

**Supplementary material**

**Methods**

*Selection of research questions and identification of key words*

All the task force meetings were conducted online. The group decided on

the methodological framework, determined the important areas to be addressed, and established the general scope of the guidelines during the first session. The task force developed research questions that address the diagnostic approach, imaging modalities,

follow-up and monitoring, and medical treatment of giant cell arteritis (GCA). These research questions are presented in Supplementary Table S1. Polymyalgia rheumatica (PMR) was not addressed in the systematic literature review.

**Supplementary Table S1.** Research questions for systematic literature research.

<b>Diagnosis</b>	<p><b>Question 1:</b> Which method should be preferred for the diagnosis of GCA?</p> <p><b>Question 2:</b> For the diagnosis of GCA, what are the optimal procedural parameters for temporal artery biopsy with respect to laterality (unilateral vs. bilateral), specimen length, and timing relative to the initiation of therapy?</p> <p><b>Question 3:</b> What is the recommended diagnostic pathway after a negative temporal artery biopsy in suspected GCA?</p>
<b>Imaging</b>	<p><b>Question 4:</b> Which imaging modalities should be preferred as the first-line option for diagnosis in patients with GCA?</p> <p><b>Question 5:</b> Which imaging modalities are recommended for monitoring disease activity during follow-up of patients with GCA?</p> <p><b>Question 6:</b> In cranial GCA, is screening for extracranial involvement recommended for all patients at baseline and/or during follow-up?</p> <p><b>Question 7:</b> Do imaging-derived outcomes have predictive value for relapse or other outcomes during follow-up in GCA?</p>
<b>Management: Glucocorticoids</b>	<p><b>Question 8:</b> What is the optimal initial glucocorticoid dose or route of administration in patients with GCA?</p> <p><b>Question 9:</b> What is the optimal timing for initiating glucocorticoid therapy in patients with GCA?</p> <p><b>Question 10:</b> What are the efficacy and safety outcomes of combining glucocorticoids with immunosuppressive agents in patients with GCA?</p> <p><b>Question 11:</b> What is the optimal strategy for glucocorticoid tapering in patients with GCA?</p>
<b>Management: csDMARDs</b>	<p><b>Question 12:</b> Which immunosuppressive agent should be used in first step in addition to glucocorticoids in patients with GCA?</p>
<b>Management: bDMARDs and tsDMARDs</b>	<p><b>Question 13:</b> In patients with GCA requiring immunosuppressive therapy in addition to glucocorticoids, is tocilizumab superior to csDMARDs alone in terms of efficacy and safety?</p> <p><b>Question 14:</b> What is the efficacy of tocilizumab in preserving vision in patients with GCA?</p> <p><b>Question 15:</b> Is there a difference in the efficacy of tocilizumab for relapsing versus newly diagnosed GCA?</p> <p><b>Question 16:</b> What is the efficacy of tocilizumab in patients with GCA who present with cranial symptoms?</p> <p><b>Question 17:</b> Does combining tocilizumab with csDMARDs enhance treatment efficacy compared with tocilizumab monotherapy in GCA?</p> <p><b>Question 18:</b> Does short-term induction therapy with tocilizumab facilitate glucocorticoid tapering in patients with GCA?</p> <p><b>Question 19:</b> In patients with GCA in remission, what are the outcomes of tapering or discontinuing tocilizumab?</p> <p><b>Question 20:</b> What evidence supports the efficacy and safety of bDMARDs other than tocilizumab, and of tsDMARDs, in the management of GCA?</p>
<b>Management: ASA and statin treatment</b>	<p><b>Question 21:</b> What are the benefits of antiplatelet therapy, anticoagulant therapy, or statins in the management of GCA?</p>

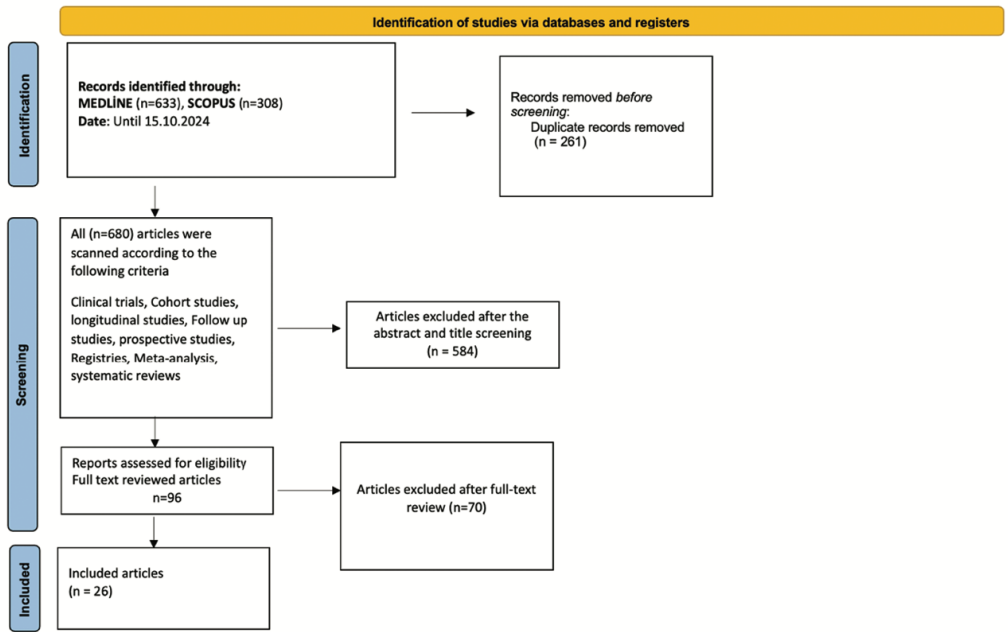
*Systematic literature review*

Relevant studies were identified through a systematic review of PubMed and Scopus. The systematic literature search was conducted by junior researchers (MK, NE, GK, GSU, BÜ, BI, MK, SKT, CA, GA, EB, FGH, RK, FT) under the supervision of the methodologist (GH) and senior task force members responsible for each subgroup (KA, GH, FAÖ, HE, NSYB). The junior researchers attended an online training session on the methodology that was conducted by the meth-

odologist (GH) and organised by the Turkish Society for Rheumatology. They worked in pairs under the supervision of a senior task force member. The systematic literature review was conducted using Rayyan systematic review platform. Relevant key phrases corresponding to research questions were identified to guide the literature review. All researchers conducted a search using the keyword combination “ (Giant Cell Arteritis) OR (Horton’s arteritis) OR (Horton’s disease) OR (temporal ar-

teritis) OR (aortitis) OR (large vessel vasculitis)” in addition to the keywords specific to that question. Polymyalgia rheumatica was not addressed in the systematic literature review. Only studies that were published in English or Turkish were included. To identify other pertinent studies, the reference lists of systematic reviews and meta-analyses were also searched. Junior and senior members of the task force then worked together to evaluate the full text of eligible papers for data extraction.

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases, registers and other sources

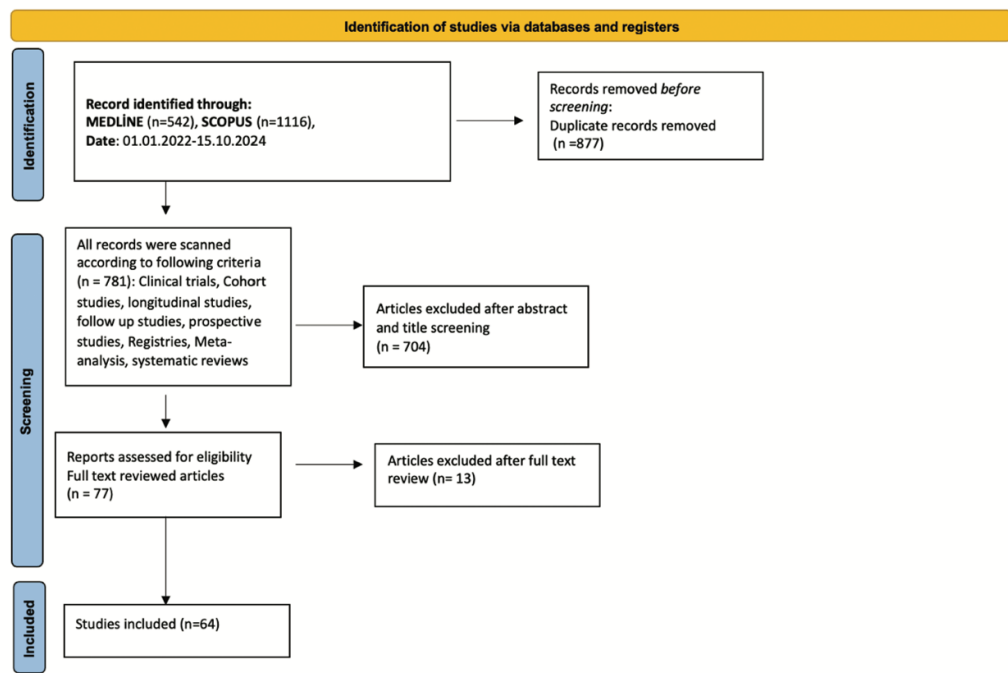


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**Supplementary Fig. S1.**

Flow chart of the study selection for data analysis: Diagnosis group (Q1-2-3). Key words: (“giant cell arteritis”[mh] OR “giant cell arteritis”[tiab] OR “giant cell arteritides”[tiab] OR “horton disease”[tiab] OR “temporal arteritis”[tiab] OR “temporal arteritides”[tiab] OR “cranial arteritis”[tiab] OR “cranial arteritides”[tiab] OR “giant cell aortic arteritis”[tiab]) AND “biopsy”[title/abstract] NOT (case report).

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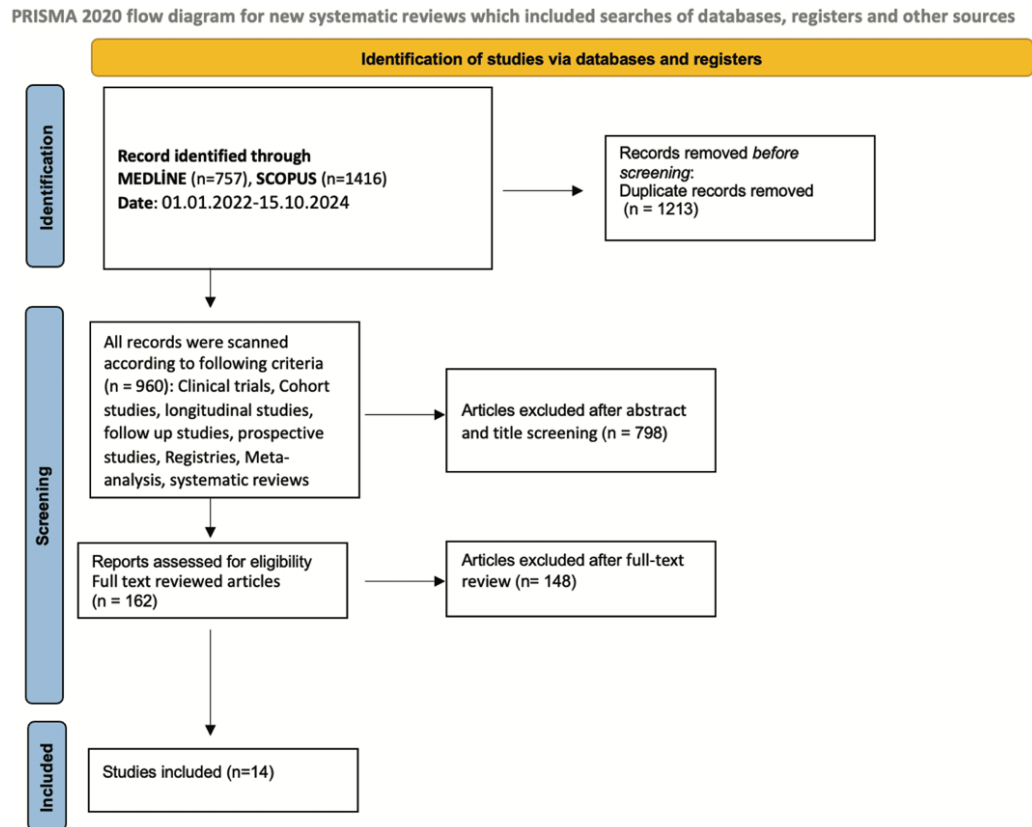
**Supplementary Fig. S2.**

Flow chart of the study selection for data analysis: Imaging group (Q4). Key words: (“giant cell arteritis” OR “temporal arteritis” OR “aortitis” OR “large vessel vasculitis”) AND (imaging OR ultrasound OR US OR “magnetic resonance” OR MRI OR “computed tomography” OR CT OR PET OR “positron emission tomography”) NOT “case report”.

**Supplementary Fig. S3.**

Flow chart of the study selection for data analysis: Imaging group (Q5).

Key words: ((giant cell arteritis) OR (Horton's arteritis) OR (Horton's disease) OR (temporal arteritis) OR (aortitis) OR (large vessel vasculitis)) AND ((imaging) OR (ultrasound) OR (ultrasonography) OR (US) OR (magnetic resonance) OR (MRI) OR (MR) OR (computed tomography) OR (CT) OR (PET) OR (positron emission tomography)) NOT (case report).



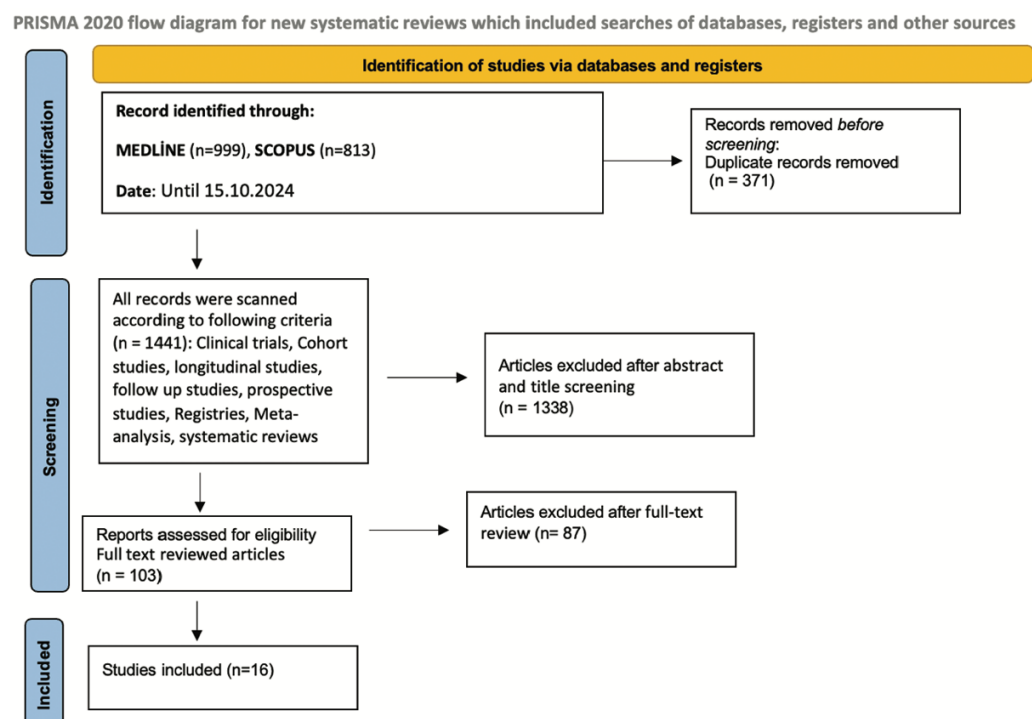
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**Supplementary Fig. S4.**

Flow chart of the study selection for data analysis: Imaging group (Q6).

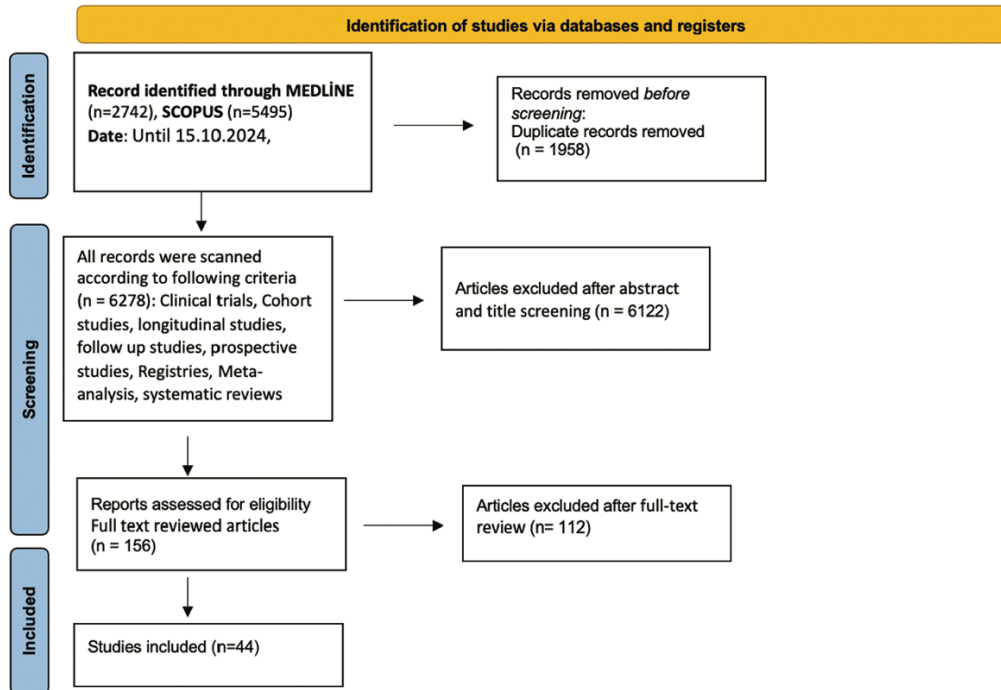
Key words: (GIANT CELL ARTERITIS [Title/Abstract]) OR (HORTON'S DISEASE [Title/Abstract]) OR TEMPORAL ARTERITIS [Title/Abstract] OR GIANT CELL ARTERITIS [MeSH Terms] OR HORTON'S DISEASE [MeSH Terms] OR TEMPORAL ARTERITIS [MeSH Terms]) AND (Magnetic resonance OR Computed tomography OR PET OR FDG PET OR Ultrasound OR Positron emission tomography) AND (Extracranial involvement OR LARGE VESSEL INVOLVEMENT OR LARGE VESSEL GIANT CELL ARTERITIS) NOT Case Reports.



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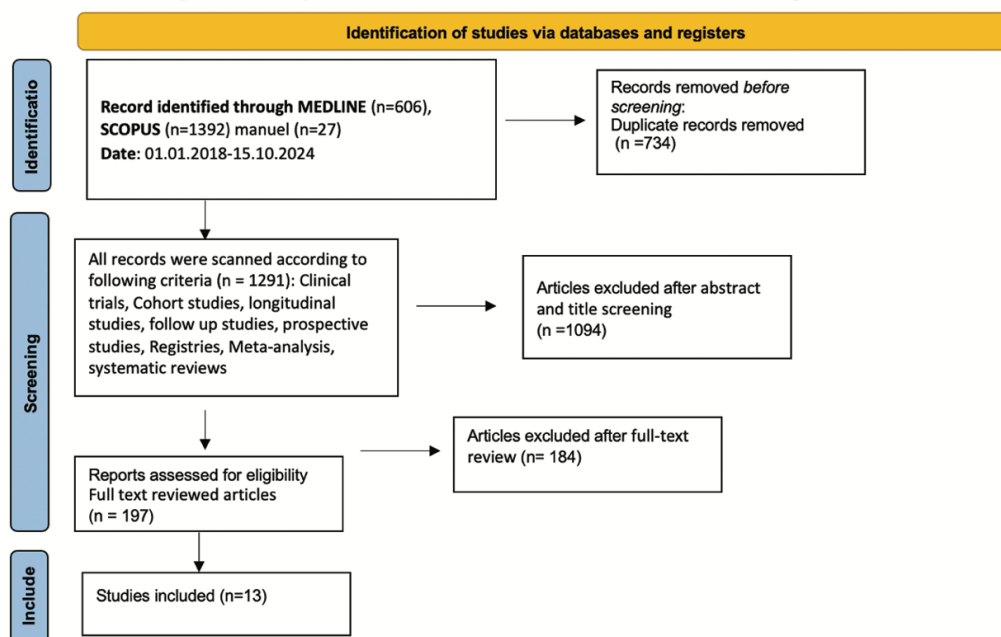
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Supplementary Fig. S5.

Flow chart of the study selection for data analysis: Imaging group (Q7).

Key words: ((giant cell arteritis) OR (Horton's arteritis) OR (Horton's disease) OR (temporal arteritis) OR (aortitis) OR (large vessel vasculitis)) AND ((imaging) OR (ultrasound) OR (ultrasonography) OR (US) OR (magnetic resonance) OR (MRI) OR (MR) OR (computed tomography) OR (CT) OR (PET) OR (positron emission tomography)) NOT (case report).

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Supplementary Fig. S6.

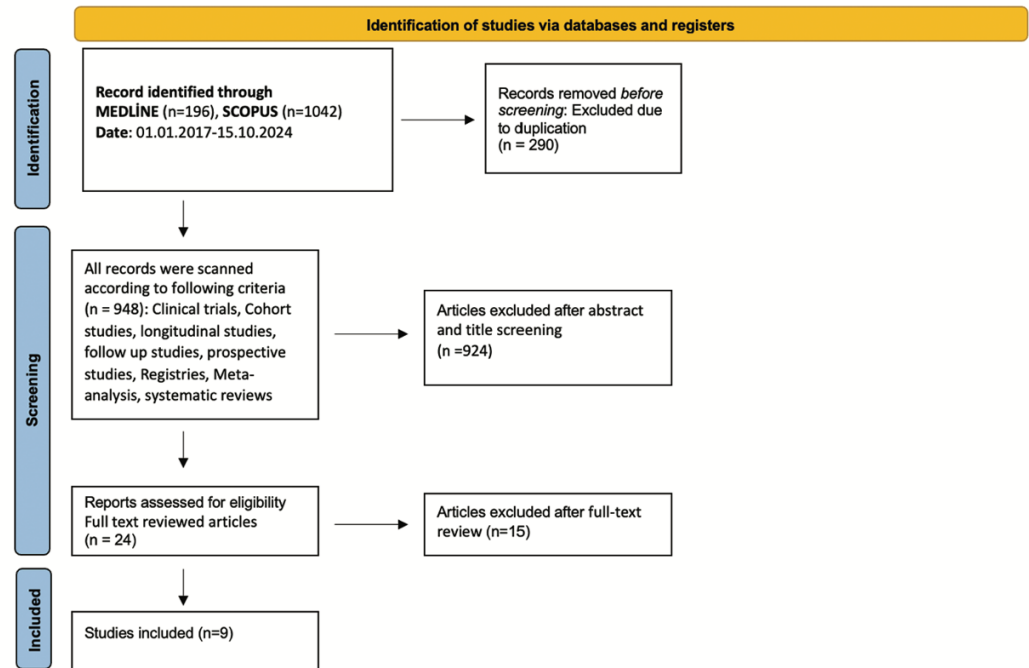
Flow chart of the study selection for data analysis: Management: GK (Q8-11).

Key words: ("Giant Cell Arteritis" OR "Temporal Arteritis" OR "GCA" OR "Horton's disease" OR "cranial arteritis") AND ("glucocorticoids" OR "steroids" OR "prednisone" OR "methylprednisolone" OR "prednisolone" OR "deflazacort" OR "dexamethasone" OR "hydrocortisone" OR "betamethasone") AND ("treatment" OR "therapy" OR "management" OR "outcome" OR "efficacy" OR "adverse effects" OR "side effects") AND (publication date: 2018-present) AND ("randomized controlled trial" OR "cohort study" OR "case-control study" OR "clinical trial" OR "observational study").

**Supplementary Fig. S7.**

Flow chart of the study selection for data analysis: Management: csDMARDs (Q12). Key words: (Giant cell arteritis) OR (Aortitis) OR (large vessel vasculitis) OR (temporal arteritis) OR (Horton’s disease) OR (Horton’s arteritis) AND (large vessel vasculitis) AND ((azathioprine) OR (azathioprine) OR (Azathioprine Sulfate) OR (Azathioprine Sodium) AND ((Mycophenolate Mofetil) OR (Mycophenolate Sodium) OR (Mycophenolic Acid)) OR (methotrexate) OR (Leflunomide) NOT (case report).

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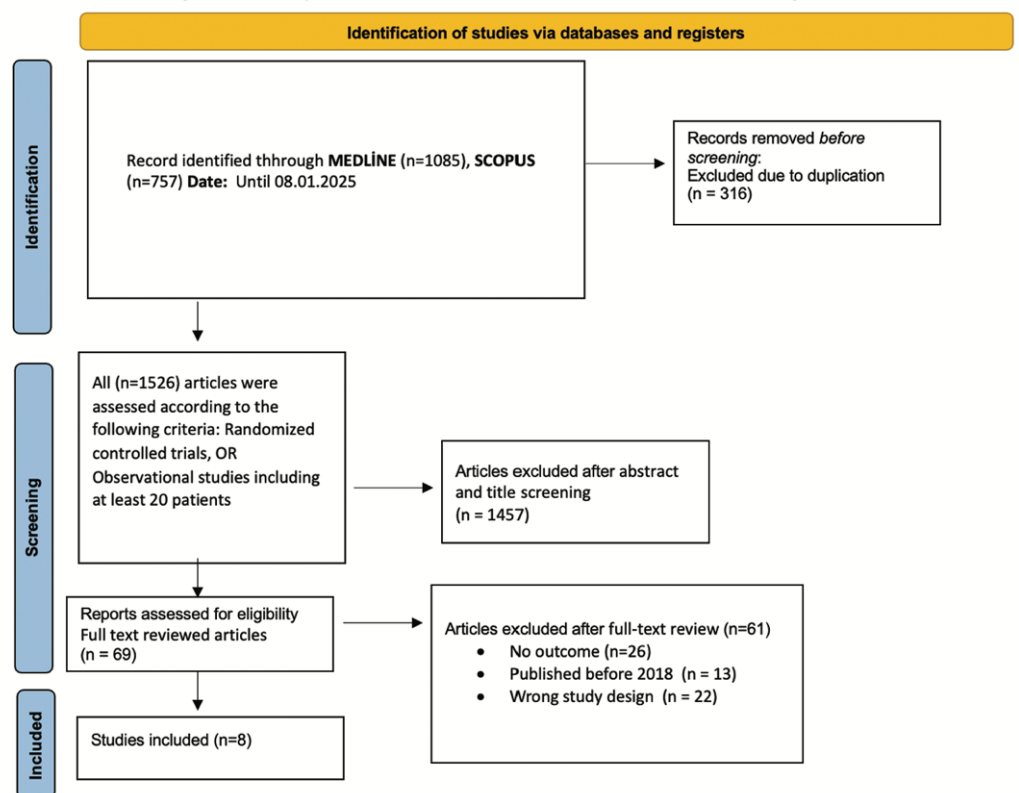
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**Supplementary Fig. S8.**

Flow chart of the study selection for data analysis: Management: bDMARDs and tsDMARDs (Q13-20). Key words: (((((((Giant cell arteritis) OR (Aortitis)) OR (large vessel vasculitis) OR (temporal arteritis) OR (Horton’s disease)) OR (Horton’s arteritis) AND (((((((((((((((biological therapy) OR (biological agents)) OR (tumor necrosis factor\*)) OR (etanercept)) OR (infliximab)) OR (adalimumab)) OR (tocilizumab)) OR (interleukin 6)) OR (abatacept)) OR (ustekinumab)) OR (rituximab)) OR (secukinumab)) OR (mavrilimumab)) OR (sarilimumab)) OR (JAK inhibitors)) OR (upadacitinib)) OR (anakinra) OR (canakinumab) OR (baricitinib)) OR (tofacitinib))) NOT (case report).

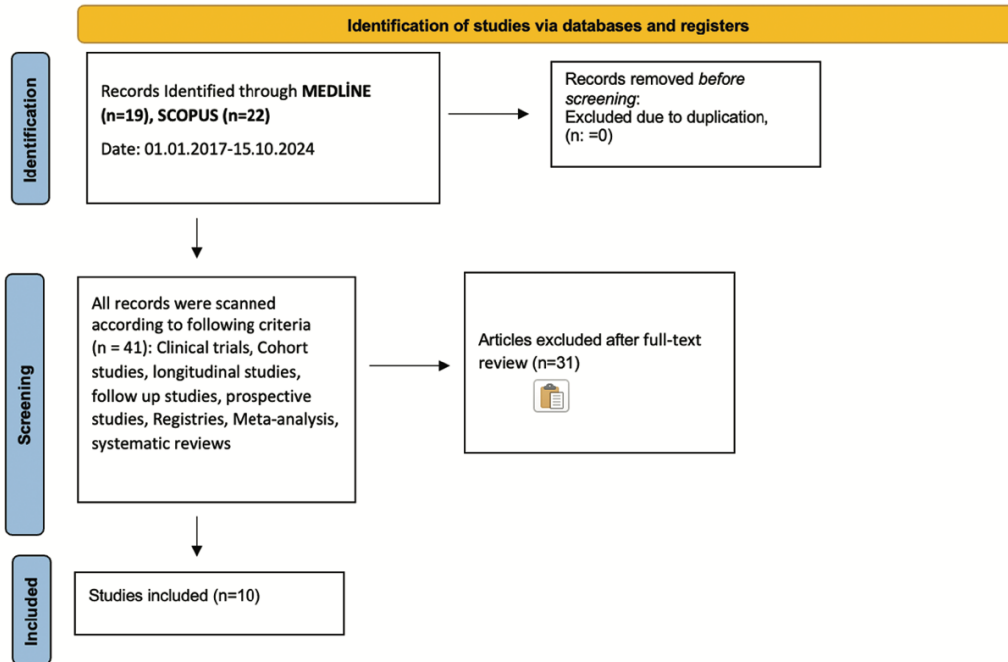
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**Supplementary Fig S9.** Flow chart of the study selection for data analysis: management: ASA and statins (Q21). Key words: (Giant cell arteritis) OR (Aortitis) OR (large vessel vasculitis)) OR (temporal arteritis)) OR (Horton’s disease)) OR (Horton’s arteritis)) AND (Hydroxymethylglutaryl-CoA Reductase Inhibitors) [MeSH] OR Aspirin [MeSH])).

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