Vaccination considerations in autoimmune rheumatic diseases

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What patients should know about EULAR, ACR and the 2026 evidence?

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Conflict of interest statement

Autoimmune rheumatic diseases are my personal cause!



EULAR 2019; ACR 2022 guideline; Nature Reviews Rheumatology 2026 review.

- Do you discuss the importance of developing a vaccination plan that addresses each patient’s rheumatic condition and individual needs?
- Do you encourage patients to ask questions about vaccination?



EULAR 2019; ACR 2022 guideline; Nature Reviews Rheumatology 2026 review.

Why vaccination matters

Infection prevention is part of rheumatic care

Rheumatic disease and some treatments can raise the chance of serious infection.

Vaccines lower risk, even when medication reduces the immune response.

Safety

Non-live vaccines are generally safe during treatment.

Response

Some medicines reduce protection, so timing can matter.

EULAR 2019; ACR 2022 guideline; Nature Reviews Rheumatology 2026 review.

The published EULAR adult guidance

2019 update, published in 2020

Plan together	Timing	Vaccine type
Review vaccines yearly; tailor the plan	Prefer stable disease and before immune suppression	Non-live vaccines can generally be given
Check age, exposure and treatment	Coordinate around B-cell depletion	Use caution with live vaccines

Influenza and pneumococcal vaccines deserve particular attention. Other vaccines depend on age, risk and national schedules.

Furer et al., Ann Rheum Dis 2020;79:39–52. DOI: 10.1136/annrheumdis-2019-215882.

Which vaccines should we discuss?

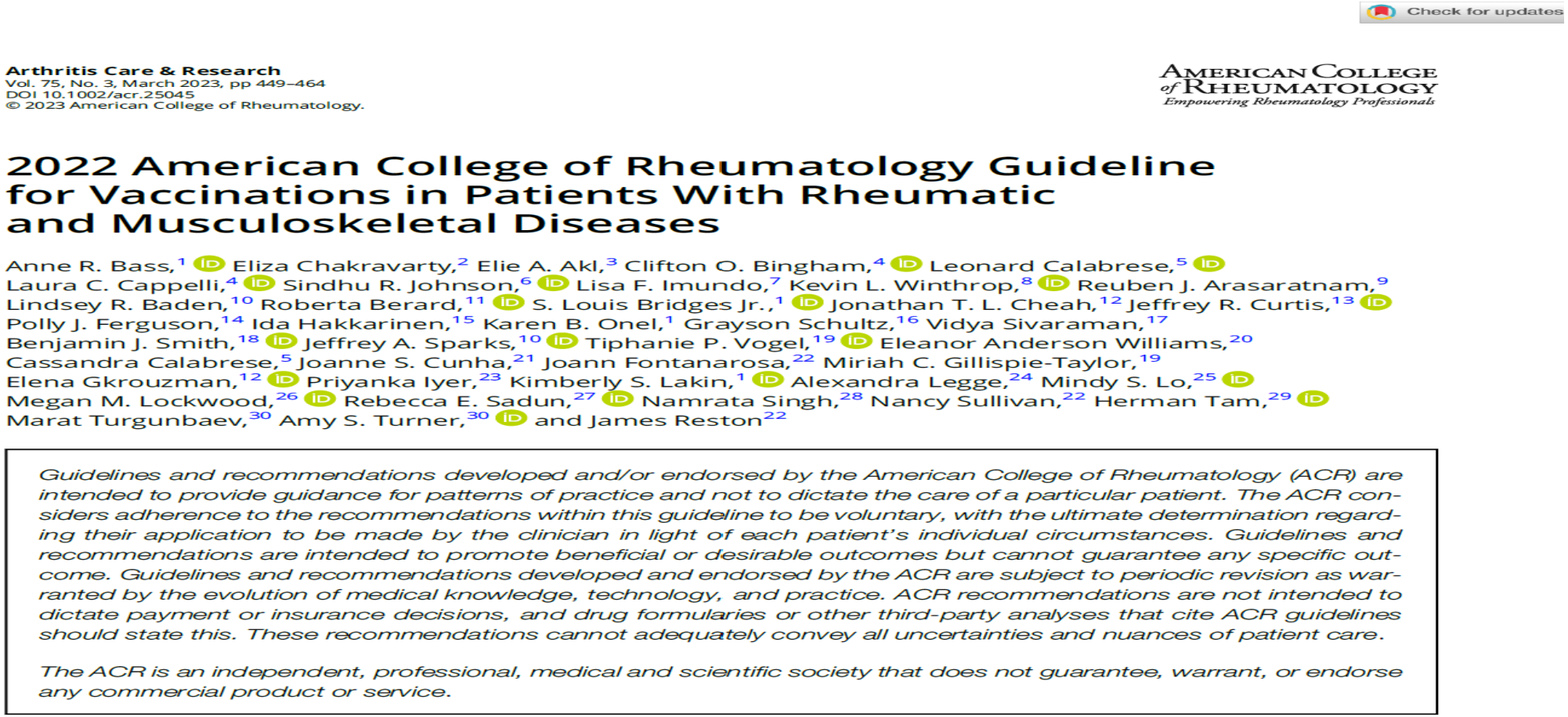
The exact schedule depends on country, age and treatment

Vaccine	Why it matters	Discussion point
Influenza	Yearly protection	Ask about the current season
Pneumococcal	Helps prevent serious bacterial infection	Check earlier doses
COVID-19	Protection as schedules change	Follow national advice
Recombinant zoster	Prevents shingles; non-live	Especially relevant with immune suppression
HPV / hepatitis / RSV	Depends on age and risk	Ask which apply to you

EULAR 2019; ACR 2022; national immunization schedules determine eligibility and dose sequence.

The published ACR guideline

Source figure from the supplied ACR presentation



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AMERICAN COLLEGE of RHEUMATOLOGY
Empowering Rheumatology Professionals

2022 American College of Rheumatology Guideline for Vaccinations in Patients With Rheumatic and Musculoskeletal Diseases

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Bass et al. Arthritis Rheumatol 2023;75:333–348.

Reproduced from source slide 4; explanatory labels are in English.

Core vaccination principles

2022 ACR guideline • translated from the supplied presentation

Vaccinate whenever possible.

Make decisions together with the patient.

Avoid postponing vaccination without a sound reason.

Source: ACR Vaccination Guidelines presentation by Dr Ekaterina Kurteva; ACR 2022 guideline.

What does ACR add?

ACR 2022 gives more detailed treatment timing advice

Treatment	ACR advice for non-live vaccines	Why discuss it
Methotrexate	Consider 2-week pause after influenza vaccine if disease allows	Can improve vaccine response
Rituximab	Give flu vaccine on schedule; time other vaccines near next dose	B-cell depletion reduces response
Other medicines	Usually continue at vaccination	Avoid unnecessary treatment changes

Never pause a medicine without agreeing a plan with your rheumatology team.

Bass et al., Arthritis Rheumatol 2023;75:333–348. DOI: 10.1002/art.42386. Recommendations mostly conditional.

Influenza vaccination

2022 ACR guideline • translated from the supplied presentation

For adults aged 65 or older, and adults younger than 65 who take immunosuppressive medicines, ACR conditionally prefers high-dose or adjuvanted influenza vaccine over standard dose.

Any influenza vaccine is preferable to none. If the preferred product is unavailable at the visit, give the available standard-dose vaccine.

High-dose vaccine contains more antigen. Trials in rheumatoid arthritis found greater seroconversion without a worse safety profile. Adjuvanted vaccine contains MF59 to strengthen the immune response.

Source: ACR Vaccination Guidelines presentation by Dr Ekaterina Kurteva; ACR 2022 guideline.

Pneumococcal vaccination

2022 ACR guideline • translated from the supplied presentation

RMD patients taking immunosuppressive medicines may have greater pneumococcal infection risk.

Studies have examined a conjugate vaccine followed by PPSV23. The guideline also discusses the introduction of one-dose PCV20 in the US.

There are already approvals of PCV15 and PCV20 in 2023. Vaccine products and age approvals have changed since publication; use the current national schedule.

Source: ACR Vaccination Guidelines presentation by Dr Ekaterina Kurteva; ACR 2022 guideline.

Recombinant zoster vaccine

2022 ACR guideline • translated from the supplied presentation

ACR strongly recommends recombinant zoster vaccine for adults with RMDs who take immunosuppressive medicines.

People with rheumatoid arthritis and systemic lupus erythematosus can face greater shingles risk. Evidence from other immunocompromised groups supported the recommendation when direct RMD evidence was limited.

The vaccine is recombinant and non-live. Eligibility and dosing follow current national guidance.

Source: ACR Vaccination Guidelines presentation by Dr Ekaterina Kurteva; ACR 2022 guideline.

Shingles awareness



Historical promotional material; check current local product indication.

Herpes zoster and vascular risk

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Herpes zoster and long-term vascular risk: a retrospective cohort study

Amir Horev[1,2,5], Anat Horev[2,3,5], Adi Gordon-Irshai[2,4], Michal Gordon[4], Nicolas Andre[2] & Gal Ifergane[2,3]

Herpes zoster (HZ) represents a serious health problem in the general population due to its abundance and complications. Stroke and acute myocardial infarction are well-documented short-term complications of HZ, primarily due to vasculopathy in the cerebral and coronary arteries. However, no major study to date has specifically demonstrated that HZ is a long-term risk factor for all Major Adverse Cardiac and Cerebrovascular Events (MACCE). A retrospective cohort study was conducted analyzing the association between HZ and MACCE. We compared HZ patients diagnosed between 2001 and 2018 and a matched control group. The model was stratified according to matched pairs and adjusted for age, socioeconomic status, history of dyslipidemia, and prior myocardial infarction (MI). Association between HZ exposure and stroke was assessed through a multivariable Cox regression analysis. The study included 41,930 patients, with 20,965 patients in each group. The risk of MACCE was 19% higher among HZ patients in the first year of follow up ($P < 0.001$). Antiviral treatment did not positively affect long-term survival among HZ patients ($P < 0.001$). These results suggest that HZ is a marker of long-term vascular risk. Additional studies will be needed to further evaluate this risk, the impact of HZ vaccination on such risk, and potential mitigation strategies.

Abbreviations

ADT	Admission-discharge-transfer
AMI	Acute myocardial infarction
CABG	Coronary artery bypass grafting
CI	Confidence interval
DNA	Deoxynucleic acid
HMO	Health maintenance organization
HR	Hazard ratio
HZ	Herpes zoster
ICD9	International Classification of Diseases, Ninth Revision
MACCE	Major adverse cardiac and cerebrovascular events
MI	Myocardial infarction
PCI	Percutaneous coronary intervention
PCR	Polychain reaction
SUMC	Soroka University Medical Center
TIA	Transient ischemic attack
VZV	Varicella-zoster virus

Herpes zoster (HZ) infections are characterized by painful, unilateral vesicular skin eruptions usually limited to a single dermatome. These infections are caused by the endogenous reactivation of latent varicella-zoster virus (VZV) residing in the sensory ganglia and dorsal roots after primary infection. HZ represents a serious health problem in the general population[1], with an overall lifetime risk range from 10 to 30%[2]. Postherpetic neuralgia, the most debilitating HZ complication, affects 13–25% of patients[3]. It often negatively affects the quality of life and sometimes requires specific treatment[4]. Another complication of this infection is encephalitis due to the

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Herpes zoster vaccination and dementia

Article

A natural experiment on the effect of herpes zoster vaccination on dementia

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Neurotropic herpesviruses may be implicated in the development of dementia[1–5]. Moreover, vaccines may have important off-target immunological effects[6–9]. Here we aim to determine the effect of live-attenuated herpes zoster vaccination on the occurrence of dementia diagnoses. To provide causal as opposed to correlational evidence, we take advantage of the fact that, in Wales, eligibility for the zoster vaccine was determined on the basis of an individual's exact date of birth. Those born before 2 September 1933 were ineligible and remained ineligible for life, whereas those born on or after 2 September 1933 were eligible for at least 1 year to receive the vaccine. Using large-scale electronic health record data, we first show that the percentage of adults who received the vaccine increased from 0.01% among patients who were merely 1 week too old to be eligible, to 47.2% among those who were just 1 week younger. Apart from this large difference in the probability of ever receiving the zoster vaccine, individuals born just 1 week before 2 September 1933 are unlikely to differ systematically from those born 1 week later. Using these comparison groups in a regression discontinuity design, we show that receiving the zoster vaccine reduced the probability of a new dementia diagnosis over a follow-up period of 7 years by 3.5 percentage points (95% confidence interval (CI) = 0.6–7.1, $P = 0.019$), corresponding to a 20.0% (95% CI = 6.5–33.4) relative reduction. This protective effect was stronger among women than men. We successfully confirm our findings in a different population (England and Wales's combined population), with a different type of data (death certificates) and using an outcome (deaths with dementia as primary cause) that is closely related to dementia, but less reliant on a timely diagnosis of dementia by the healthcare system[10]. Through the use of a unique natural experiment, this study provides evidence of a dementia-preventing or dementia-delaying effect from zoster vaccination that is less vulnerable to confounding and bias than the existing associational evidence.

HPV vaccination

2022 ACR guideline • translated from the supplied presentation

For previously unvaccinated adults with RMDs aged 27–45 who take immunosuppressive medicines, ACR conditionally recommends HPV vaccination through shared decision-making.

Some immunosuppressed patients face increased risk of cervical dysplasia and cervical cancer. Studies in young women with SLE found HPV vaccination immunogenic and well tolerated.

Routine age limits and catch-up recommendations come from the relevant national program.

Source: ACR Vaccination Guidelines presentation by Dr Ekaterina Kurteva; ACR 2022 guideline.

Medication timing with non-live vaccines

ACR 2022

Medicine	Influenza	Other non-live vaccines
Methotrexate	Hold 2 weeks after, if disease allows	Continue
Rituximab	Vaccinate on schedule; delay next dose ≥2 weeks if possible	Vaccinate when next dose is due; delay it ≥2 weeks
Other immunosuppressants	Continue	Continue

Coordinate any medication pause with the treating rheumatologist.

ACR 2022 guideline, Table 3. Conditional timing advice.

Glucocorticoids and non-live vaccines

ACR 2022

Prednisone-equivalent daily dose	Influenza	Other non-live vaccines
≤10 mg	Give	Give
>10 to <20 mg	Give	Give
≥20 mg	Give	Defer until dose is <20 mg if feasible

The high-dose recommendation concerns immune response. Influenza is still given.

ACR 2022 guideline, Table 4; equivalent pediatric or other glucocorticoid doses apply.

Live attenuated vaccines

2022 ACR guideline • translated from the supplied presentation

Avoid live vaccines during significant immunosuppression.

If vaccination is essential, a specialist may plan a medicine interruption. Use non-live alternatives when available.

The risks of vaccine-associated infection and disease flare must be discussed for the individual patient.

Source: ACR Vaccination Guidelines presentation by Dr Ekaterina Kurteva; ACR 2022 guideline.

Planning for a live vaccine

Example ACR medication hold intervals

Medicine	Before live vaccine	After live vaccine
Glucocorticoids	4 weeks	4 weeks
Methotrexate / azathioprine	4 weeks	4 weeks
JAK inhibitors	1 week	4 weeks
Rituximab	6 months	4 weeks
IV immunoglobulin, 1 g/kg	10 months	4 weeks

Selected rows from source slide 23 and ACR 2022 Table 5. Specialist planning is essential; dose and circumstances may modify intervals.

Live vaccines in young children

2022 ACR guideline • translated from the supplied presentation

Few people taking immunosuppressants need live viral vaccines during treatment. Some young children with autoinflammatory disease need biologic treatment before their primary vaccines are complete.

For them, flare risk during a medication hold can be substantial, while missed live vaccines may be difficult to catch up later. A shorter hold may be considered when vaccination is critical.

Parents or guardians should take part in the decision and know symptoms of vaccine-associated infection.

Source: ACR Vaccination Guidelines presentation by Dr Ekaterina Kurteva; ACR 2022 guideline.

Why the four-week hold may vary

2022 ACR guideline • translated from the supplied presentation

ACR’s suggested four-week medication hold after a live vaccine is conservative. Circulation of vaccine virus generally lasts around two weeks, but may last longer, especially after a first dose.

A specialist may shorten the post-vaccine hold if vaccination is essential and the flare risk without treatment is high.

Source: ACR Vaccination Guidelines presentation by Dr Ekaterina Kurteva; ACR 2022 guideline.

Infants exposed to treatment during pregnancy

Rotavirus vaccination requires advance discussion

Medicine before birth	Rotavirus in first 6 months	After 6 months
TNF inhibitor	Give, according to ACR	Usually outside rotavirus age window
Rituximab	Do not give	Assess with pediatric specialist

Discuss placental medicine exposure with the pediatrician before birth. The infant's vaccine schedule may change.

Translation of source slide 26; check current pediatric guidance and vaccine age limits.

EULAR and ACR: where do they differ?

Both support vaccination

Question	EULAR 2019	ACR 2022
Who is covered?	Adults with autoimmune inflammatory RMDs	Children and adults with RMDs
When disease is active?	Prefer vaccination in quiet disease	Give influenza even in active disease
Methotrexate after flu?	No specific routine hold in main recommendations	Consider holding for 2 weeks if feasible
Rituximab timing?	Vaccinate before treatment when possible	Detailed timing around next dose
Recombinant zoster?	Older zoster guidance	Recommends in immunosuppressed adults >18

Published guideline comparison; local vaccination schedules still apply.

The 2026 review: what has changed?

Nature Reviews Rheumatology, September 2026

Vaccines remain a key tool

The review considers safety, tolerability, immune response and disease flares across autoimmune rheumatic diseases.

Treatment changes the response

B-cell depletion and newer intensive therapies make timing and evidence gaps especially important.

Patient question: “Which vaccines are due, and is there a better time around my treatment?”

Vaccination considerations in autoimmune rheumatic diseases. Nat Rev Rheumatol (2026). DOI: 10.1038/s41584-026-01427-w.

A simple conversation guide

Bring your vaccine record and medicine list

Ask your team	Why
Which vaccines am I due for this year?	Your age, health and country determine the schedule
Is any vaccine live?	Live vaccines need special planning during immune suppression
Does treatment timing matter for me?	Especially relevant around rituximab and some other therapies
What if my disease is active?	Balance timely protection with your current health
Who will record the doses?	Keep one shared, up-to-date record

Questions for shared decisions; do not change treatment without your care team.

Published guidance and 2026 update

The congress update is preliminary until final publication

Topic	EULAR 2019 published	ACR 2022 published	EULAR 2026 congress report
Disease activity	Prefer quiet disease	Flu even in active disease	Vaccinate promptly regardless of activity
Influenza / MTX	Flu encouraged	Consider 2-week MTX hold	1 week discussed as option
Pneumococcal	PCV13 / PPSV23 era	Follow current US schedule	Newer conjugate vaccines emphasized
Zoster	Vaccinate at-risk people	Recombinant vaccine for immunosuppressed adults	Recombinant vaccine emphasized
COVID-19	Predates pandemic	Separate COVID guidance	Included in updated scope

The last column summarizes the EULAR 2026 presentation, not a final peer-reviewed guideline.

EULAR published recommendations; ACR 2022; EULAR ongoing initiative QoC024; RheumNow report of EULAR 2026 presentation.

Sources and status

EULAR 2019 adult vaccination update: doi.org/10.1136/annrheumdis-2019-215882

ACR 2022 vaccination guideline: doi.org/10.1002/art.42386

2026 review: nature.com/articles/s41584-026-01427-w

EULAR publication status: eular.org/recommendations-management and /ongoing-initiatives

2026 congress report: rheumnow.com/news/eular-2026-updated-recommendations-vaccination-patients-autoimmune-inflammatory-rheumatic

For individual vaccine choices, use the current national schedule and your treating clinician’s advice.

Thank you for your attention!



