Rheumatoid arthritis (version 2)

Rheumatoid arthritis is a progressive, systemic and autoimmune inflammatory disorder characterized by symmetrical synovitis, joint erosions and multisystem extra-articular manifestations.

Diagnosis

RA is diagnosed according to ACR/EULAR (2010) criteria after exclusion of infective causes of arthritis.

Table 1. Diagnosis according to ACR/EULAR (2010) RA criteria

Symptom	Score
A Joint involvement (0-5)	
1 medium-large joint	0
2-10 medium-large joint	1
1-3 small joints (with or without involvement of large joint)	2
4-10 small joints (with or without involvement of large joint)	3
>10 joints (at least one small joint)	5
B Serology (0-3)	
Negative RF and negative ACPA	0
Low positive RF or low positive ACPA	2
High positive RF or high positive ACPA	3
C Acute phase reactants	
Normal CRP and normal ESR	0
Abnormal CRP or abnormal ESR	1
D Duration of symptoms	
< 6 week	0
>= 6 week	1

A score of >6/10 is needed to diagnose definite RA.

NB: In some patients with chronic deformed RA in the state of remission at first visit, not fulfil the above criteria, ACR criteria for RA (1987) may be useful to make the diagnosis.

Clinical Assessment in RA

- Disease Activity Score (DAS) (Inflammation)
- X'ray changes (Structural damage)
- Quality of life (MQoL for Myanmar people)
- Comorbidities

Severity Assessment

Disease Activity-Modified Disease Activity Score (DAS 28)

(*Can use "Rheuma Help" or "DAS 28" application in the Android or iOS*)

$$DAS\ 28_{ESR} = 0.56 \times \sqrt{(TJC28)} + 0.28 \times \sqrt{(SJC28)} + 0.7 \times Log_{nat}(ESR) + 0.014 \times GH$$

TJC = tender joint count; SJC = Swollen joint count, ESR= Erythrocyte sedimentation rate, GH = Global Health

< 2.6 = Remission
2.6 - 3.2 = Low Disease Activity
3.2 - 5.1 = Moderate Activity
> 5.1 = High Activity

Poor prognostic factor (PPF)

- High acute phase reactant levels
- High swollen joint count
- Presence of RF and/or ACPA, especially at high levels
- Presence of early erosions
- Persistently moderate or high disease activity despite conventional synthetic DMARD (csDMARD) therapy according to composite measures including joint counts
- Failure of two or more csDMARDs

Function Health Status of RA

- Class I - No handicap (Can perform ADL, Vocational &Avocational works)
- Class II - Can perform activity of daily life (ADL) and vocational works.
- Class III - Can do ADL (self-care without assistant, may need minimal help sometimes)
- Class IV - Need assistant for self-care, chair bound

Before starting DMARD

Clinical background

- Alcohol consumption
- Smoking
- Diabetes
- Hypertension
- Coronary Heart disease
- Menstrual history
- Contraception

Investigations

- CRP or ESR, Cholesterol, Blood sugar, FBC, LFT, ALT, Urea and Creatinine
- HBs Ag, Ab –HCV, HIV
- Tuberculin test in those with history of close contact to open case, IGRA
- ECG
- Chest X'ray (PA)

Vaccinations

- Influenza vaccine
- Pneumococcal vaccine
- Hepatitis B vaccine

DMARD nomenclature

DMARD nomenclature

1. Synthetic DMARDs

(i) csDMARDs- methotrexate, leflunomide, sulfasalazine, hydroxychloroquine

(ii) Targeted synthetic tsDMARDs- baricitinib, tofacitinib, upadacitinib

2. Biological DMARDs

(i) Biological originator DMARDs - TNFi: adalimumab, certolizumab, etanercept, golimumab, infliximab; IL- 6Ri: sarilumab, tocilizumab; Costimulation-i: abatacept; anti-B cell (CD20): rituximab

(ii) Biosimilar DMARDs- currently for: adalimumab, etanercept, infliximab, rituximab

Dosage of csDMARD

- HCQ - 200mg od
- MTX - 7.5-15mg weekly + folic acid 5mg weekly

- Leflunomide – 10-20 mg od
- SSZ – 0.5 – 3 g per day in divided doses

Dosage of tsDMARD (JAKi)

- Oral Tofacitinib 5 mg BD (avoid in patients with thromboembolic risks)

Dosage of bDMARDs including biosimilar

- TNFi: Etanercept – subcutaneous 50 mg/week
  Adalinmumab – subcutaneous 40 mg every other week
  Golimumab - Subcutaneous 50 mg once a month
- IL-6Ri: Tocilizumab – IV 8mg/kg every 4 week (sc---)
- Selective T-Cell Costimulation Blocker: Abatacept –subcutaneous 125 mg once weekly
- Anti-CD20: Rituximab - IV: 500 -1,000 mg on days 1 and 15 (in combination with methotrexate); subsequent courses may be administered every 24 weeks (or based on clinical evaluation), but no sooner than every 16 weeks. Premedication with methylprednisolone 100 mg IV is recommended 30 minutes prior to each rituximab dose.

Dosage of Steroid

- Low dose Steriod – oral prednisolone <7.5 mg per day should be slowly tapered over a period of months

Adjunctive Rx

- Omega 3 Fatty acid
- Lipid-Lowering Agent
- Prophylactic Rx for osteoporosis (see in osteoporosis guideline)

Follow Up

- Timing- At week 4, week 12, week 24, week 36, week 52, then 24 weekly (6 monthly later)
- Monitor
  - Disease activity
    $DAS28_{ESR}$ calculation and assess the achievement of T2T (remission or Low disease activity

Improvement criteria (EULAR improvement criteria)

Value achieved	Change in DAS or DAS28 from base line			
DAS28	DAS	>1.2	>0.6 and ≤ 1.2	≤0.6
≤ 3.2	≤ 2.4 (**2.6)	Good		
>3.2 and ≤5.1	>2.4 and ≤		Moderate	
>5.1	>3.7			Non

- Functional ability using M-QoL for Myanmar people

Grasping	
Dressing	
Eating	
Using toilet	
Walking	
Worshipping	
Sleeping disturbance	
Social isolation	
Anxiety/depression	
Pain/discomfort	

0: No problem
1: Some problem
2: Moderate problem
3: Difficult problem
4:Unable

0: No
1: Slightly
2: Moderately
3:Severely
4:Extreme

Total Score M-QOL = ( )

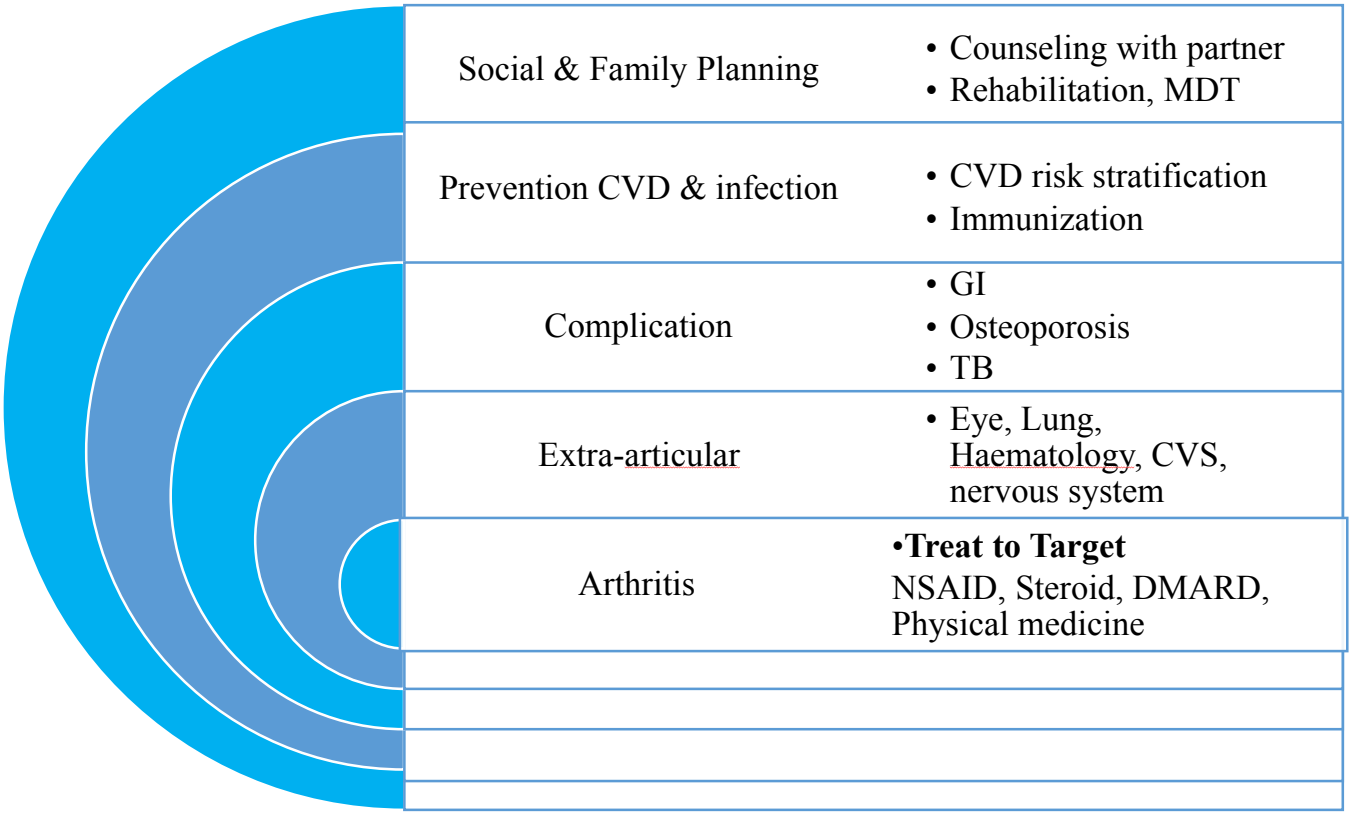
- Blood Test
  - At week 4 - FBC, ALT
  - At week 12 – FBC, LFT, ALT, CRP
  - At week 24 – FBC, ALT, CRP, CXR (PA)
  - AT week 36 – FBC, ALT

- At week 52 - FBC, LFT, ALT, CRP, Urea, Crea nine, Cholesterol, Sugar, CXR (PA) Bone mineral density (DEXA scan)

Referral to rheumatologist

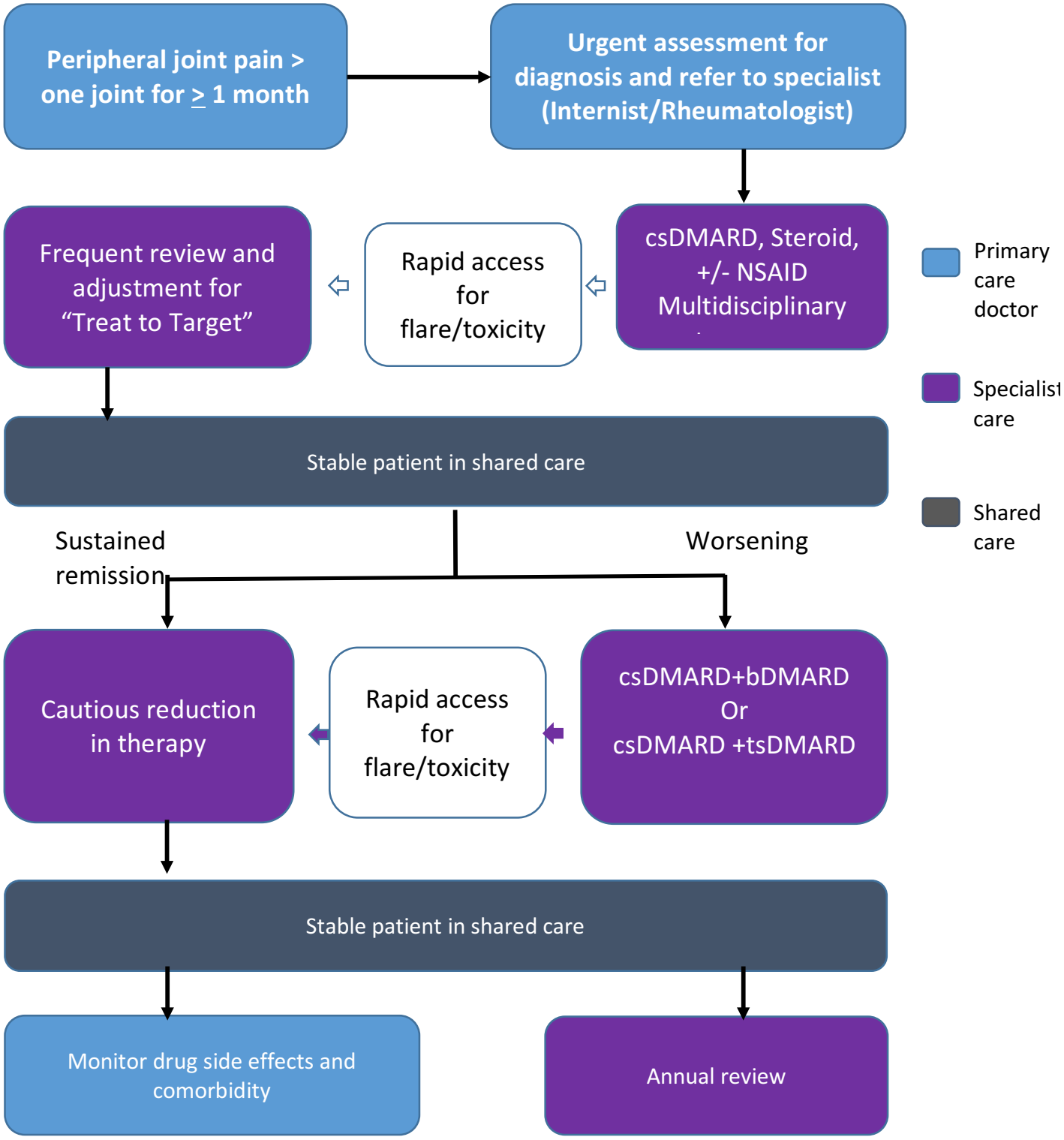
- Pregnancy
- Interstitial lung disease
- Liver disease (eg; HBV, HCV, Alcoholic liver disease)
- Vasculitis
- Moderate or high disease activity at 3 months follow up after combination of 2 csDMARDs

Minimal care in RA

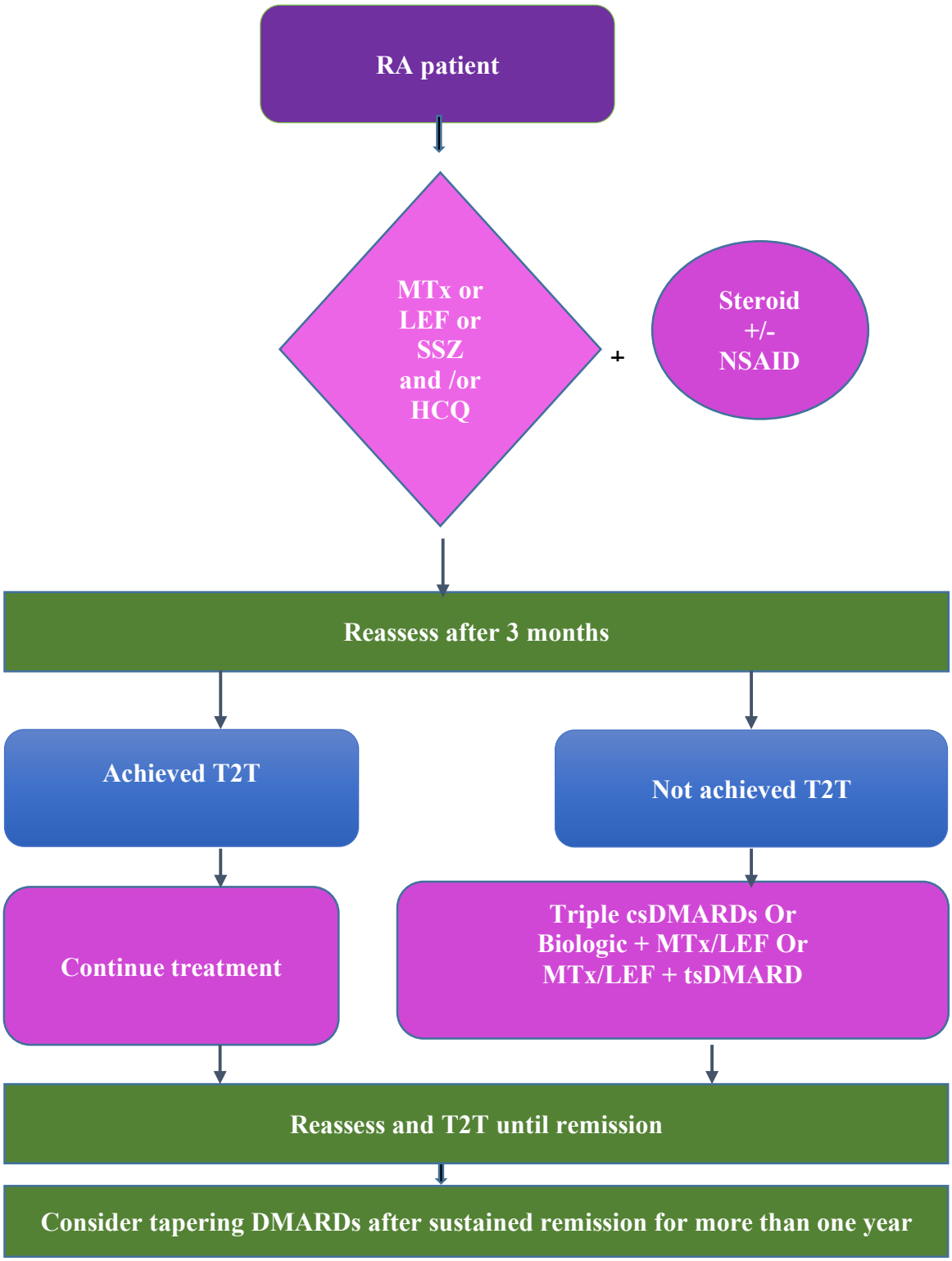


NB: Treat to Target (T2T) = treat to get sustained remission or low disease activity

Algorithm 1. Shared care System in Management of RA patient



Algorithm 2. Management of RA



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