NOVARTIS

Secukinumab effect across the axial spondyloarthritis spectrum at 1 year

Full abstract title: Efficacy of Secukinumab in TNF-naïve Patients Across the Axial Spondyloarthritis Spectrum over 52 weeks: A Post Hoc Analysis of the MEASURE and PREVENT Clinical Trials

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Please note that this summary only contains information from the full EULAR 2021 scientific abstract and selected supporting references. The results of this study may not reflect those of other studies. This summary is not intended to provide medical advice.

Why was this study done?

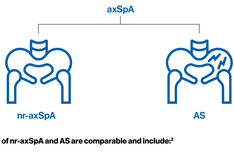
To investigate the effect of secukinumab on patients with axial spondyloarthritis over a period of 52 weeks (one year), from data across six different clinical trials.

Axial spondyloarthritis (axSpA) affects approximately 3.5 million people in the top five European countries and US.[1] It is a group of long-term inflammatory diseases, which occur when the body's immune system is overactive, causing inflammation around the spine and pelvis, leading to back pain. Inflammation can be good (eg, in fighting infection), but it can also become a problem if it occurs more than needed or without a good reason.

The axSpA spectrum includes ankylosing spondylitis (AS), where joint damage is generally visible on X-ray, and non-radiographic axial spondyloarthritis (nr-axSpA), where joint damage is not visible on X-ray.[1]

What did this study look at?

This study looked at safety data with more than 5 years of secukinumab treatment from 28 clinical trials across psoriasis, psoriatic arthritis (PsA) and AS, in addition to real-world data. Because the data come from many different trials, as well as collected in the real-world setting, it is known as 'pooled' data.



The symptoms of nr-axSpA and AS are comparable and include:[2]

- **spinal pain**
- **pain in the joints and back**
- **fatigue**
- **stiffness in the morning**
- **difficulty functioning in daily life**

If left untreated, these symptoms can affect people's daily lives, and may limit their ability to participate in normal activities such as getting themselves ready in the morning, working and enjoying time with family.[2]

Secukinumab is a type of medicine called a biologic. It helps reduce inflammation by blocking one of the molecules that activates inflammatory cells.[3] Reducing inflammation should also reduce pain.

What did this study look at?

The study looked at pooled data from the Phase 3 MEASURE and PREVENT clinical trials to see how patients with axSpA responded after being treated with secukinumab over a period of 52 weeks.

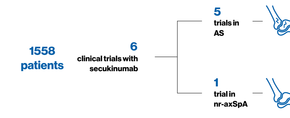
The MEASURE trials looked at the effect of secukinumab on people with AS and the PREVENT trial looked at the effect of secukinumab on people with nr-axSpA. By looking at different trials and grouping the results together, we can explore the effects of secukinumab on a broader group of people and across the axSpA disease spectrum.

The studies assessed the percentage of people achieving improvements in their disease severity after 16 weeks and 52 weeks of being treated with secukinumab. One scale of severity used was the Assessment in Ankylosing Spondylitis response criteria (ASAS), which is a scale of symptoms that assesses how the disease generally affects the patient's life, pain, ability to do things (function) and inflammation. The study looked at how many patients had a 40% improvement in their symptoms, which is abbreviated to ASAS40.

To check if any improvement was because of secukinumab, rather than the natural fluctuation of the disease, results were compared with how many patients had an improvement when given a 'dummy' injection containing no treatment (a placebo).

This study analyzed the results of the MEASURE and PREVENT trials after their first stages were finished and is therefore called a "post hoc analysis."

Design of the study



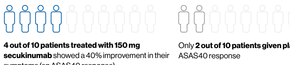
Why do a post hoc analysis?

A post hoc analysis is done after the clinical trial has finished. A clinical trial is designed to address a fixed question that scientists or physicians want to explore, and this objective is identified before the study starts. This is called a study 'endpoint.' Once all the information has been collected and analyzed, it can be useful to look at the data to help think about additional questions that were not the primary focus of the study. This approach can help to identify areas for further research and uncover interesting new insights from the study data.

What did this study find?

The study found that there were significant improvements across all measures of disease severity by 16 weeks and these were sustained for the full 52 weeks for patients with AS or nr-axSpA.

After 16 weeks

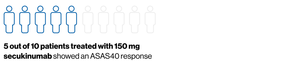


4 out of 10 patients treated with 150 mg secukinumab showed a 40% improvement in their symptoms (an ASAS40 response)

Only **2 out of 10 patients given placebo** had an ASAS40 response

On testing of these results, secukinumab was found to have a significantly greater effect than placebo.

After 52 weeks



5 out of 10 patients treated with 150 mg secukinumab showed an ASAS40 response

The trial also showed that patients treated with secukinumab experienced less night-time back pain and overall morning stiffness.

Why does this matter?

This analysis has shown that secukinumab has a favorable and well-established safety profile up to 5 years across 3 of its approved indications (psoriasis, PsA and AS).

Clinical trials typically only follow patients for a few years and include patients who meet certain criteria, so long-term safety data are important to collect, especially from patients in the "real world". The study showed secukinumab treatment can significantly reduce the severity of axSpA symptoms.

Safety

Secukinumab was well-tolerated with no new or unexpected side effects.

Glossary

Ankylosing
[an-kih-low-sing]:
abnormal stiffening and immobility of a joint due to fusion of the bones.

ASAS40 (Assessment in SpondyloArthritis 40%) response:
a ≥40% improvement in three out of four areas of a scoring system designed to rate the severity of axial spondyloarthritis. It includes how the disease generally affects the patient's life, pain, ability to do things (function) and inflammation.

Axial spondyloarthritis (axSpA)
[ax-eel spon-dill-lo-ar-thri-tiss]:
a painful, chronic (long term) inflammatory disease that primarily affects the spine and sacroiliac (where the spine joins the pelvis) joints.

Biologic medicine:
a treatment made using living organisms, rather than being chemically synthesized.

Inflammation:
the body's immune response to an irritant, which involves a variety of cells that release different substances to help the body fight the infection. In some diseases, the immune cells can attack the body by mistake – this is known as an autoimmune disease.

Non-radiographic (nr-):
may not appear on imaging techniques, like X-rays.

nr-axSpA (non-radiographic axial spondyloarthritis):
undetected by X-ray.

Placebo:
a substance with no active component which has no therapeutic effect.

Post hoc:
after the event.

Significant(ly):
statistically, the difference between the groups is unlikely to have occurred by chance. This difference is therefore likely to be related to the medication given to the patients.

Spondylitis
[spon-dill-eye-tiss]:
inflammation of the spine or vertebrae.

Who sponsored this study?

Novartis Pharma AG, Basel, Switzerland sponsored both this study and the writing of this plain language summary.

Further information

- More on the MEASURE studies can be found here:
  - MEASURE 1-2: https://www.nejm.org/doi/full/10.1056/nejmoa1505066
  - MEASURE 3: https://arthritis-research.biomedcentral.com/articles/10.1186/s13075-017-1490-y
  - MEASURE 4: https://pubmed.ncbi.nlm.nih.gov/30121827/
  - MEASURE 5: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7722578/
- More on the PREVENT study can be found here: https://onlinelibrary.wiley.com/doi/full/10.1002/art.41477

References

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3. Blair HA. *Drugs.* 2019;79(4):433-443.
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6. Kivitz AJ, et al. *Rheumatol Ther.* 2018;5(2):447-462 (MEASURE 4).
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8. Deodhar A, et al. *Arthritis Rheumatol.* 2021;73(1):110-120 (PREVENT).