New Treatments for Patients with Rheumatoid Arthritis

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National Audit Office Conference: Improving Services for People with Rheumatoid Arthritis

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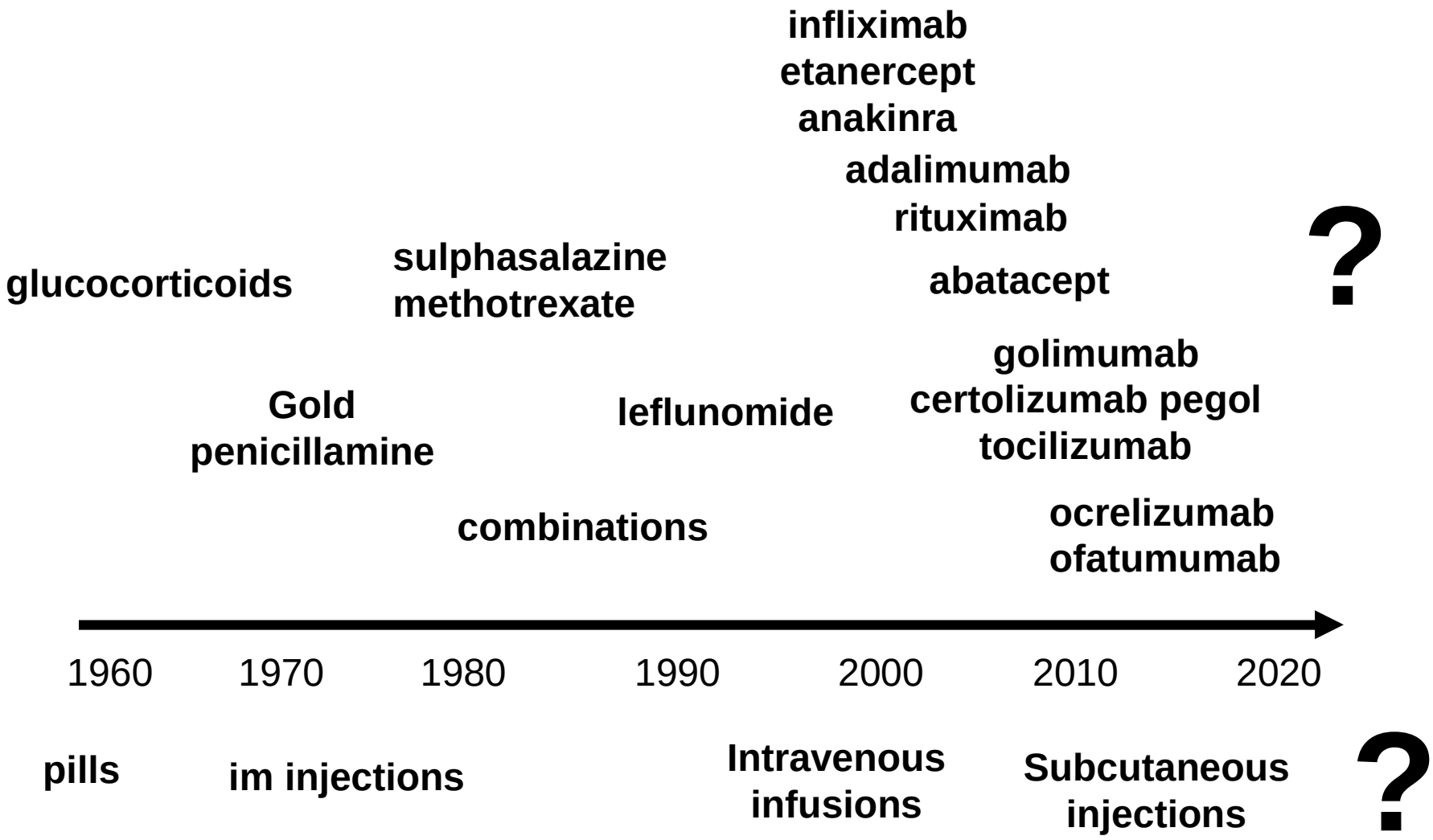
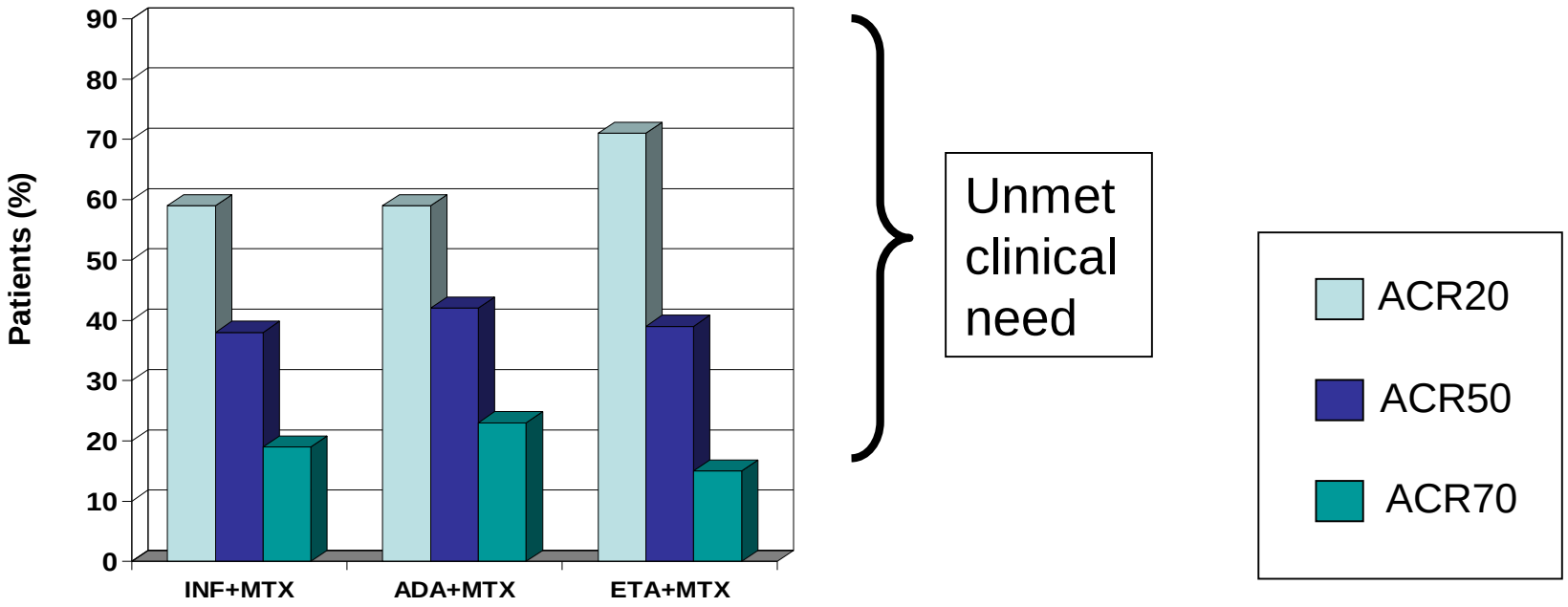
Drugs to treat rheumatoid arthitis



2009 vs 1995

- More drugs
- More powerful drugs (efficacy and side effects)
- More parenteral drugs
- Used earlier in disease
- Disease Activity Score (DAS)
- Targetting remission

Anti-TNF in MTX non-responders

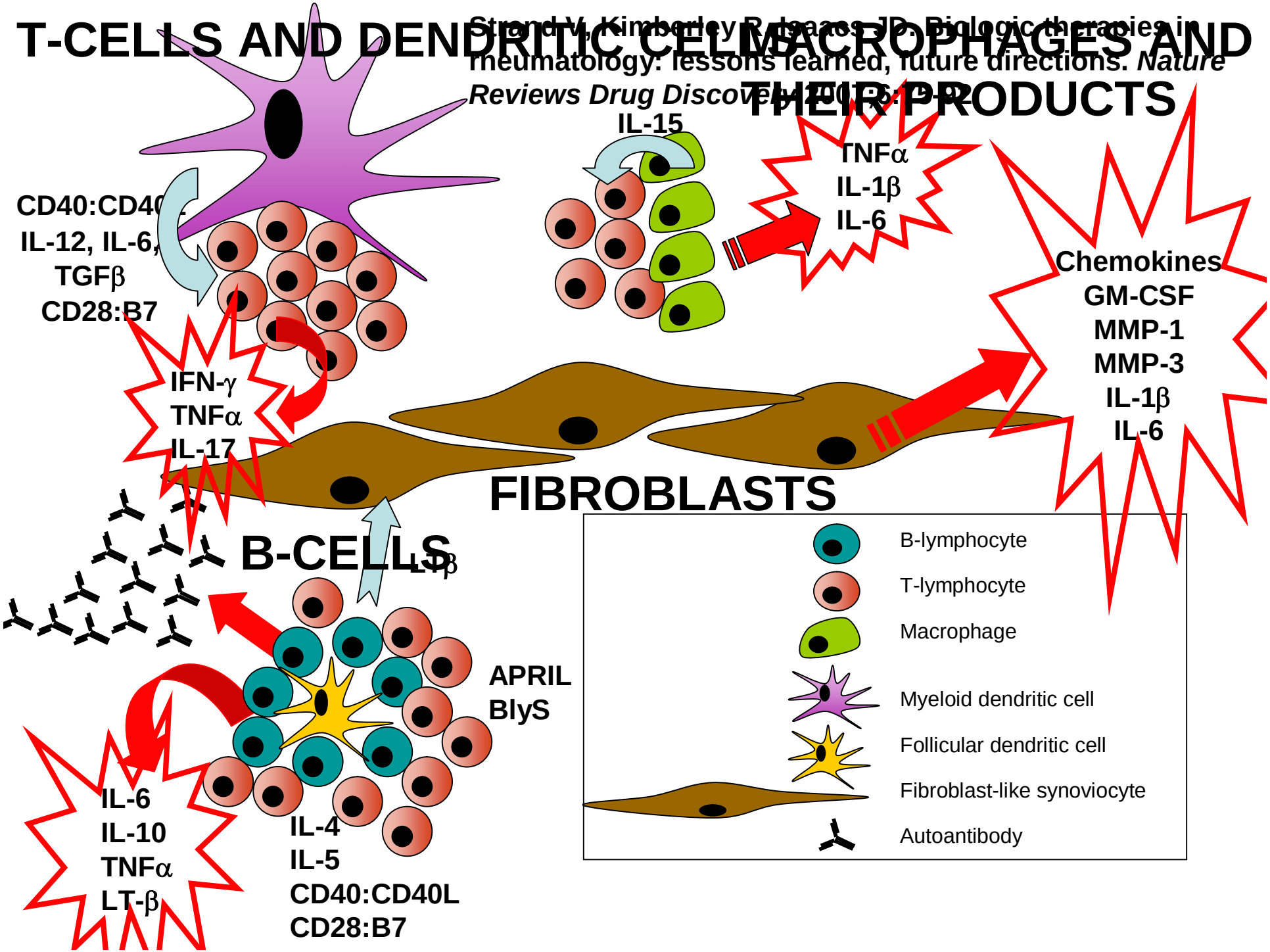


INF + MTX (ATTRACT): Lipsky PE *et al*. *N Engl J Med* 2000; 343: **1594–1502**
ADA + MTX (DE019): Keystone EC *et al*. *Arthritis Rheum* 2004; 50: **1400–1411**
ETA + MTX: Weinblatt ME *et al*. *N Engl J Med* 1999; 340: **253–925**

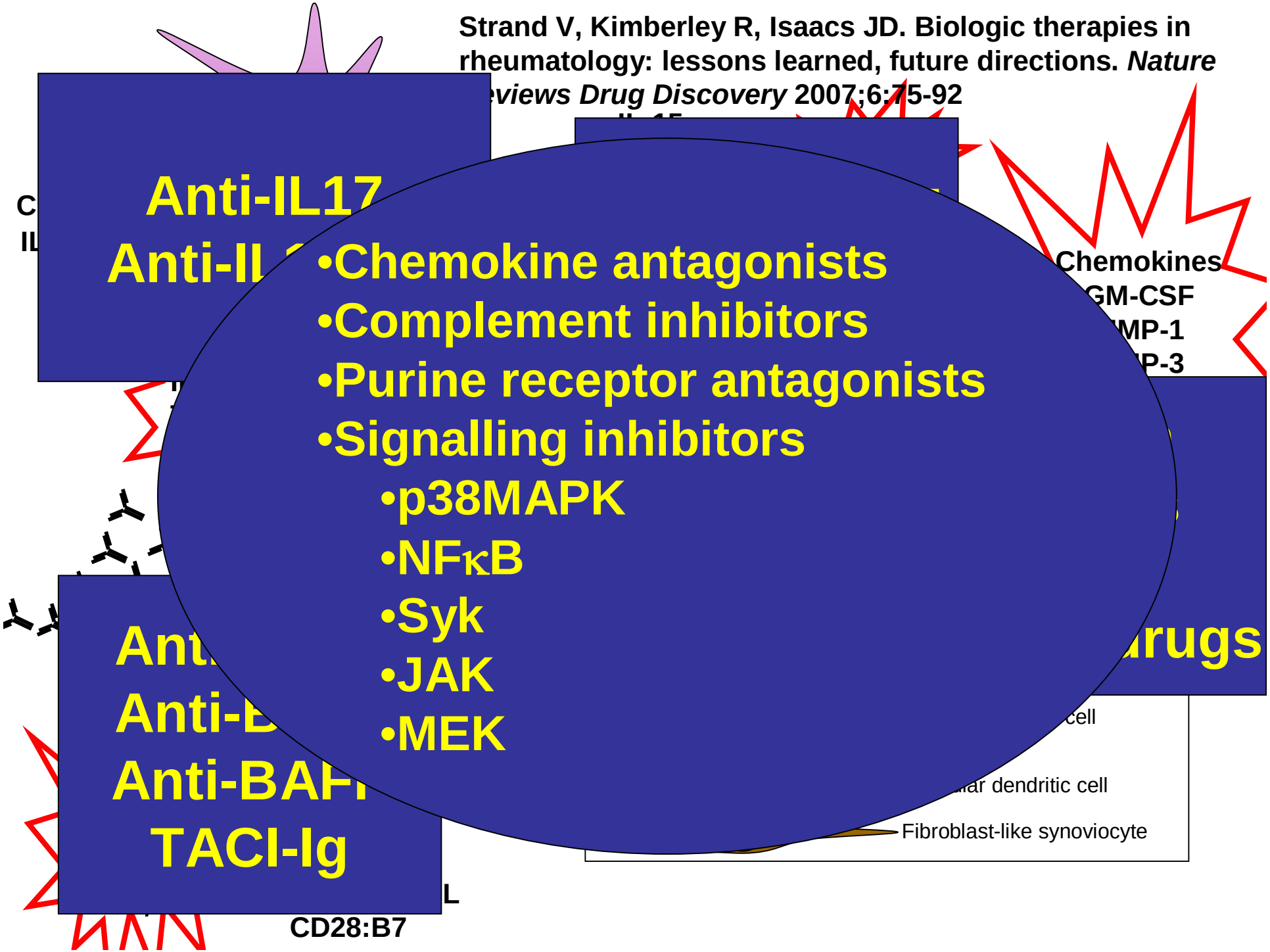
Equivalent data for rituximab, abatacept, tocilizumab and newer anti-TNFs

T-CELLS AND DENDRITIC CELLS, MACROPHAGES AND THEIR PRODUCTS

Strand V, Kimberley R, Isaacs JD. Biologic therapies in rheumatology: lessons learned, future directions. *Nature Reviews Drug Discovery* 2006; 5:189-202



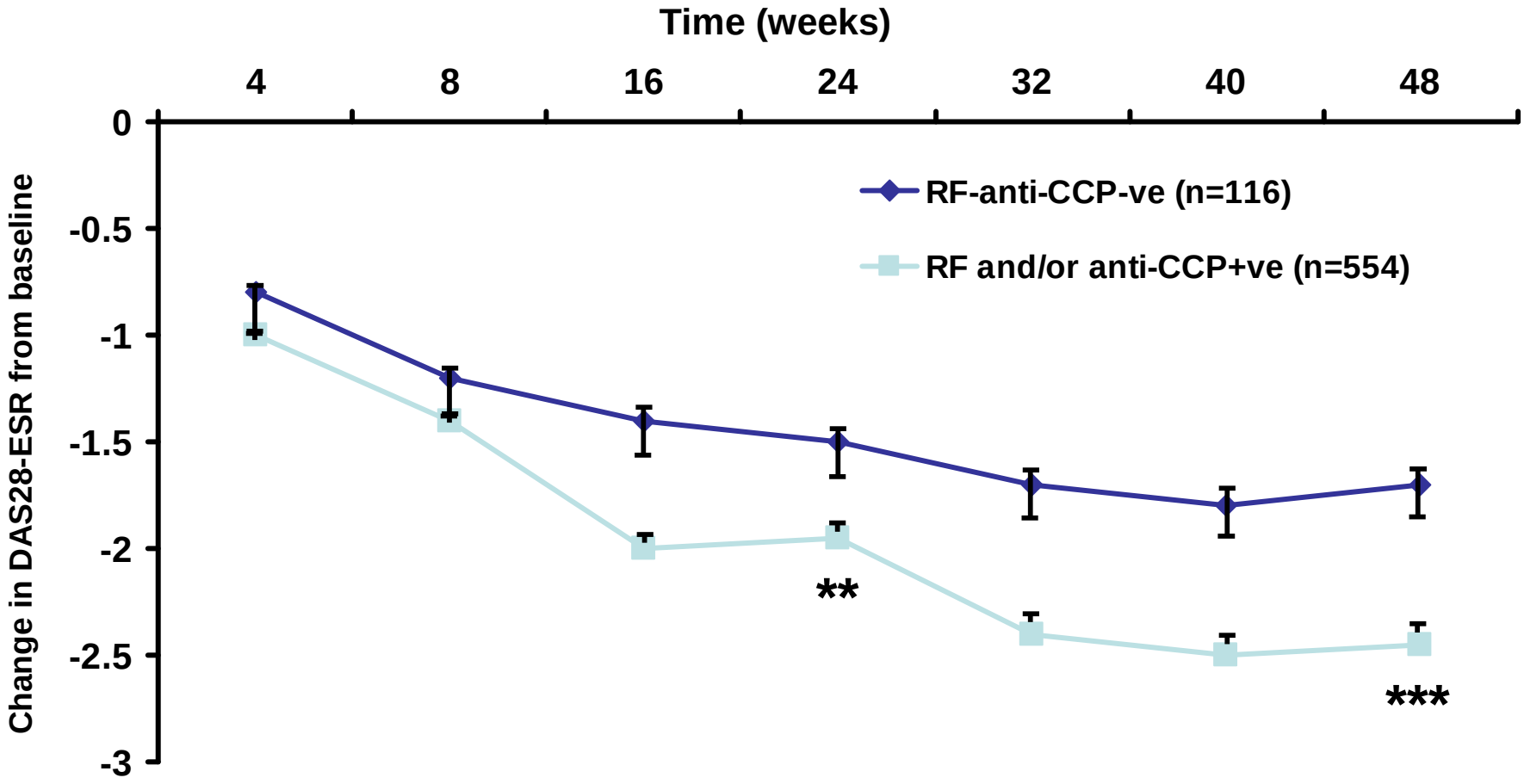
Strand V, Kimberley R, Isaacs JD. Biologic therapies in rheumatology: lessons learned, future directions. *Nature Reviews Drug Discovery* 2007;6:75-92



Key Issues

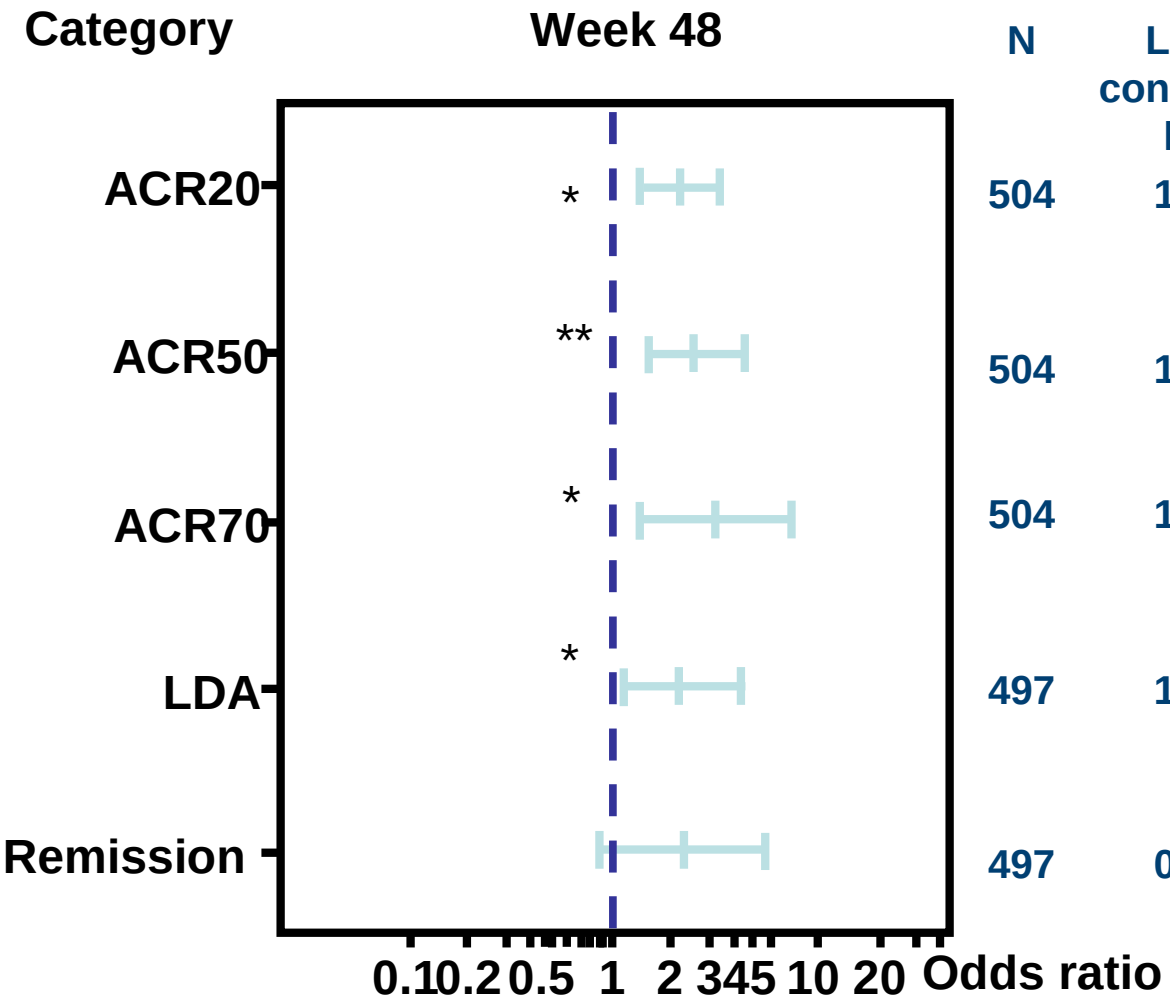
- No shortage of new drugs – but will they produce any better outcomes?
- Cost
  - Small molecule drugs vs cells, gene therapy?
- Which drug for which patient?
  - Personalised medicine?
    - Genetics
    - Autoantibodies etc
- Identify/treat ‘pre-RA’?
  - Best chance of a cure?
  - Therapeutic tolerance?

Patients seropositive for RF and/or anti-CCP had a greater change in DAS28-ESR from baseline compared with seronegative patients



**p<0.001, ***p<0.0001 vs seronegative patients

Patients seropositive for RF and/or anti-CCP were more likely to achieve a clinical response at Week 48 versus seronegative patients



Category	N	Lower confidence limit	Estimate	Upper confidence limit
ACR20	504	1.382	2.225	3.582
ACR50	504	1.575	2.720	4.628
ACR70	504	1.390	3.296	7.818
LDA	497	1.197	2.290	4.380
Remission	497	0.902	2.334	8.038

Statistical analysis was carried out by logistic regression, fitting serotype as covariate and using observed clinical data only (no imputation). *p<0.05, **p<0.001

Isaacs et al. EULAR 2009. Poster FRI0256

Improving services for people with arthritis: How might we treat RA in 20 years time?

- Wider selection of drugs
- Better understanding of RA
- Higher public awareness
- Pre-diagnosis in some, eg strong FH - leading to lifestyle changes and possibly very early intervention
- Diagnostic work-up for all includes genetics and possibly synovial biopsy – allowing disease subclassification and predictors of treatment response
- Patients will receive therapy most likely to be effective – some patients (a minority) may still receive methotrexate monotherapy
- Treatment-to-target, step-down regimes, imaging guided
- Continued disease activity may lead to a switch of drug, or an informed choice of combination therapy
- Concurrent aggressive targeting of comorbidity