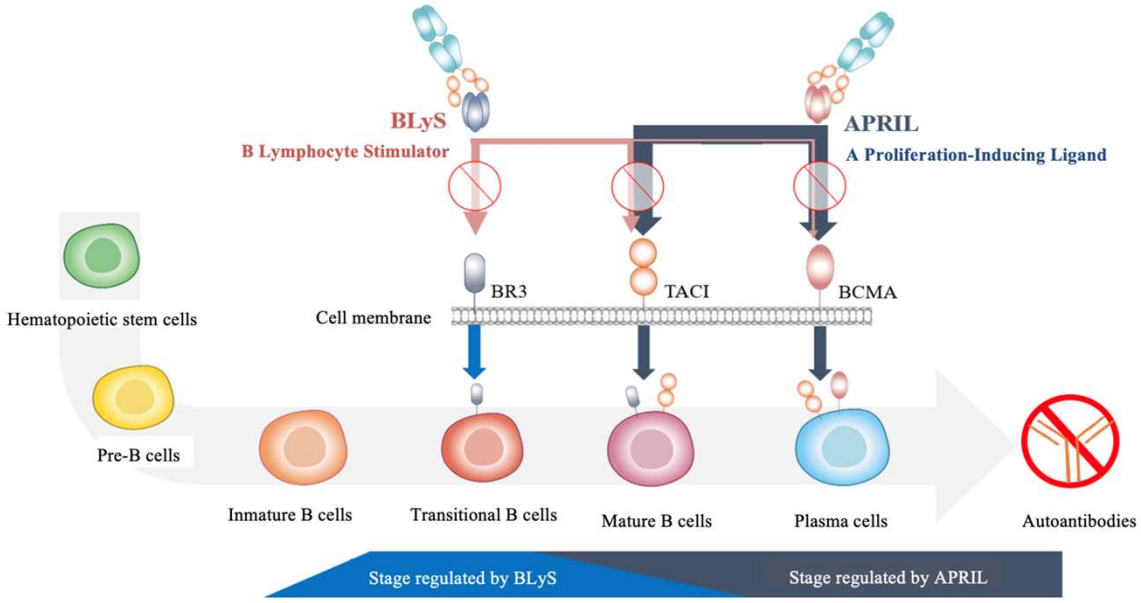
- Aberrant B-cell activation is central to disease pathogenesis
- Enhanced BAFF/APRIL signaling promotes B-cell survival and plasma cell differentiation
- Autoantibody production and epithelial injury



Mariette X, et al. Ann Rheum Dis. 2003;62(2):168–171.
Baldini C, et al. Nat Rev Rheumatol. 2024;20(8):473–491.
Zhao T, et al. Heliyon. 2024;10(17).

Telitacicept: Dual Inhibition of BAFF and APRIL





- **TACI-Fc fusion protein**
- **Independently developed by RemeGen dual inhibition**
- **Simultaneously blocks BAFF and APRIL**

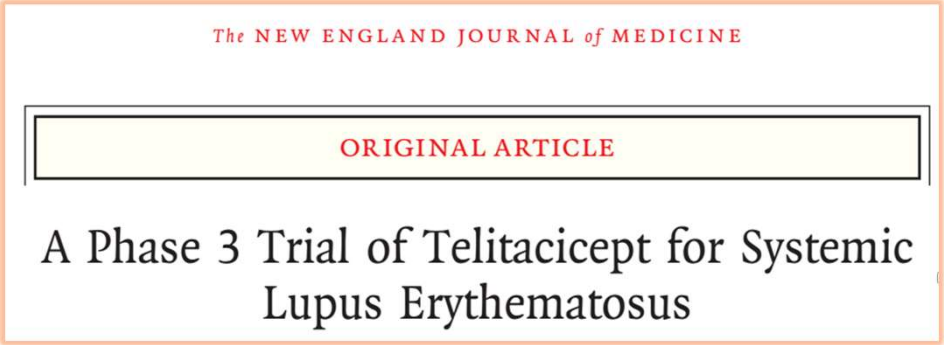
TACI: Transmembrane activator and calcium-modulating cyclophilin ligand interactor.

Antibody and fusion protein.RemeGen.https://remegen.com/zh-hans/science/fusion-proteins/
Yi Zhang, et al. Chinese Journal of Biotechnology,2000,20 (3):13-17.

Clinical Evidence of Telitacicept in SLE and Sjögren's Disease

- **Systemic Lupus Erythematosus**

  Approved in China in 2021 for active SLE; reduces disease activity and flares


The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Phase 3 Trial of Telitacicept for Systemic Lupus Erythematosus


Rheumatology, 2023, **00**, 1–8
https://doi.org/10.1093/rheumatology/kead265
Advance access publication 3 July 2023
Original Article

British Society for Rheumatology RHEUMATOLOGY OXFORD

Clinical science

Efficacy and safety of telitacicept in primary Sjögren's syndrome: a randomized, double-blind, placebo-controlled, phase 2 trial

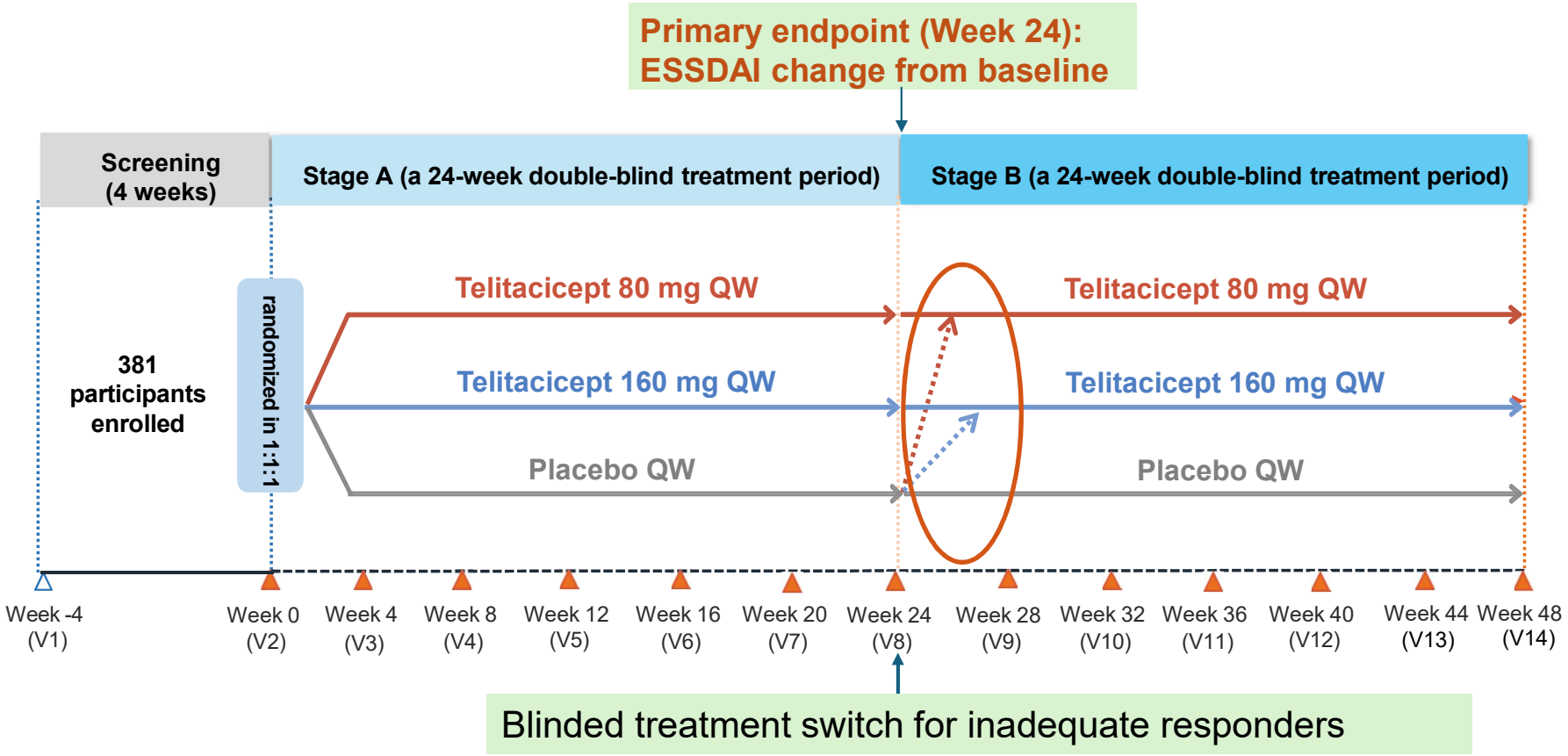
- **Sjögren's disease**

  Phase II RCT met primary endpoint (ESSDAI improvement vs placebo)

van Vollenhoven RF, et al. N Engl J Med. 2025;393(15):1475-1485.
Xu D, Zhang S, et al. *Rheumatology (Oxford)*. 2024;63(3):698-705.

Telitacicept SjD Phase 3 Trial Design

A phase 3, randomized, double-blind, placebo-controlled study (NCT05673993) evaluating efficacy and safety of telitacicept in active SjD patients.



Main Inclusion and Exclusion Criteria

Main inclusion criteria

- Aged 18-70 years, male or female;
- Meeting the 2016 ACR/EULAR classification criteria;
- **Anti-SSA antibody positive** at screening;
- **ESSDAI score ≥ 5 at screening.**

Main exclusion criteria

- Secondary Sjögren's disease;
- Severe organ involvements associated with SjD determined by investigators;
- On a stable-dose hydroxychloroquine therapy for less than 6 weeks prior to randomization;
- Prior use of immunosuppressants, biological agents, Chinese medicines, IVIG/plasma exchange, and symptomatic medications within specified time windows.

Participant disposition

Stage A

381 participants **were randomized** and 380 received treatment

- Placebo **n=127**
- Telitacicept 160 mg **n=127**
- Telitacicept 80 mg **n=127** (One participant was excluded from the estimand population and safety set)

Stage B

A total of **356** participants **entered Stage B**

- Telitacicept 160 mg **n=118**
- Telitacicept 80 mg **n=119**
- Placebo **n=119**

Blinded treatment switch for inadequate responders

Stage B

During Stage B

48 participants placebo→telitacicept 160 mg

47 participants placebo→telitacicept 80 mg

24 participants **remained on placebo**

Baseline demographic and clinical characteristics

Variables*	Telitacicept 160 mg (N=127)	Telitacicept 80 mg (N=127)	Placebo (N=127)	Total (N=381)
Age (year)	45.9（12.29）	44.6（12.06）	47.3（12.75）	46.0（12.39）
Weight (kg)	55.89（9.042）	56.88（8.713）	56.99（11.077）	56.58（9.654）
BMI (kg/m^2)	22.03（3.163）	22.31（3.192）	22.24（3.576）	22.19（3.309）
Female, n (%)	124（97.6）	124（97.6）	123（96.9）	371（97.4）
Ethnicity, n (%)				
Han	120（94.5）	124（97.6）	120（94.5）	364（95.5）
Others	7（5.5）	3（2.4）	7（5.5）	17（4.5）
ESSDAI	10.0（3.77）	9.8（3.52）	10.2（4.17）	10.0（3.82）
Baseline ESSDAI stratification , n (%)				
<10	64（50.4）	66（52.0）	64（50.4）	194（50.9）
≥10	63（49.6）	61（48.0）	63（49.6）	187（49.1）
ESSPRI	5.07（1.602）	4.91（1.719）	5.08（1.764）	5.02（1.694）

*Mean (SD), unless specified otherwise.
BMI: body mass index. SjD: Sjogren's Disease; ESSDAI, EULAR Sjögren's syndrome disease activity index; ESSPRI, EULAR Sjögren's Syndrome Patient Reported Index; RS: randomized set.

Efficacy Endpoints

Primary endpoint:

- ESSDAI Change from baseline (**CFB**) at Week 24

Secondary endpoints:

- ESSDAI Change from baseline (**CFB**) at Week 48
- MCII of ESSDAI and ESSPRI (Weeks 24 and 48), etc.

Other endpoints:

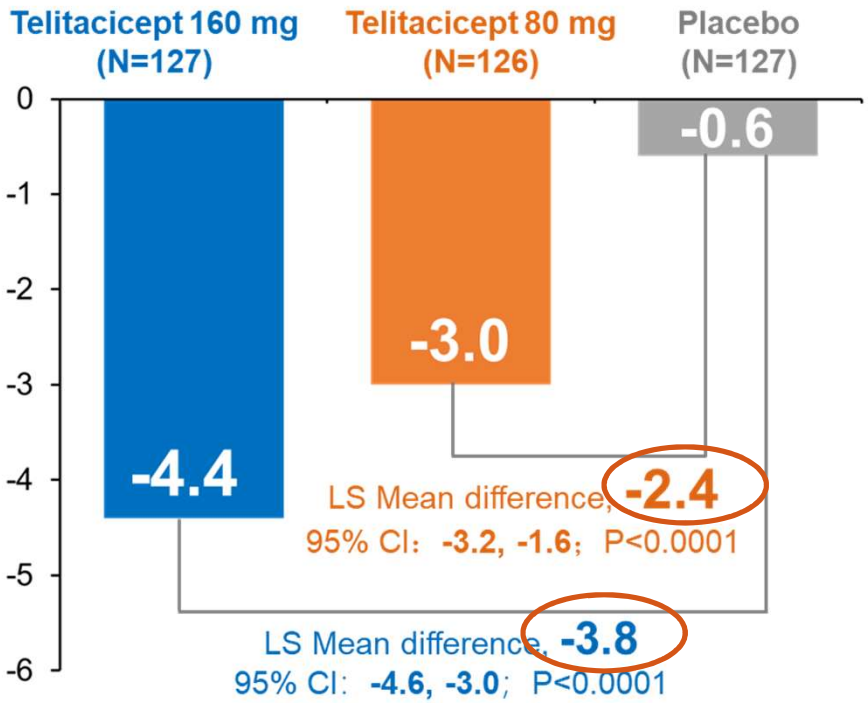
- ΔESSPRI, etc. (Weeks 24 and 48)

Exploratory objective:

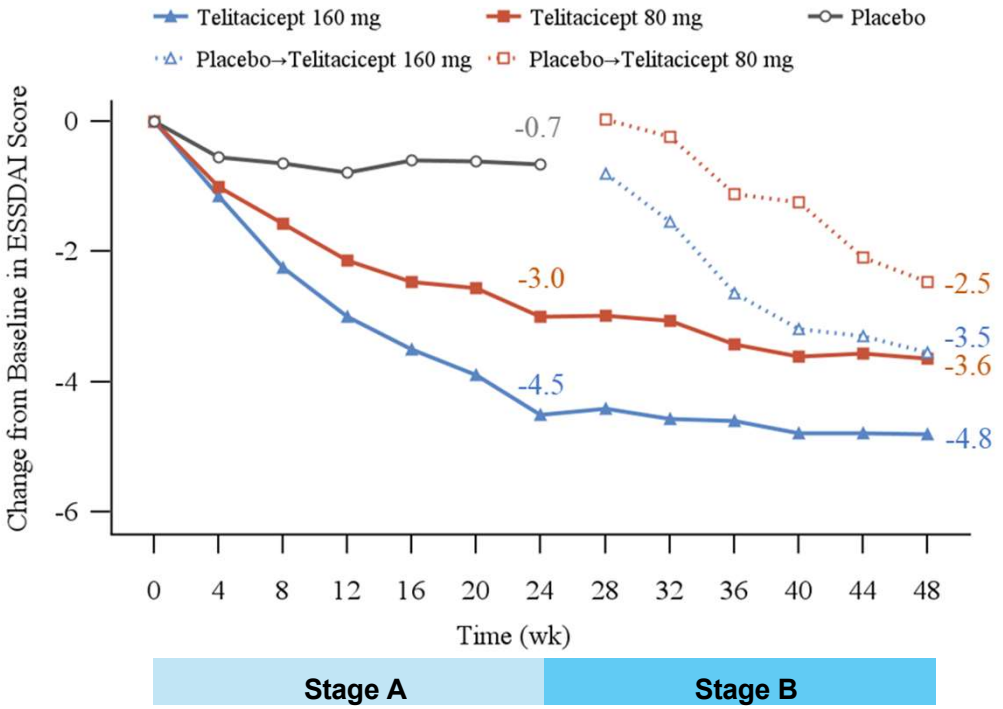
- Proportion of STAR responders (Weeks 24 and 48)

ESSDAI, European League Against Rheumatism (EULAR) SS disease activity index; ESSPRI, EULAR SS patient-reported index; MCII, minimal clinically important improvement; STAR, the Sjögren's tool for assessing response.
MCII of ESSDAI was defined as a ≥ 3-point reduction in ESSDAI score.
MCII of ESSPRI was defined as a ≥ 1-point or 15% reduction in ESSPRI score.
A STAR responder was defined as a subject with a score of 5 or more on the Candidate STAR.

Telitacicept Significantly Improved ESSDAI Scores



CFB in ESSDAI at Week 24 (LS Mean, EP)[#]



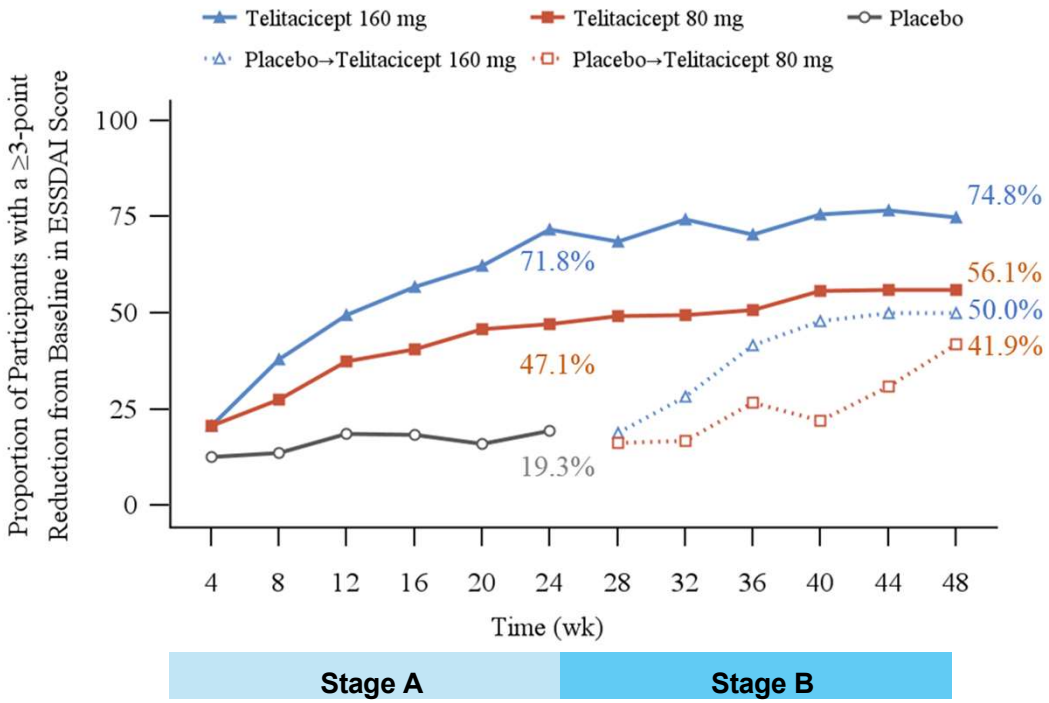
CFB in ESSDAI Over Time (Mean, EP-AO)

[#]The LS mean difference and its two-sided 95%CI were calculated by MMRM, with group, visit, and group*visit as fixed effects and baseline ESSDAI score as a covariate.

ESSDAI, EULAR Sjögren's syndrome disease activity index; EP, Estimand population; LS Mean, Least square mean.

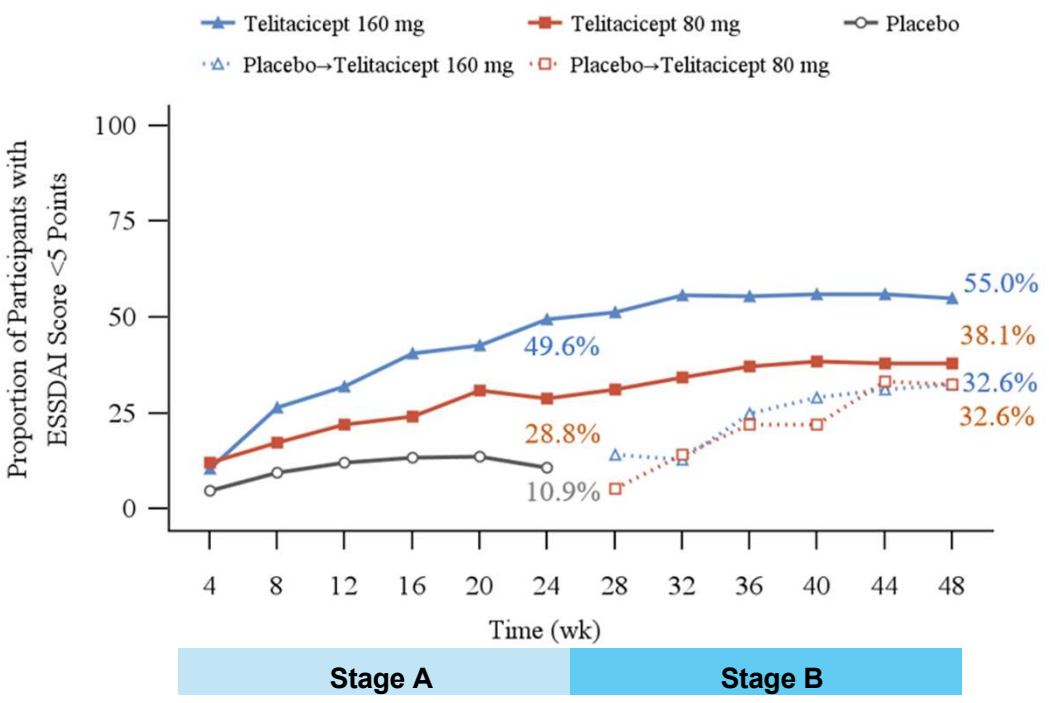
Clinically Meaningful Improvements in ESSDAI Outcomes

MCII of ESSDAI (≥ 3-point reduction)



Proportion of participants achieving MCII of ESSDAI (≥ 3-point reduction) (EP-AO)

ESSDAI<5 points

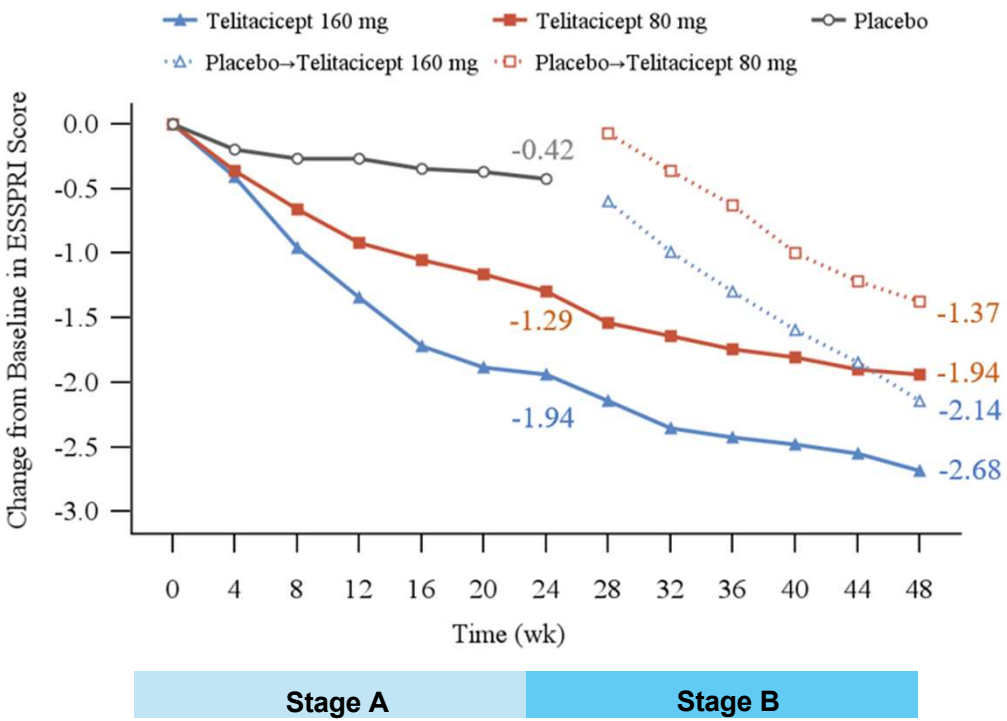


Proportion of participants with ESSDAI<5 points (EP-AO)

ESSDAI, EULAR Sjögren's syndrome disease activity index; EP, Estimand population; AO, as observed.

Improvements in Patient-Reported ESSPRI Outcomes

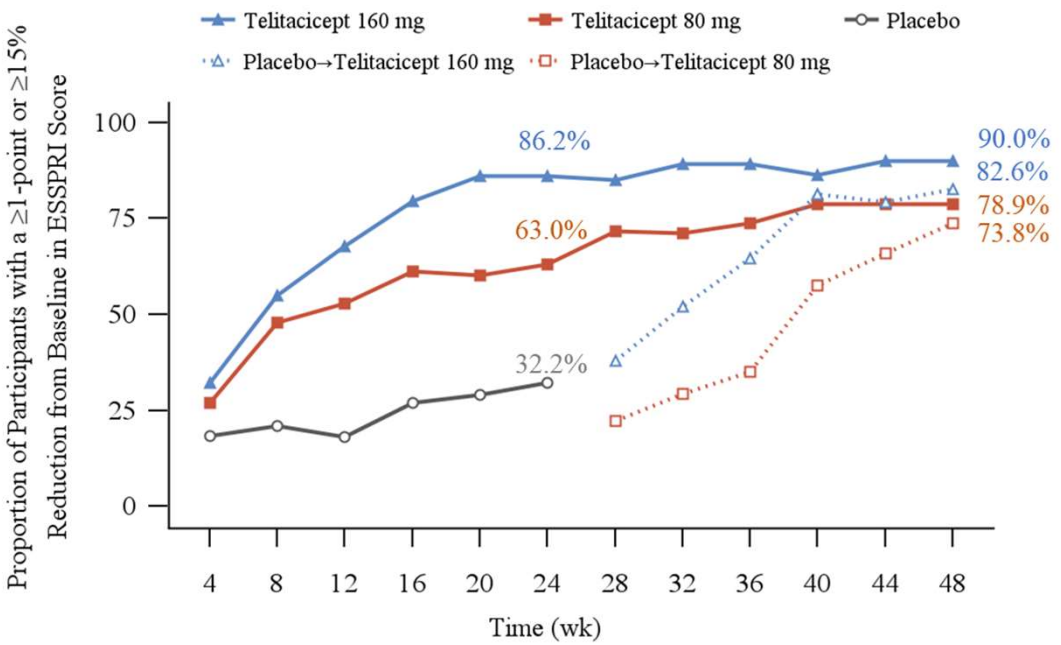
CFB in ESSPRI



Stage A | Stage B

CFB in ESSPRI (Mean，EP-AO)

MCII of ESSPRI (≥ 1-point or 15% reduction)

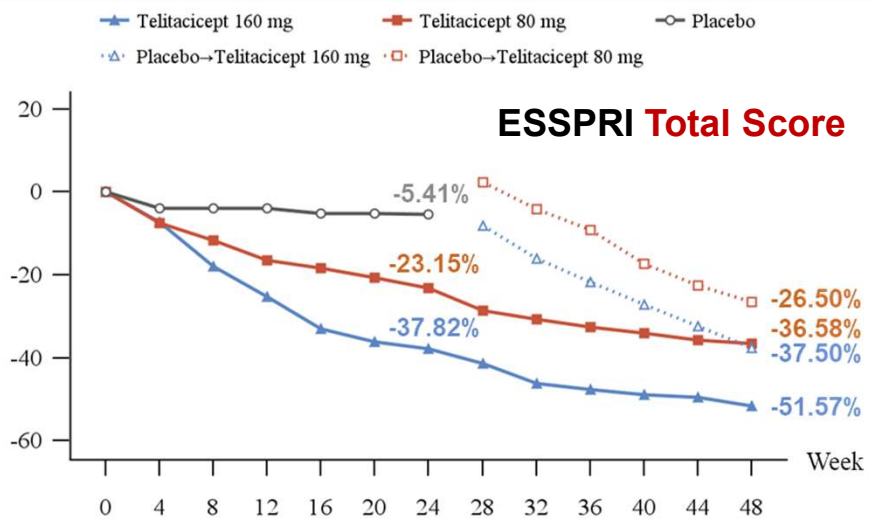


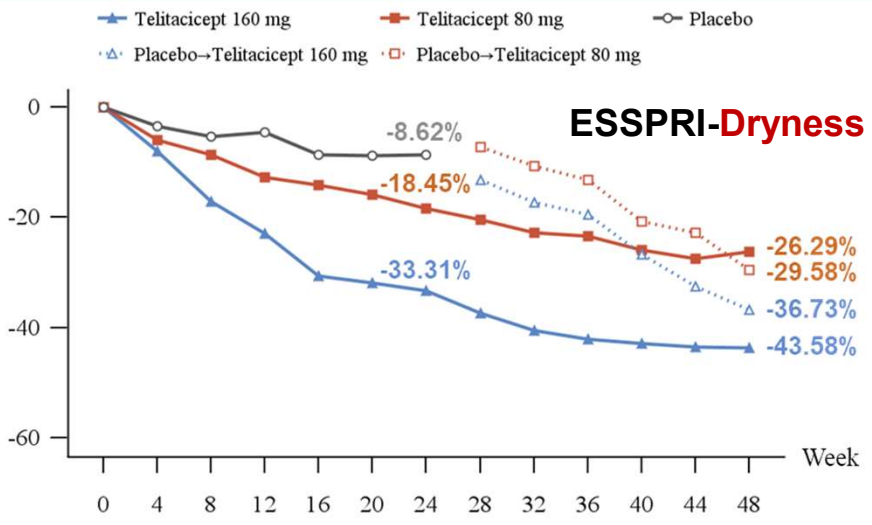
Stage A | Stage B

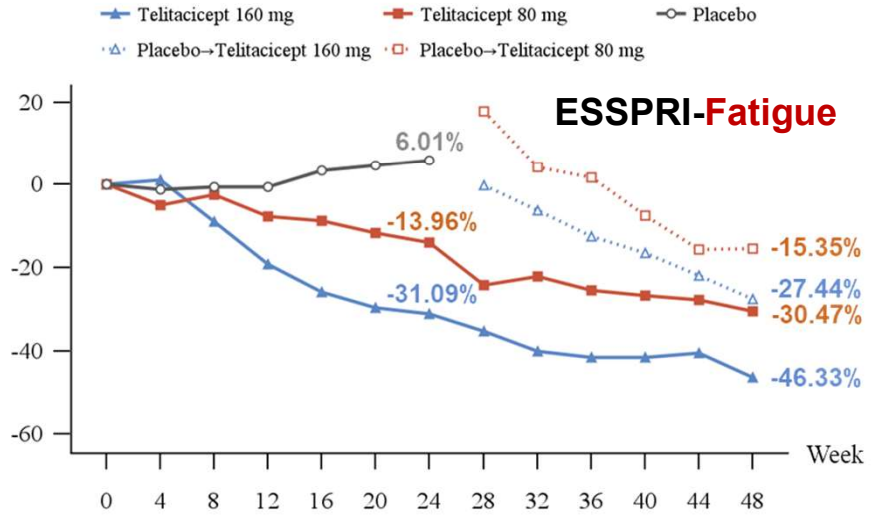
Proportion of participants achieving MCII of ESSPRI (≥ 1-point or 15% reduction) (EP-AO)

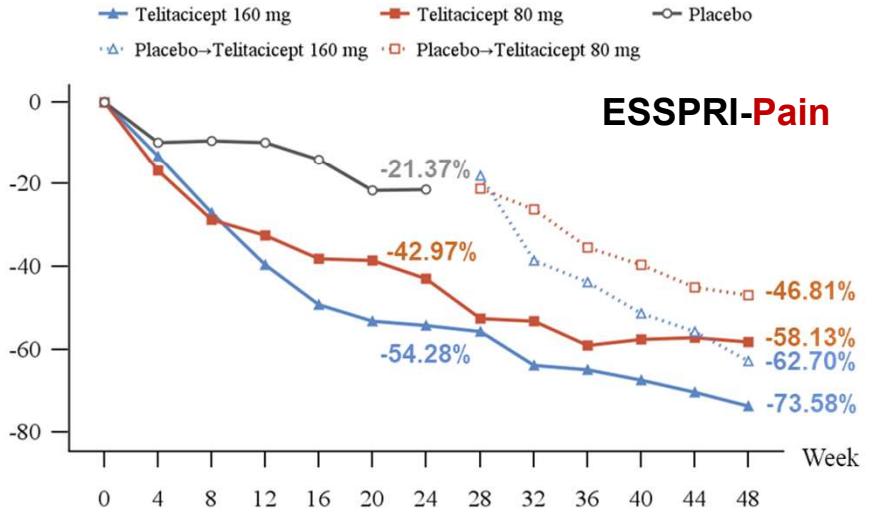
ESSPRI, EULAR Sjögren's Syndrome Patient Reported Index; EP, Estimand population; AO, as observed.

Improvements Across ESSPRI Symptom Domains

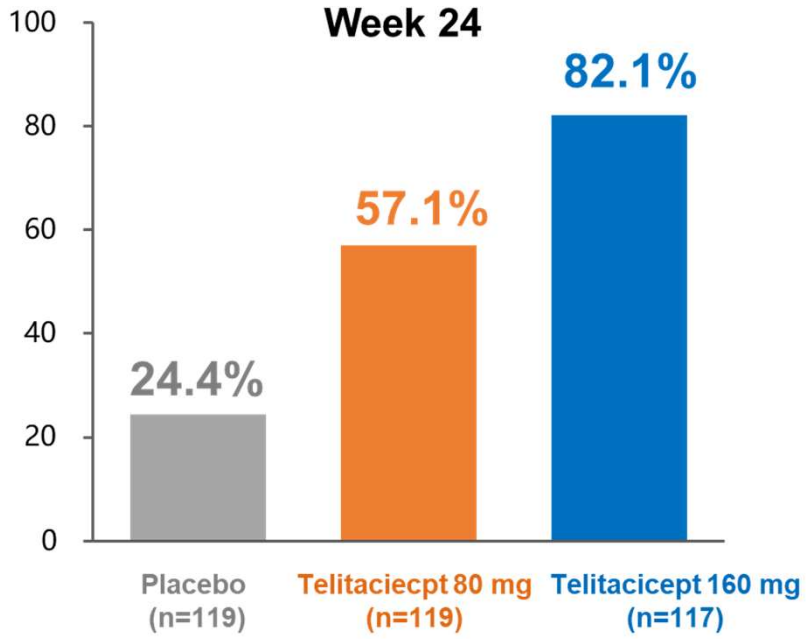




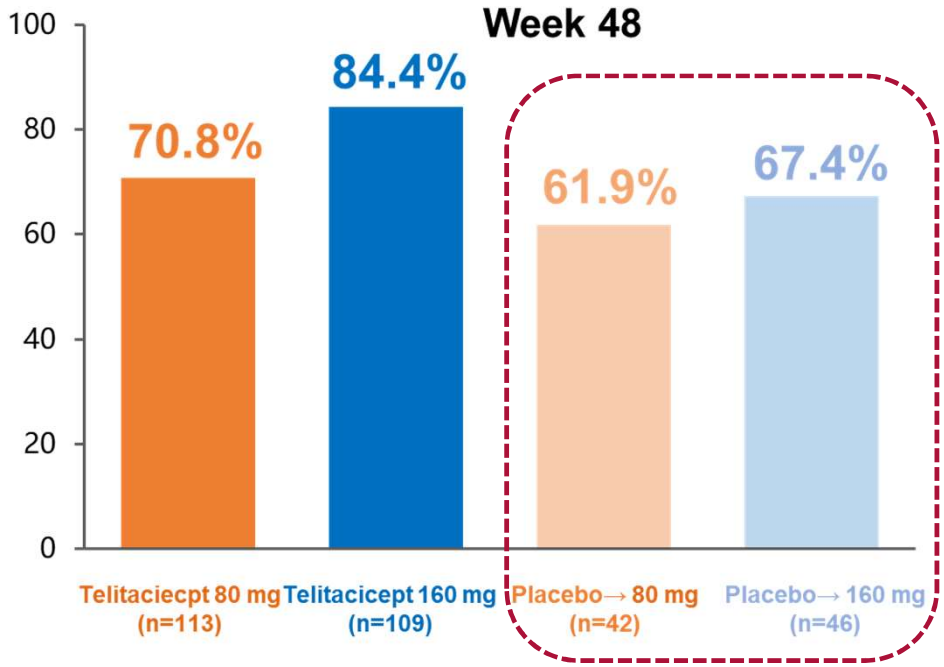




The Sjögren‘s Tool for Assessing Response (STAR) Responder Analysis



STAR Response at Week 24 (EP-AO)

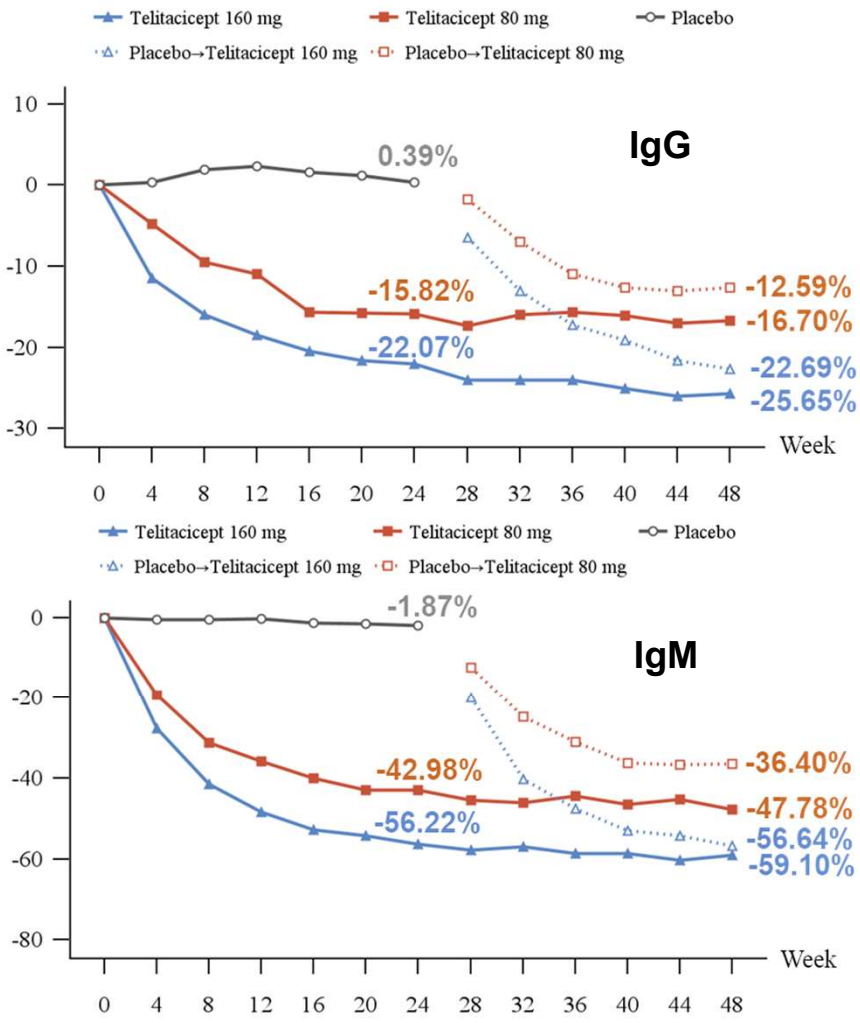


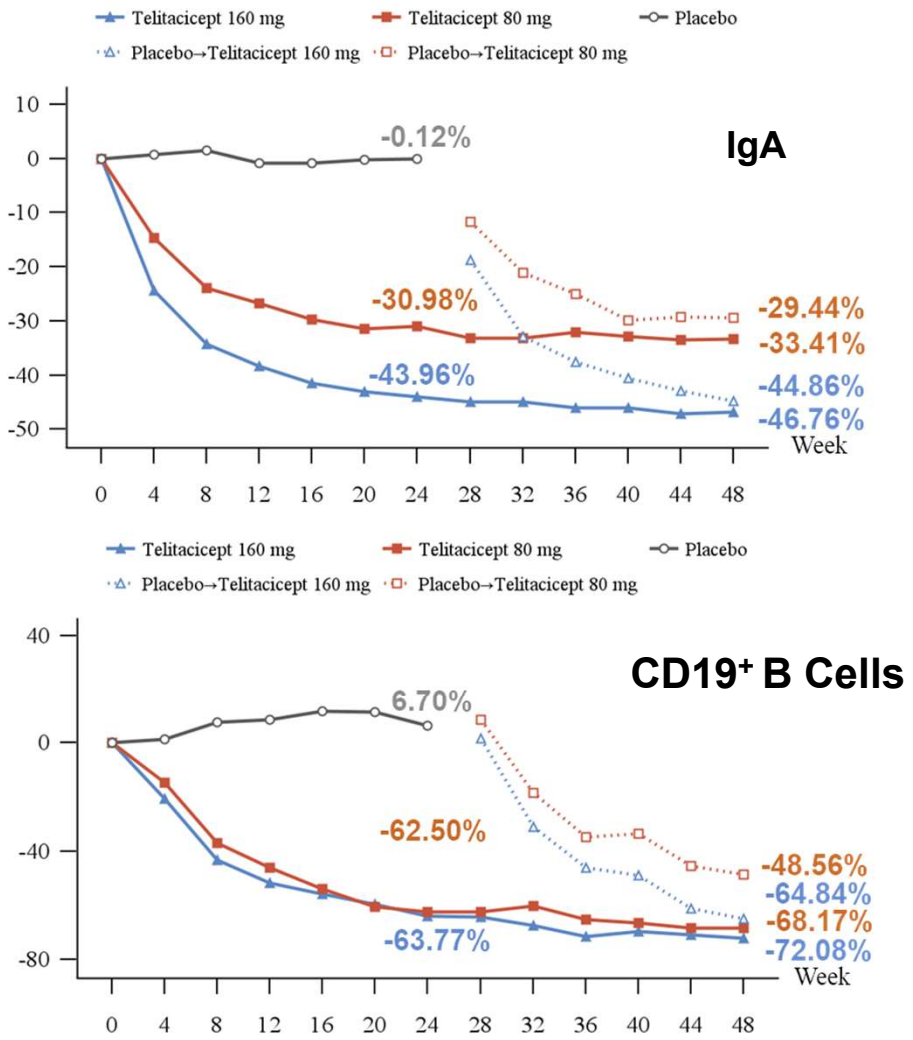
STAR Response at Week 48 (EP-AO)

A STAR responder was defined as a subject with a score of 5 or more on the Candidate STAR.

STAR, The Sjögren's Tool for Assessing Response; EP, Estimand population; n, actual number of participants; AO, as-observed.

Effects on Immunologic Biomarkers





Overview of Adverse event (0-48 Weeks)

	Telitacicept 160 mg (N=127) n (%)	Telitacicpet 80 mg (N=126) n (%)	Placebo by visit# (N=127) n (%)
TEAE	122（96.1）	119（94.4）	112（88.2）
TRAE	107（84.3）	106（84.1）	74（58.3）
TESAE	11（8.7）	14（11.1）	10（7.9）
TRSAE	2（1.6）	5（4.0）	4（3.1）
TRAEs leading to treatment discontinuation	3（2.4）	1（0.8）	3（2.4）
TRAEs leading to withdrawal	3（2.4）	1（0.8）	3（2.4）
Severe TEAE	3（2.4）	5（4.0）	3（2.4）
Severe TRAE	0	1（0.8）	1（0.8）
Death	0	0	0

TEAE: treatment-emergent adverse event; TRAE: treatment-related adverse event; SAE: treatment-emergent serious adverse event; TRSAE: treatment-related serious adverse event.
#The mean exposure time in the placebo group was **27 weeks**.

Safety-Infections and Infestations

	Telitacicept 160 mg (N=127) n(%)	Telitacicpet 80 mg (N=126) n(%)	Placebo[#] (N=127) n(%)
Infections and Infestations	98（77.2）	101（80.2）	83（65.4）
Upper respiratory tract infection	80（63.0）	85（67.5）	74（58.3）
Conjunctivitis	9（7.1）	4（3.2）	2（1.6）
Respiratory tract infection	8（6.3）	2（1.6）	8（6.3）
Urinary tract infection	8（6.3）	15（11.9）	7（5.5）
Vaginal infection	8（6.3）	6（4.8）	3（2.4）
TESAE about Infections and Infestations	4 （3.1）	6 （4.8）	5（3.9）
Severe TEAE about Infections and Infestation	1（0.8）	1（0.8）	1（0.8）

[#]The mean exposure time in the placebo group was **27 weeks**.

TEAE, Treatment emergent adverse event; SAE, Treatment emergent serious adverse event

Conclusions

- ✓ Telitacicept demonstrated consistent efficacy across primary, secondary, and exploratory endpoints, with clinically meaningful improvement in SjD patients.
- ✓ Both 160 mg and 80 mg doses showed favorable safety profiles with good tolerability.
- ✓ These findings support telitacicept as a promising treatment option for patients with active SjD who need more effective therapies.

Acknowledgments

We sincerely thank all patients, investigators, and research teams for their valuable contributions to this study.

BACK UP SLIDES

表14.2.9.2 免疫学指标(IgG)(g/L)较基线变化值MMRM分析(0-48wk)(EP-LOCF处理转组后数据)

访视 指标 统计量	泰爱160mg (N=127)	泰爱80mg (N=126)	安慰剂* (N=127)
基线			
实测值			
n	127	126	127
Mean (SD)	21.459 (7.434)	22.389 (7.966)	22.297 (7.209)
Median	19.810	20.500	21.850
Min, Max	8.850, 47.400	10.210, 62.500	7.100, 47.200
24wk			
实测值			
n	117	119	119
Mean (SD)	16.772 (6.345)	18.723 (7.383)	22.015 (7.698)
Median	15.400	17.100	20.920
Min, Max	7.190, 42.600	6.750, 57.300	8.900, 46.290
48wk			
实测值			
n	111	114	115
Mean (SD)	16.311 (6.679)	18.565 (7.525)	22.346 (7.853)
Median	14.810	17.000	20.820
Min, Max	5.940, 42.600	7.620, 54.400	7.000, 46.290

Drug exposure in 0-48 Weeks

	Telitacicept 160 mg (N=127)	Telitacicpet 80 mg (N=126)	Placebo by visit# (N=127)	placebo→ Telitacicept 160 mg (N=48)	placebo→ Telitacicept 80 mg (N=47)
Compliance(%)					
n	127	126	127	48	47
Mean(SD)	85.14(26.357)	87.24(21.857)	86.97(24.650)	97.02(5.509)	88.87(27.528)
Median	95.83	95.83	97.37	100	100
Stratification of compliance, n (%)					
In [80%-120%]	104(81.9)	110(87.3)	108(85.0)	47(97.9)	41(87.2)
Outside[80%-120%]	23(18.1)	16(12.7)	19(15.0)	1(2.1)	6(12.8)
Frequency of exposures					
n	127	126	127	48	47
Mean(SD)	40.9(12.65)	41.9(10.49)	26.0(9.74)	21.8(2.33)	19.1(6.68)
Median	46	46	25	23	22
Times of exposures (Week)					
n	127	126	127	48	47
Mean(SD)	42.67(12.844)	44.10(10.907)	**27.17**(9.572)	22.19(2.250)	19.47(6.487)
Median	47.86	47.86	25	23	22.71
Amount of exposures (mg)					
n	127	126	127	48	47
Mean(SD)	6538.6(2024.20)	3349.8(839.29)	0(0)	3483.3(372.30)	1525.1(534.42)
Median	7360	3680	0	3680	1760

#The mean exposure time in the placebo group was 27 weeks.

TEAEs with an incidence of ≥ 5% in any group

PT	Telitacicept 160 mg (N=127) n (%)	Telitacicpet 80 mg (N=126) n (%)	Placebo by visit[#] (N=127) n (%)
Upper respiratory tract infection	80(63.0)	85(67.5)	74(58.3)
Conjunctivitis	9(7.1)	4(3.2)	2(1.6)
Respiratory tract infection	8(6.3)	2(1.6)	8(6.3)
Urinary tract infection	8(6.3)	15(11.9)	7(5.5)
Vaginal infection	8(6.3)	6(4.8)	3(2.4)
Hyperuricaemia	5(3.9)	8(6.3)	3(2.4)
Cough	11(8.7)	14(11.1)	8(6.3)
Diarrhoea	5(3.9)	4(3.2)	8(6.3)
Hepatic function abnormal	7(5.5)	16(12.7)	7(5.5)
Rash	5(3.9)	6(4.8)	7(5.5)
Injection site reaction	53(41.7)	51(40.5)	5(3.9)
Injection site pruritus	8(6.3)	4(3.2)	0
Pyrexia	4(3.1)	14(11.1)	4(3.1)
White blood cell count decreased	14(11.0)	14(11.1)	7(5.5)
Neutrophil count decreased	9(7.1)	7(5.6)	4(3.1)
Lymphocyte count decreased	7(5.5)	6(4.8)	4(3.1)
Aspartate aminotransferase increased	7(5.5)	8(6.3)	5(3.9)
Alanine aminotransferase increased	6(4.7)	8(6.3)	5(3.9)

TEAE: treatment-emergent adverse event; PT: Preferred term. [#]The mean exposure time in the placebo group was **27 weeks**.