

# Rheumatology in General Practice: 3 Common Clinical Scenarios

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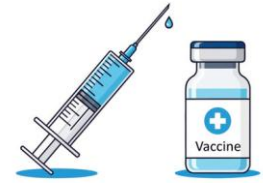
# Shared Care of Patients on Immunosuppressive Therapy

- Increasing use of immunosuppressive therapy
  - More options
  - Earlier treatment
  - Treat-to-target approach
- Ongoing care is largely delivered in general practice
- Collaborative care is essential for optimal outcomes
- Focus today:
  - Vaccination
  - Pregnancy planning
  - Peri-operative management



# Case 1: Vaccination

- 66-year-old Female with rheumatoid arthritis
- Medications:
  - Methotrexate for years
  - Adalimumab recently added due to frequent flare up
  - Not on steroids
- Question:
  - Can I get my flu vaccine this year?
  - Do I need any other vaccines?



# Vaccination in Immunocompromised Patients

## Non-live Vaccines

Pneumococcal  
Recombinant Zoster  
COVID-19

High dose  
if available

### Medication management at the time of non-live attenuated vaccine administration

	Influenza vaccination	Other non-live attenuated vaccinations
Methotrexate	Hold methotrexate for 2 weeks <i>after</i> vaccination*	Continue methotrexate
Rituximab	Continue rituximab**	Time vaccination for when the next rituximab dose is due, and then hold rituximab for at least 2 weeks after vaccination
Immunosuppressive medications other than methotrexate and rituximab	Continue immunosuppressive medication	Continue immunosuppressive medication

# Vaccination in Immunocompromised Patients

	Influenza vaccination	Other non-live attenuated vaccinations
Prednisone $\leq$ 10 mg daily*	Give	Give
Prednisone $>$ 10 mg and $<$ 20 mg*	Give	Give
Prednisone $\geq$ 20 mg daily*	Give	Defer**

# Live Vaccines

Immunosuppressive medication	Hold <u>before</u> live-attenuated virus vaccine administration	Hold <u>after</u> live-attenuated virus vaccine administration
Glucocorticoids <sup>a</sup>	4 weeks	4 weeks
Methotrexate, azathioprine <sup>b</sup>	4 weeks	4 weeks
Leflunomide, mycophenolate mofetil, calcineurin inhibitors, oral cyclophosphamide	4 weeks	4 weeks
JAK inhibitors	1 week	4 weeks
TNF, IL17, IL12/23, IL23, BAFF/BLyS inhibitors	1 dosing interval <sup>c</sup>	4 weeks
IL6 pathway inhibitors	1 dosing interval <sup>d</sup>	4 weeks
IL1 inhibitors		
Anakinra	1 dosing interval <sup>d</sup>	4 weeks
Rilonacept	1 dosing interval <sup>d</sup>	4 weeks
Canakinumab	1 dosing interval <sup>d</sup>	4 weeks
Abatacept	1 dosing interval <sup>c</sup>	4 weeks
Anifrolumab	1 dosing interval <sup>c</sup>	4 weeks
Cyclophosphamide IV	1 dosing interval <sup>c</sup>	4 weeks
Rituximab	6 months	4 weeks
IVIG <sup>e</sup>		
300-400 mg/kg	8 months	4 weeks
1 gm/kg	10 months	4 weeks
2 gm/kg	11 months	4 weeks

# Case 1: Vaccination

- Question:
  - Can I get my flu vaccine this year?
    - Yes, high dose if available
    - Hold Methotrexate for 2 weeks after
  - Do I need any other vaccines?
    - Check vaccination status for Varicella, Pneumococcal and COVID-19
    - No need to hold DMARDs
    - OK to give at the same time



# Case 2: Pregnancy Planning



- 34-year-old female with psoriatic arthritis
- Medications:
  - Sulfasalazine
  - Etanercept
- Planning pregnancy in the next 12 months
- Questions:
  - What do I do about my arthritis medications?
  - Am I going to flare up?
  - Am I going to be able to breastfeed?
  - Can my baby get vaccinated?

# Reproductive health in Rheumatic Diseases

- Plan pregnancy during remission/low disease activity
- Review medications before conception
  - **safe** vs **contraindicated**
- Stop teratogens early and switch to pregnancy-compatible therapy
- Balance disease control, fetal safety and breastfeeding goals

Medication	Pre-conception	During pregnancy	Breastfeeding
<b>Conventional medications</b>			
Hydroxychloroquine	++	++	++
Sulfasalazine	++	++	++
Colchicine	++	++	++
Azathioprine, 6-mercaptopurine	++	++	+ Low transfer
Prednisone	+ Taper to <20 mg/day by adding pregnancy-compatible immunosuppressants	+ Taper to <20 mg/day by adding pregnancy-compatible immunosuppressants	+ After a dose of >20 mg, delay breastfeeding for 4 hours
Cyclosporine, tacrolimus	+ Monitor blood pressure	+ Monitor blood pressure	+ Low transfer
Nonsteroidal antiinflammatory drugs (cyclooxygenase 2 inhibitors not preferred)	+ Discontinue if the woman is having difficulty conceiving	+ Continue in first and second trimesters; discontinue in third trimester	+ Ibuprofen preferred
<b>Tumor necrosis factor inhibitors (tumor necrosis factor inhibitors are considered compatible with pregnancy)</b>			
Certolizumab	++	++	++
Infliximab, etanercept, adalimumab, golimumab	+ Continue through conception	+ Continue in first and second trimesters; discontinue in third trimester several half-lives prior to delivery	++
Rituximab	+ Discontinue at conception	+ Life-/organ-threatening disease	++

<b>Other biologics (limited safety data; limited transfer in early pregnancy but high transfer in second half of pregnancy)</b>			
Anakinra, belimumab, abatacept, tocilizumab, secukinumab, ustekinumab	+ Discontinue at conception	× Discontinue during pregnancy	+ Expect minimal transfer due to large molecular size, but no available data
<b>Not compatible with pregnancy</b>			
Methotrexate	×× Stop 1–3 months prior to conception	×× Stop and give folic acid 5 mg/day	× Limited data suggest low transfer
Leflunomide	×× Cholestyramine washout if detectable levels	×× Stop and give cholestyramine washout	××
Mycophenolate mofetil and mycophenolic acid	×× Stop >6 weeks prior to conception to assess disease stability	××	××
Cyclophosphamide	×× Stop 3 months prior to conception	+ Life-/organ-threatening disease in second and third trimesters	××
Thalidomide	×× Stop 1–3 months prior to conception	××	××
Tofacitinib, apremilast, baricitinib	Unable to determine due to lack of data; small molecular size suggests transfer across the placenta and into breast milk		

EULAR 2024 update:  
May be considered  
Not first line

# Case 2: Pregnancy Planning



- Questions:
  - What do I do about my arthritis medications?
    - Continue Sulfasalazine before, during and after
    - Stop Etanercept in last trimester and resume post-partum
  - Am I going to flare up?
    - 2/3 do well, especially with stable pre-pregnancy disease
    - Postpartum flares common 40-50%
  - Am I going to be able to breastfeed? Yes
  - Can my baby get vaccinated?
    - Inactivated vaccines on schedule
    - Delay live vaccines for at least 6 months post-exposure to TNFi

# Case 3: perioperative planning

- 60-year-old man with osteoarthritis, psoriasis and PMR
- Plan for elective total knee replacement
- Medications:
  - Methotrexate
  - Tocilizumab (SQ)
- Question: How should his medications be managed?



# Perioperative Immunosuppressive Planning

MEDICATIONS TO CONTINUE THROUGH SURGERY		
DMARDs: CONTINUE these medications through surgery. (All patients)	Dosing Interval	Recommended timing of surgery since last medication dose
Methotrexate	Weekly	Anytime
Sulfasalazine	Once or twice daily	Anytime
Hydroxychloroquine	Once or twice daily	Anytime
Leflunomide (Arava)	Daily	Anytime
Doxycycline	Daily	Anytime
<b>Apremilast (Otezla)</b>	<b>Twice daily</b>	<b>Anytime</b>

<b>MEDICATIONS TO WITHHOLD PRIOR TO SURGERY***</b>		
<b>BIOLOGICS: WITHHOLD these medications through surgery</b>		<b>Recommended timing of surgery since last medication dose</b>
Infliximab (Remicade)	Every 4, 6, or 8 weeks	Week 5, 7, or 9
Adalimumab (Humira)	Every 2 weeks	Week 3
Etanercept (Enbrel)	Every week	Week 2
Golimumab (Simponi)	Every 4 weeks (SQ) or every 8 weeks (IV)	Week 5 Week 9
Abatacept (Orencia)	Monthly (IV) or weekly (SQ)	Week 5 Week 2
Certolizumab (Cimzia)	Every 2 or 4 weeks	Week 3 or 5
Rituximab (Rituxan)	2 doses 2 weeks apart every 4-6 months	Month 7
<b>Tocilizumab (Actemra)</b>	Every week (SQ) or every 4 weeks (IV)	Week 2 Week 5
Anakinra (Kineret)	Daily	Day 2
IL-17-Secukinumab (Cosentyx)	Every 4 weeks	Week 5
Ustekinumab (Stelara)	Every 12 weeks	Week 13
<b>Ixekizumab (Taltz)†</b>	<b>Every 4 weeks</b>	<b>Week 5</b>
<b>IL-23 Guselkumab (Tremfya)†</b>	<b>Every 8 weeks</b>	<b>Week 9</b>
<b>JAK inhibitors WITHHOLD this medication 3 days prior to surgery**</b>		
<b>Tofacitinib (Xeljanz):</b>	<b>Daily or twice daily</b>	<b>Day 4</b>
<b>Baricitinib (Olumiant)†</b>	<b>Daily</b>	<b>Day 4</b>
<b>Upadacitinib (Rinvoq)†</b>	<b>Daily</b>	<b>Day 4</b>
<b>NOT-SEVERE SLE: WITHHOLD these medications 1 week prior to surgery</b>		
Mycophenolate mofetil	Twice daily	<b>1 week after last dose</b>
Azathioprine	Daily or twice daily	1 week after last dose
Cyclosporine	Twice daily	<b>1 week after last dose</b>
Tacrolimus	Twice daily (IV and PO)	<b>1 week after last dose</b>
Rituximab (Rituxan)	Every 4-6 months	Month 7
<b>Belimumab IV (Benlysta)</b>	<b>Monthly</b>	<b>Week 5</b>
<b>Belimumab SQ (Benlysta)</b>	<b>Weekly</b>	<b>Week 2</b>

## Case 3: perioperative planning

- Question: How should his medications be managed?
  - Continue methotrexate perioperatively
  - HOLD tocilizumab 2 weeks prior to surgery
  - Resume tocilizumab after 2/52



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# Thank you