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Original Article

Clinical science

British Axial Spondyloarthritis Inception Cohort (BAxSIC): a protocol for a multicentre real-world observational cohort study of early axial spondyloarthritis

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Abstract

Objectives: Timely diagnosis remains a challenge in axial SpA (axSpA). In addition, data are scarce on the impact of diagnostic delay and disease progression in affected individuals. The British Axial Spondyloarthritis Inception Cohort (BAxSIC) study aims to investigate the impact of newly diagnosed axSpA, the natural history of the disease and the effect of diagnostic delay on disease outcomes.

Methods: BAxSIC is a prospective, multicentre, observational study. Eligible participants are adults (≥16 years of age), with a physician-confirmed diagnosis of axSpA in the 6 months prior to study entry, recruited from secondary and tertiary rheumatology centres in the UK. Participants will be followed up for 3 years, with in-person visits at baseline and 24 months. In addition, patient self-reported assessments will be recorded remotely via the online electronic case report form (eCRF) at 6, 12, 18, 30 and 36 months.

Results: The first patient was enrolled in BAxSIC in June 2023. Recruitment is currently ongoing and is planned to end in June 2026. Initial results will be available in 2027. Since opening, the trial has undergone two protocol amendments.

Conclusion: The BAxSIC study is the first inception cohort designed to investigate the impact of diagnostic delay on clinical presentation and long-term functional outcomes in patients with axSpA in the UK. With an innovative, patient-led virtual longitudinal data collection model, data generated from this study will help inform and improve the care of people newly diagnosed with axSpA.

Trial registration: ClinicalTrials.gov (http://clinicaltrials.gov), NCT05676775.

Lay Summary

What does this mean for patients?

Axial spondyloarthritis (axSpA) is often diagnosed following many years of symptoms, with an estimated average of 8.5 years from the first symptoms of back pain to diagnosis. Currently there is little research into the impact of this 'diagnostic delay' on initial presentation, disease course and long-term effects in axSpA. The British Axial Spondyloarthritis Inception Cohort (BAxSIC) study aims to investigate the impact of diagnostic delay on patients with newly diagnosed axSpA. BAxSIC is an observational study recruiting patients in the UK with a new diagnosis of axSpA. Patients will be reviewed in person at initial recruitment and at 24 months. In addition, patients will complete online questionnaires about their health and well-being at 6, 12, 18 and 36 months. The study aims to recruit a minimum of 500 patients and participants will be followed up for 36 months. BAxSIC is the first large study in the UK to investigate the impact of diagnostic delay on patients with axSpA. An innovative, longitudinal, online-based data collection model will allow us to collect data in a way that is minimally disruptive to participants. Data from this study will help to improve long-term patient care.

Keywords: axial spondyloarthritis, rheumatology, diagnostic delay, inception cohort, virtual follow-up.

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Key messages

- BAxSIC is a large UK-based inception cohort of newly diagnosed axSpA patients utilising virtual follow-up.
- BAxSIC aims to investigate the impact of diagnostic delay in axSpA and long-term functional outcomes.

Introduction

Axial SpA (axSpA) is a chronic, immune-mediated condition characterized by inflammation in the axial skeleton and associated with extramusculoskeletal manifestations (EMMs). In the UK, an estimated 220 000 people live with axSpA, with a prevalence of 0.3–1.2% depending on the definition utilized [1]. The prototypic phenotype formerly known as AS is defined by the presence of new bone formation, leading to fusion in the spine and SI joints detected on radiographs [radiographic axSpA (r-axSpA)], which often manifests late in the disease course and not in all patients with axSpA. The advent of MRI at the turn of this century facilitated earlier diagnosis, prior to the development of new bone in the spine and SI joints and in those in whom new bone formation does not occur [non-radiographic (nr-axSpA)]. In parallel with these diagnostic advances, the development of biologic and targeted synthetic DMARDs (bDMARDs and tsDMARDs) have greatly improved quality of life and function in people with axSpA by improving symptoms of back pain, fatigue and stiffness [2]. However, their impact on disease progression and long-term outcomes is less clear [3].

Diagnostic delay is common in axSpA [4], and is worse in females than males [5]. In the UK, a recent report from the National Axial Spondyloarthritis Society (NASS) highlighted a mean time from symptom onset to diagnosis of 8.5 years [6]. Causes of diagnostic delay in axSpA are multifactorial and include the insidious onset of the disease, poor public and healthcare worker awareness, the absence of diagnostic serum biomarkers [7] and the reliance on clinician diagnosis based on the history, imaging and laboratory findings. The impact of this delay on patients is poorly researched, with a few small-scale studies primarily focusing on male patients with r-axSpA [8]. A recent study showed a higher burden of disease with the development of uveitis and inflammatory bowel disease associated with longer diagnostic delay [9]. Further research into the impact of diagnostic delay on the individual's initial presentation and on the wider axSpA population is therefore vital to improving patient care and outcomes.

Hypothesizing that diagnostic delay leads to worse long-term functional outcomes and affects the overall disease course of axSpA, we aimed to assess the impact of diagnostic delay on clinical presentation and long-term outcomes, including work participation, quality of life and function in axSpA.

Methods

Study design

The BAxSIC study (https://baxsic.uk) is a prospective inception cohort study (Supplementary material, available at *Rheumatology Advances in Practice* online) recruiting patients with newly diagnosed axSpA from secondary and tertiary rheumatology centres across the UK. The study protocol was developed by members of the Executive Committee of the British Society for Spondyloarthritis (BRITSpA, https://www.britspa.co.uk/), who are co-investigators for the study and members of the Trial Management Group (TMG). There is no minimum sample size required for the study due to the exploratory nature of the primary outcome.

Study population

Patients are primarily recruited from rheumatology clinics. Eligible participants are consecutive patients who are ≥16 years of age with a diagnosis of axSpA made by a consultant rheumatologist within the 6 months prior to recruitment and able to give informed consent (Fig. 1). The exclusion criteria are age <16 years, unable to provide informed consent in English (despite efforts to facilitate informed consent through a Trust-appointed interpreter) or deemed in any other way to be unable to give informed consent. Recruitment to this study is based on a collaborative effort between multiple UK secondary and tertiary centres with the help of BRITSpA. Recruitment will last for 3 years with a total follow-up duration of 36 months (Fig. 1).

Baseline procedures

Consenting participants will attend an in-person baseline visit where data on date of onset of symptoms, date of confirmed diagnosis, sociodemographic characteristics, general health, family history and data relating to symptom onset and diagnosis date will be collected (Table 1). In addition, the following information available from routine medical records will be recorded: medication data including utilization of NSAIDs, conventional synthetic DMARDs, bDMARDs, tsDMARDs, analgesics and steroids. Laboratory data from HLA-B27 testing (ever) and CRP or ESR values available on the electronic health records for up to 6 months from diagnosis and thought to be related to axSpA in the opinion of the investigator will be recorded. Available imaging data from routine anteroposterior (AP) radiographs of the pelvis/SI joints and MRI of the SI joints and spine performed as part of routine clinical practice up to 12 months prior to study entry will be collected together with data from the report by local readers (either radiologist or rheumatologist) regarding the presence or absence of radiographic sacroiliitis in accordance with modified New York (mNY) criteria [10] or a positive MRI according to Assessment of SpondyloArthritis international Society (ASAS) definitions [11].

The investigator will assess the current Axial Spondyloarthritis Disease Activity Score (ASDAS), determine whether the participant fulfils the mNY [10] or ASAS classification criteria [11] for axSpA and examine for any current evidence of psoriasis, uveitis, IBD, enthesitis, dactylitis, peripheral arthritis or costochondritis. Participants will complete questionnaires to assess function, work participation, disease activity, fatigue, comorbidities, overall health and quality of life (Table 2).

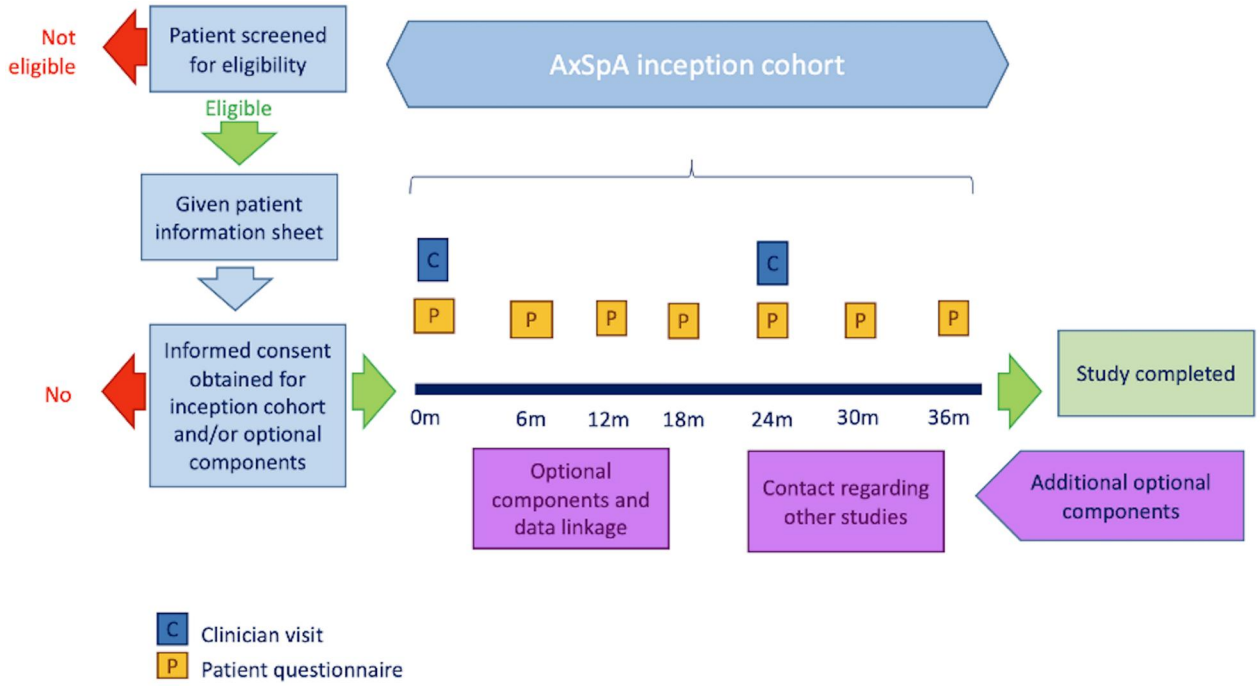

Figure 1. Schematic diagram of the BAxSIC study assessments

Follow-up procedures

At 6-month intervals (months 6, 12, 18, 30 and 36) participants will be asked to complete electronic data collection sheets and questionnaires (Table 2) via e-mail or text message. These will collect data regarding disease activity and EMMs in addition to patient-reported outcome measures. Participants will be sent up to three electronic reminders via the Research Electronic Data Capture (REDCap) system to complete each visit. Each visit will have a window of 28 days (±14 days). Participants may request paper versions, if required.

At 24 months (Fig. 1), participants will be invited for a further in-person review to collect data on medication use related to axSpA, employment status, alcohol and smoking status and comorbidities. Participants will be examined for any extra-axial features of SpA and data from routinely performed MRIs, X-rays and CRP/ESR will be collected. Patient reported outcomes and questionnaire data will also be collected at this visit (Table 2).

Events of special interest

Only relevant predefined events of special interest (pregnancy and development of EMMs) will be recorded on the electronic case report form (eCRF).

Pregnancy

Participants who have reported a pregnancy will be asked to complete a questionnaire within 6 months after the due date. This will collect information on the date of conception, previous pregnancies, pre-conception counselling, assisted conception, complications in pregnancy, gestation length, pregnancy outcome, complications in labour and delivery, postpartum complications and infections, breastfeeding and perinatal complications.

EMMs

The development of EMMs will be recorded by either the physician/researcher (month 24) or the participant (months 6, 12, 18, 30 and 36). These include a new diagnosis of psoriasis, uveitis and IBD.

Data storage and analysis

Data will be recorded in a standardized eCRF to ensure uniformity across all participating clinical sites using REDCap software, created by Vanderbilt University (Nashville, TN, USA). Data will be collected, stored and processed in compliance with the General Data Protection Regulation and the Data Protection Act 2018. Statistical analysis will be performed by researchers and statisticians in the Leeds Teaching Hospitals Trust and University of Leeds and other co-investigators in participating centres. Initially, descriptive statistics will be used to describe the demographics of patients newly diagnosed with axSpA. Regression analysis and other statistical methods will be applied to determine the impact of diagnostic delay on baseline characteristics as appropriate. As longer-term data become available, analysis will evaluate the impact of diagnostic delay on comorbidities, work participation and functional outcomes, describing the natural history and impact of newly diagnosed axSpA and identifying potential predictors of poor long-term outcome and b/tsDMARD therapy use.

Ethics approval and consent to participate

Ethical approval for the BAxSIC study was obtained from the Wales Research Ethics Committee 7 (22/WA/0311) in 2022. The BAxSIC study is sponsored by the Leeds Teaching Hospitals Trust (RR21/146198) and is adopted on the National Institute Health and Research (NIHR) musculoskeletal study portfolio (54230) being eligible for the NIHR Associate Principal Investigator Scheme. All participants provide informed, written consent to take part in the study.

Table 1. Summary schedule of study assessments

Month ±28 days	0	6	12	18	24	30	36
Visit number	1	2	3	4	5	6	7
Clinician-/allied health professional–initiated assessments							
Full informed consent	X						
Confirmation of ongoing consent				X			
Inclusion/exclusion criteria	X						
Study ID/site	X						
NHS number 1	X						
Demographic data							
Sex	X						
Age at study entry	X						
Marital status	X						
Ethnic group	X						
Highest level of education attained	X						
Employment status	X			X			
Post code (for deprivation score)	X						
Alcohol intake (units per week)	X			X			
Smoking status (current, ex, never)	X			X			
History/symptoms							
Onset of back pain symptoms (date/duration of)	X						
Onset of other SpA-related symptoms (date/duration of)	X						
History/diagnosis							
Date of first rheumatology appointment	X						
Date of diagnosis (by consultant rheumatologist)	X						
Meets mNY criteria	X			X			
Meets ASAS criteria	X			X			
Relevant past medical history: psoriasis, psoriatic nail changes, uveitis, IBD, enthesitis, dactylitis, arthritis, costochondritis/date of onset	X			X			
Family history: AS, axSpA, psoriasis, IBD, inflammatory arthritis	X			X			
Relevant orthopaedic surgery (arthroplasty or spinal)	X			X			
Current evidence of: psoriasis, psoriatic nail changes, uveitis, IBD, enthesitis, dactylitis, arthritis, costochondritis/date of onset	X			X			
Events of special interest	X			X			
Medication (previous and current)							
NSAIDs	X			x			
DMARDs	X			X			
Other (including steroids, analgesics)	X			X			
Laboratory and imaging							
HLA-B27	X						
CRP (mg/l)	X			X			
ESR (mm/h)	X			X			
Imaging (SI joints X-ray/MRI)	X			X			
ASDAS-CRP	X			X			
Participant-initiated assessments							
Height (cm)	X			X			
Weight (kg)	X			X			
Events of special interest		X	X		X	X	X
Patient-reported outcomes							
Total spinal pain score	X	X	X	X	X	X	X
Patient global assessment of disease activity	X	X	X	X	X	X	X
BASDAI	X	X	X	X	X	X	X
BASFI	X	X	X	X	X	X	X
4D-AS questionnaire	X						
ASAS-HI	X	X	X	X	X	X	X
EQ-5D-5L	X	X	X	X	X	X	X
Work productivity and activity impairment and occupation	X	X	X	X	X	X	X
Anxiety and depression, PROMIS short form 4a	X	X	X	X	X	X	X
Fatigue, PROMIS short form fatigue 8a	X	X	X	X	X	X	X
Fibromyalgia, Wolfe questionnaire	X	X	X	X	X	X	X

Ethical approval for same-day and remote consent has been granted. The BAxSIC protocol has undergone two amendments, with the latest version (3.0) dated 20 December 2023. Protocol amendments will be disseminated to each study site for reconsent and updating of participants.

Trial oversight

The BAxSIC study is coordinated by a TMG that consists of a chief investigator, deputy chief investigator, co-investigators and study coordinator. The TMG will act as the Data Access Committee. Independent oversight of the study will be

Table 2. Patient-reported outcome measures and questionnaires

Total spinal pain [20]
Patient global assessment of disease activity [21]
BASDAI [22]
BASFI [23]
4D-AS [24]
ASAS Health Index [25]
EuroQol 5 dimension, 5-level [26]
Work Productivity and Activity Impairment Questionnaire: Specific Health Problem (version 2.0) [27]
PROMIS Depression Short Form 4a [28]
PROMIS Anxiety Short Form 4a [29]
PROMIS Fatigue Short Form 8a [30]
Fibromyalgia, Wolfe questionnaire [31]

conducted by the Trial Steering Committee, expected to meet yearly and which will include a lay individual, lay clinician independent of the study research team and at least one patient representative. In addition, an External Advisory Committee of three international experts has been appointed to advise the study investigators on maximizing the usefulness of the inception cohort for research purposes and to align opportunities for data collection with international studies or potential collaborations.

Dissemination of results

Study results and outcomes will be disseminated to participants and healthcare professionals through a variety of channels, including journal publications, presentations at conferences and social media. The BAxSIC website (https://baxsic.uk/) will be updated with easily accessible study updates for participants on a regular basis and a newsletter will be circulated to participating sites on a quarterly basis.

Discussion

Delay in diagnosis remains a significant unmet need in axSpA. A recent systematic review and meta-analysis confirmed a mean delay of 6.7 years from symptom onset to diagnosis, which did not improve when results were stratified by year of publication [4]. The BAxSIC study was designed to be the first inception cohort to explore the impact of diagnostic delay on clinical presentation, natural history and long-term outcomes in patients with newly diagnosed axSpA in the UK. Previous inception cohort studies such as GESPIC [12] and DESIR [13] have greatly improved the understanding of axSpA in recent years. However, significant gaps remain in our knowledge of areas identified by patients as priorities, including work participation, mental health and the effects of diagnostic delay [14]. The BAxSIC study aims to improve our understanding of these areas.

Diagnostic delay is common in axSpA, however, there is limited knowledge of how this affects patients and their disease course. A 2020 literature review identified 21 articles showing that a longer time to diagnosis was consistently associated with higher disease activity, poorer physical function, heightened anxiety and depression and greater healthcare costs [15]. However, 15 of these publications were confined to patients with r-axSpA with no inclusion of nr-axSpA, reporting on limited numbers, with just 4 of them having >200 participants and addressing a primarily male population, with 75% of participants being male [15]. A recent retrospective study [9] including >3000 patients from several Latin America and European centres reported an association between longer diagnostic delay and the *de novo* appearance of uveitis and IBD in r-axSpA/AS, highlighting the need to enhance diagnostic strategies to shorten the time from first symptom to diagnosis in SpA. Yet the small number of studies, overall low patient numbers and sex bias in the r-axSpA populations reported to date in the literature highlight the need for further studies to explore the impact of diagnostic delay upon the whole axSpA spectrum.

Identifying the impact of delay upon clinical presentation, natural history and long-term outcomes may allow for improved screening and diagnosis, assist in identifying patients at a higher risk of poor outcomes and comorbidities and improve our understanding of key areas of patient priority [14].

The development of b/tsDMARD therapies has greatly improved the treatment options available to patients, improving quality of life and short-term outcomes [16]. However, the effect of diagnostic delay on b/tsDMARD response is unclear [17]. Much of the data regarding b/tsDMARDs comes from clinical trials, which recruit a narrow subset of the axSpA population and are of insufficient length to address long-term outcomes such as EMMs and disease progression [18]. Therefore, longitudinal, real-world observational studies, such as BAxSIC, are required to explore these outcomes in patients with axSpA.

The BAxSIC study predominantly utilizes a virtual follow-up approach, with the majority of outcomes of interest being patient reported. The lack of specific procedures and minimal additional in-person study visits is aimed to minimize the burden on participants and thereby maximize the number of participating sites and patients recruited in a cost-effective manner. However, this minimally disruptive approach may lead some participants to disengage from the study and therefore fail to complete the virtual questionnaires. Therefore, encouraging ongoing participation is vital to the study's success. A previous axSpA cohort study utilizing a virtual follow-up to capture outcomes in axSpA has been successfully performed in the UK with good rates of follow-up data completion [19]. Yet a number of factors were considered at the time of study design in order to minimize attrition over time. These include the short time to completion of virtual visits, which averages 10 min, and a window of ±14 days at each end of the follow-up visit's target, providing a total of 28 days for visit completion. In addition, up to three electronic reminders are sent automatically by the REDCap system, including a standard e-mail containing the survey link and unique QR code. The study has recently been granted ethical approval for the use of telephone text messaging and remote consent, which is also expected to minimize disruption and encourage engagement of study participants. A dedicated section for participants within the study website includes an easy-to-understand timeline (https://baxsic.uk/patient-involvement-in-baxsic/).

Conclusion

The BAxSIC study will provide real-world data in an inception cohort of axSpA, with participants remotely contributing validated patient-reported outcome measures routinely used in clinical practice. Although based in the UK, the results from this study will be of international relevance, evaluating the scope and impact of newly diagnosed axSpA, the

impact of diagnostic delay upon initial presentation and long-term outcomes and the effect of bDMARDs on the disease course, all identified by researchers and patients as areas of unmet need in this disease.

Supplementary material

Supplementary material is available at *Rheumatology Advances in Practice* online.

Data availability

Anonymized study data can be made available to other academic researchers upon reasonable request, subject to the approval of the BAxSIC Data Access Committee, which will consist of the TMG and include clinical and patient representation.

Authors' contributions

S.S. and H.M.O. designed the study. H.M.O., A.B., K.G., G. J., P.M.M., J.P., R.S. and S.S.Z. contributed to the conception. S.R.H. and J.W. participated in study recruitment. J.W. and H.M.O. wrote the first version of the manuscript. All authors revised and approved the final version of the manuscript.

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Original Article

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Are you using a treatment that addresses all 6 key manifestations of PsA?

The key clinical manifestations of PsA are joints, axial, skin, enthesitis, dactylitis and nails.[1]

Joint relief in PsA:

68% of patients achieved **ACR50** with Cosentyx® (secukinumab) at **Year 1** (observed data)[2]

Results from ULTIMATE (N=166). The primary endpoint of GLOESS mean change from baseline vs placebo at Week 12 was met (−9 vs −6, p=0.004)[2,3]

Click here to visit our HCP portal and learn more

Skin clearance in PsO:

55% of patients achieved **PASI100** at **Week 52** with Cosentyx 300 mg AI (secondary endpoint, observed data, N=41)[4]

Results from MATURE. The co-primary endpoints PASI 75 and IGA mod 2011 0/1 at Week 12 were met for Cosentyx 300 mg (N=41) vs placebo (N=40), (95% vs 10% and 76% vs 8% respectively, p<0.0001)[4]

Axial joint relief in PsA:

69% of patients achieved **ASAS40** at **Week 52** with Cosentyx 300 mg (secondary endpoint, observed data, N=139)[1]

Results from MAXIMISE. The primary endpoint of ASAS20 with Cosentyx 300 mg (N=164) vs placebo (N=164) at Week 12 was met (63% vs 31% respectively, p<0.0001)[1]

Cosentyx is the first and only, fully human biologic that directly blocks IL-17A regardless of its source[5–10]

8 years

A **consistent safety profile** with **over 8 years** of real-world experience[5,6,11]

The most frequently reported adverse reactions are upper respiratory tract infections (17.1%) (most frequently nasopharyngitis, rhinitis).[5,6]

Cosentyx licensed indications in rheumatology: Cosentyx is indicated for the treatment of active psoriatic arthritis in adult patients (alone or in combination with methotrexate) when the response to previous disease-modifying anti-rheumatic drug therapy has been inadequate; active ankylosing spondylitis in adults who have responded inadequately to conventional therapy; active non-radiographic axial spondyloarthritis with objective signs of inflammation as indicated by elevated C-reactive protein and/or magnetic resonance imaging evidence in adults who have responded inadequately to non-steroidal anti-inflammatory drugs; moderate to severe plaque psoriasis in children and adolescents from the age of 6 years, and adults who are candidates for systemic therapy; active enthesitis-related arthritis in patients 6 years and older (alone or in combination with methotrexate) whose disease has responded inadequately to, or who cannot tolerate conventional therapy; active juvenile psoriatic arthritis in patients 6 years or older (alone or in combination with methotrexate) whose disease has responded inadequately to, or who cannot tolerate, conventional therapy.[5,6]

ULTIMATE (N=166), a multicentre, randomised, double-blind, placebo-controlled, 52-week Phase III trial in patients with PsA. Patients were randomly assigned to receive either weekly subcutaneous Cosentyx (300 mg or 150 mg according to the severity of psoriasis) or placebo followed by 4-weekly dosing thereafter. The primary outcome of mean change in the ultrasound GLOESS from baseline to Week 12 was met (−9 vs −6; p=0.004).[2,3]
MATURE (N=122), a 52-week, multicentre, double-blind, randomised, placebo-controlled, Phase III trial in patients with PsO. Eligible patients were randomised to Cosentyx 300 mg or placebo. The co-primary endpoints were PASI75 and IGA mod 2011 0/1 responses at Week 12. The study met the co-primary endpoints: PASI75 and IGA mod 2011 0/1 response at Week 12 were met for Cosentyx 300 mg vs placebo (95% vs 10% and 76% vs 8% respectively, p<0.0001).[4]
MAXIMISE (N=498) a double blind, placebo-controlled, multicentre, Phase IIIb study in patients with PsA. Patients were randomised in a 1:1:1 ratio to receive Cosentyx 300 mg, 150 mg or placebo. The primary endpoint of the proportion of patients achieving and ASAS20 response with Cosentyx 300 mg at Week 12 vs placebo was met (63% vs 31% respectively, p<0.0001).[1]

ACR, American College of Rheumatology; AI, auto-injector; ASAS, Assessment of SpondyloArthritis International Society; BASDAI, Bath; ankylosing spondylitis disease activity index; EULAR, European Alliance of Associations for Rheumatology; GLOESS, Global EULAR and OMERACT synovitis score; IGA mod 2011 0/1, investigator global assessment modified 2011 0/1; OMERACT, outcome measures in rheumatology; PASI, psoriasis area and severity index; PsA, psoriatic arthritis; PsO, plaque psoriasis.

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NOVARTIS

Prescribing information, adverse event reporting and full indication can be found on the next page.

UK | May 2024 | 425034

Cosentyx® (secukinumab) Great Britain Prescribing Information.

Please refer to the Summary of Product Characteristics (SmPC) before prescribing.

Indications: Treatment of: moderate to severe plaque psoriasis in adults, children and adolescents from the age of 6 years who are candidates for systemic therapy; active psoriatic arthritis in adults (alone or in combination with methotrexate) who have responded inadequately to disease-modifying anti-rheumatic drug therapy; active ankylosing spondylitis in adults who have responded inadequately to conventional therapy; active non-radiographic axial spondyloarthritis (nr-axSpA) with objective signs of inflammation as indicated by elevated C-reactive protein (CRP) and/or magnetic resonance imaging (MRI) evidence in adults who have responded inadequately to non-steroidal anti-inflammatory drugs; active enthesitis-related arthritis and juvenile psoriatic arthritis in patients 6 years and older (alone or in combination with methotrexate) whose disease has responded inadequately to, or who cannot tolerate, conventional therapy; active moderate to severe hidradenitis suppurativa (acne inversa) in adults with an inadequate response to conventional systemic HS therapy. **Presentations:** Cosentyx 75 mg solution for injection in pre-filled syringe; Cosentyx 150 mg solution for injection in pre-filled syringe; Cosentyx 150 mg solution for injection in pre-filled pen; Cosentyx 300 mg solution for injection in pre-filled pen. **Dosage & Administration:** Administered by subcutaneous injection at weeks 0, 1, 2, 3 and 4, followed by monthly maintenance dosing. Consider discontinuation if no response after 16 weeks of treatment. Each 75 mg dose is given as one injection of 75 mg. Each 150 mg dose is given as one injection of 150 mg. Each 300 mg dose is given as two injections of 150 mg or one injection of 300 mg. If possible avoid areas of the skin showing psoriasis. *Plaque Psoriasis:* Adult recommended dose is 300 mg. Based on clinical response, a maintenance dose of 300 mg every 2 weeks may provide additional benefit for patients with a body weight of 90 kg or higher. Adolescents and children from the age of 6 years: if weight ≥ 50 kg, recommended dose is 150 mg (may be increased to 300 mg as some patients may derive additional benefit from the higher dose). If weight < 50 kg, recommended dose is 75 mg. *Psoriatic Arthritis:* For patients with concomitant moderate to severe plaque psoriasis see adult plaque psoriasis recommendation. For patients who are anti-TNFα inadequate responders, the recommended dose is 300 mg, 150 mg in other patients. Can be increased to 300 mg based on clinical response. *Ankylosing Spondylitis:* Recommended dose 150 mg. Can be increased to 300 mg based on clinical response. *nr-axSpA:* Recommended dose 150 mg. *Enthesitis-related arthritis and juvenile psoriatic arthritis:* From the age of 6 years, if weight ≥ 50 kg, recommended dose is 150 mg. If weight < 50 kg, recommended dose is 75 mg. *Hidradenitis suppurativa:* Recommended dose is 300 mg monthly. Based on clinical response, the maintenance dose can be increased to 300 mg every 2 weeks. **Contraindications:** Hypersensitivity to the active substance or excipients. Clinically important, active infection. **Warnings & Precautions:** *Infections:* Potential to increase risk of infections; serious infections have been observed. Caution in patients with chronic infection or history of recurrent infection. Advise patients to seek medical advice if signs/symptoms of infection occur. Monitor patients with serious infection closely and do not administer Cosentyx until the infection resolves. Non-serious mucocutaneous candida infections were more frequently reported for secukinumab in the psoriasis clinical studies. Should not be given to patients with active tuberculosis (TB). Consider anti-tuberculosis therapy before starting Cosentyx in patients with latent TB. *Inflammatory bowel disease (including Crohn's disease and ulcerative colitis):* New cases or exacerbations of inflammatory bowel disease have been reported with secukinumab. Secukinumab, is not recommended in patients with inflammatory bowel disease. If a patient develops signs and symptoms of inflammatory bowel disease or experiences an exacerbation of pre-existing inflammatory bowel disease, secukinumab should be discontinued and appropriate medical management should be initiated. *Hypersensitivity reactions:* Rare cases of anaphylactic reactions have been observed. If an anaphylactic or serious allergic reactions occur, discontinue immediately and initiate appropriate therapy. *Vaccinations:* Do not give live vaccines concurrently with Cosentyx; inactivated or non-live vaccinations may be given. Paediatric patients should receive all age appropriate immunisations before treatment with Cosentyx. *Latex-Sensitive Individuals:* The removable needle cap of the 75mg and 150 mg pre-filled syringe and 150mg pre-filled pen contains a derivative of natural rubber latex. *Concomitant immunosuppressive therapy:* Combination with immunosuppressants, including biologics, or phototherapy has not been evaluated in psoriasis studies. Cosentyx was given concomitantly with methotrexate, sulfasalazine and/or corticosteroids in arthritis studies. Caution when considering concomitant use of other immunosuppressants. **Interactions:** Live vaccines should not be given concurrently with secukinumab. No interaction between Cosentyx and midazolam (CYP3A4 substrate) seen in adult psoriasis study. No interaction between Cosentyx and methotrexate and/or corticosteroids seen in arthritis studies. **Fertility, pregnancy and lactation:** *Women of childbearing potential:* Use an effective method of contraception during and for at least 20 weeks after treatment. *Pregnancy:* Preferably avoid use of Cosentyx in pregnancy. *Breast feeding:* It is not known if secukinumab is excreted in human breast milk. A clinical decision should be made on continuation of breast feeding during Cosentyx treatment (and up to 20 weeks after discontinuation) based on benefit of breast feeding to the child and benefit of Cosentyx therapy to the woman. *Fertility:* Effect on human fertility not evaluated. **Adverse Reactions**: *Very Common (≥1/10):* Upper respiratory tract infection. *Common (≥1/100 to <1/10):* Oral herpes, headache, rhinorrhoea, diarrhoea, nausea, fatigue. *Uncommon (≥1/1,000 to <1/100):* Oral candidiasis, lower respiratory tract infections, neutropenia, inflammatory bowel disease. *Rare (≥1/10,000 to <1/1,000)*: anaphylactic reactions, exfoliative dermatitis (psoriasis patients), hypersensitivity vasculitis. *Not known:* Mucosal and cutaneous candidiasis (including oesophageal candidiasis). *Infections:* Most infections were non-serious and mild to moderate upper respiratory tract infections, e.g. nasopharyngitis, and did not necessitate treatment discontinuation. There was an increase in mucosal and cutaneous (including oesophageal) candidiasis, but cases were mild or moderate in severity, non-serious, responsive to standard treatment and did not necessitate treatment discontinuation. Serious infections occurred in a small proportion of patients (0.015 serious infections reported per patient year of follow up). *Neutropenia:* Neutropenia was more frequent with secukinumab than placebo, but most cases were mild, transient and reversible. Rare cases of neutropenia CTCAE Grade 4 were reported. *Hypersensitivity reactions:* Urticaria and rare cases of anaphylactic reactions were seen. *Immunogenicity:* Less than 1% of patients treated with Cosentyx developed antibodies to secukinumab up to 52 weeks of treatment. *Other Adverse Effects:* The list of adverse events is not exhaustive, please consult the SmPC for a detailed listing of all adverse events before prescribing. **Legal Category:** POM. **MA Number & List Price:** PLGB 00101/1205 – 75 mg pre-filled syringe x 1 - £304.70; PLGB 00101/1029 - 150 mg pre-filled pen x2 £1,218.78; PLGB 00101/1030 - 150 mg pre-filled syringe x2 £1,218.78; PLGB 00101/1198 – 300 mg pre-filled pen x 1 £1218.78. **PI Last Revised:** June 2023. Full prescribing information, (SmPC) is available from: Novartis Pharmaceuticals UK Limited, 2nd Floor, The WestWorks Building, White City Place, 195 Wood Lane, London, W12 7FQ. Telephone: (01276) 692255.

UK | 290802 | June 2023

Adverse Event Reporting:

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Novartis via uk.patientsafety@novartis.com or online through the pharmacovigilance intake (PVI) tool at www.novartis.com/report.

If you have a question about the product, please contact Medical Information on 01276 698370 or by email at medinfo.uk@novartis.com

Cosentyx® (secukinumab) Northern Ireland Prescribing Information.

Please refer to the Summary of Product Characteristics (SmPC) before prescribing.

Indications: Treatment of: moderate to severe plaque psoriasis in adults, children and adolescents from the age of 6 years who are candidates for systemic therapy; active psoriatic arthritis in adults (alone or in combination with methotrexate) who have responded inadequately to disease-modifying anti-rheumatic drug therapy; active ankylosing spondylitis in adults who have responded inadequately to conventional therapy; active non-radiographic axial spondyloarthritis (nr-axSpA) with objective signs of inflammation as indicated by elevated C-reactive protein (CRP) and/or magnetic resonance imaging (MRI) evidence in adults who have responded inadequately to non-steroidal anti-inflammatory drugs; active enthesitis-related arthritis and juvenile psoriatic arthritis in patients 6 years and older (alone or in combination with methotrexate) whose disease has responded inadequately to, or who cannot tolerate, conventional therapy; active moderate to severe hidradenitis suppurativa (acne inversa) in adults with an inadequate response to conventional systemic HS therapy. **Presentations:** Cosentyx 150 mg solution for injection in pre-filled pen; Cosentyx 300 mg solution for injection in pre-filled pen. **Dosage & Administration:** Administered by subcutaneous injection at weeks 0, 1, 2, 3 and 4, followed by monthly maintenance dosing. Consider discontinuation if no response after 16 weeks of treatment. Each 150 mg dose is given as one injection of 150 mg. Each 300 mg dose is given as two injections of 150 mg or one injection of 300 mg. If possible avoid areas of the skin showing psoriasis. *Plaque Psoriasis:* Adult recommended dose is 300 mg monthly. Based on clinical response, a maintenance dose of 300 mg every 2 weeks may provide additional benefit for patients with a body weight of 90 kg or higher. Adolescents and children from the age of 6 years: if weight ≥ 50 kg, recommended dose is 150 mg (may be increased to 300 mg as some patients may derive additional benefit from the higher dose). If weight < 50 kg, recommended dose is 75 mg. However, 150mg solution for injection in pre-filled pen is not indicated for administration of this dose and no suitable alternative formulation is available. *Psoriatic Arthritis:* For patients with concomitant moderate to severe plaque psoriasis see adult plaque psoriasis recommendation. For patients who are anti-TNFα inadequate responders, the recommended dose is 300 mg, 150 mg in other patients. Can be increased to 300 mg based on clinical response. *Ankylosing Spondylitis:* Recommended dose 150 mg. Can be increased to 300 mg based on clinical response. *nr-axSpA:* Recommended dose 150 mg. *Enthesitis-related arthritis and juvenile psoriatic arthritis:* From the age of 6 years, if weight ≥ 50 kg, recommended dose is 150 mg. If weight < 50 kg, recommended dose is 75 mg. 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Should not be given to patients with active tuberculosis (TB). Consider anti-tuberculosis therapy before starting Cosentyx in patients with latent TB. *Inflammatory bowel disease (including Crohn's disease and ulcerative colitis):* New cases or exacerbations of inflammatory bowel disease have been reported with secukinumab. Secukinumab, is not recommended in patients with inflammatory bowel disease. If a patient develops signs and symptoms of inflammatory bowel disease or experiences an exacerbation of pre-existing inflammatory bowel disease, secukinumab should be discontinued and appropriate medical management should be initiated. *Hypersensitivity reactions:* Rare cases of anaphylactic reactions have been observed. If an anaphylactic or serious allergic reactions occur, discontinue immediately and initiate appropriate therapy. *Vaccinations:* Do not give live vaccines concurrently with Cosentyx; inactivated or non-live vaccinations may be given. Paediatric patients should receive all age appropriate immunisations before treatment with Cosentyx. *Latex-Sensitive Individuals:* The removable needle cap of the 150mg pre-filled pen contains a derivative of natural rubber latex. *Concomitant immunosuppressive therapy:* Combination with immunosuppressants, including biologics, or phototherapy has not been evaluated in psoriasis studies. Cosentyx was given concomitantly with methotrexate, sulfasalazine and/or corticosteroids in arthritis studies. Caution when considering concomitant use of other immunosuppressants. **Interactions:** Live vaccines should not be given concurrently with secukinumab. No interaction between Cosentyx and midazolam (CYP3A4 substrate) seen in adult psoriasis study. No interaction between Cosentyx and methotrexate and/or corticosteroids seen in arthritis studies. **Fertility, pregnancy and lactation:** *Women of childbearing potential:* Use an effective method of contraception during and for at least 20 weeks after treatment. *Pregnancy:* Preferably avoid use of Cosentyx in pregnancy. *Breast feeding:* It is not known if secukinumab is excreted in human breast milk. A clinical decision should be made on continuation of breast feeding during Cosentyx treatment (and up to 20 weeks after discontinuation) based on benefit of breast feeding to the child and benefit of Cosentyx therapy to the woman. *Fertility:* Effect on human fertility not evaluated. **Adverse Reactions**: *Very Common* (≥1/10): Upper respiratory tract infection. *Common* (≥1/100 to <1/10): Oral herpes, headache, rhinorrhoea, diarrhoea, nausea, fatigue. *Uncommon (≥1/1,000 to <1/100):* Oral candidiasis, lower respiratory tract infections, neutropenia, inflammatory bowel disease. *Rare (≥1/10,000 to <1/1,000)*: anaphylactic reactions, exfoliative dermatitis (psoriasis patients), hypersensitivity vasculitis. *Not known:* Mucosal and cutaneous candidiasis (including oesophageal candidiasis). *Infections:* Most infections were non-serious and mild to moderate upper respiratory tract infections, e.g. nasopharyngitis, and did not necessitate treatment discontinuation. 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UK | 284832 | May 2023

Adverse Event Reporting:

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Novartis via uk.patientsafety@novartis.com or online through the pharmacovigilance intake (PVI) tool at www.novartis.com/report

If you have a question about the product, please contact Medical Information on 01276 698370 or by email at medinfo.uk@novartis.com