

INFLAMMATORY ARTHRITIS

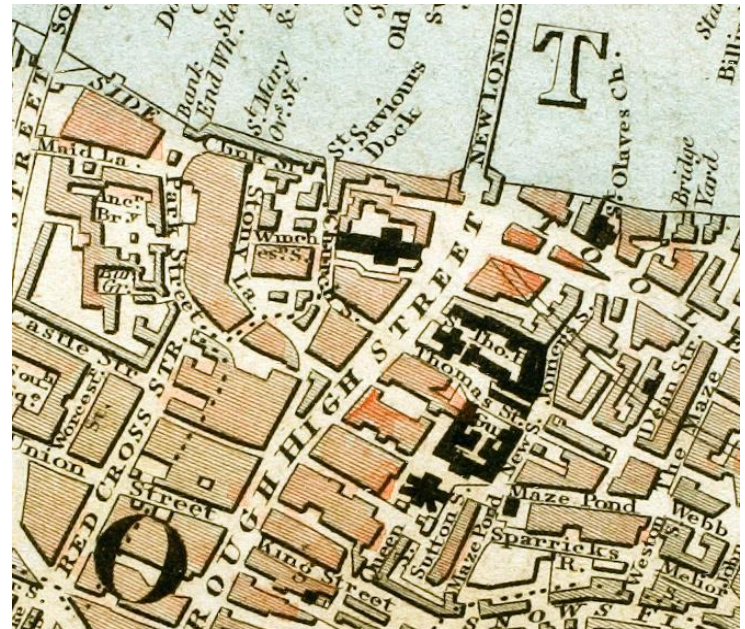
Professor Bruce Kirkham

Guy's & St Thomas' NHS Foundation Trust

DISCLOSURES

Industry and investigator-initiated studies of therapies for arthritis since 2000, currently Novartis, Eli Lilly

Consultant/Speaker: Eli Lilly & Co, Gilead, Janssen, Novartis



**Guy's and St Thomas' Hospitals
Schmollinger Map 1833**

INFLAMMATORY ARTHRITIS

RHEUMATOID ARTHRITIS - RA

PSORIATIC ARTHRITIS - PsA

ANKLYOSING SPONDYLITIS – AS

OTHER CONDITIONS eg LUPUS (SLE)
called Connective Tissue Diseases

In clinic last week

- Mary aged 28
- Second baby born 3 months ago
- Happy and healthy

- Mary had noticed some joint aches in last few months ?related to pregnancy

Mary continued

- Pain and stiffness, especially in wrists and hands at night and mornings
- Very hard to nurse baby and function, especially in the mornings eg make tea
- Struggled on, then one morning very hard to get out of bed, partner has to help
- GP referred urgently to Rheumatology

SYMPTOMS OF INFLAMMATORY ARTHRITIS

Joint swelling

Night and morning pain and loss of function

In RA usually increased ESR, CRP

Often normal in PsA and AS

RHEUMATOID ARTHRITIS

RHEUMATOID ARTHRITIS:

RA is a common disease: 0.8 per cent of the population

RA more common in females: female to male ratio 3:1

RA is a serious disease:

- **pain, disability, crippling**
- **social isolation, unable to look after family**
- **high divorce rate**

RA is a costly disease: total costs £ 1.3 billion per annum

Severe, uncontrolled RA increases mortality

UNCONTROLLED ARTHRITIS

Pain and swelling cause serious loss of function
Continued active arthritis causes joint damage

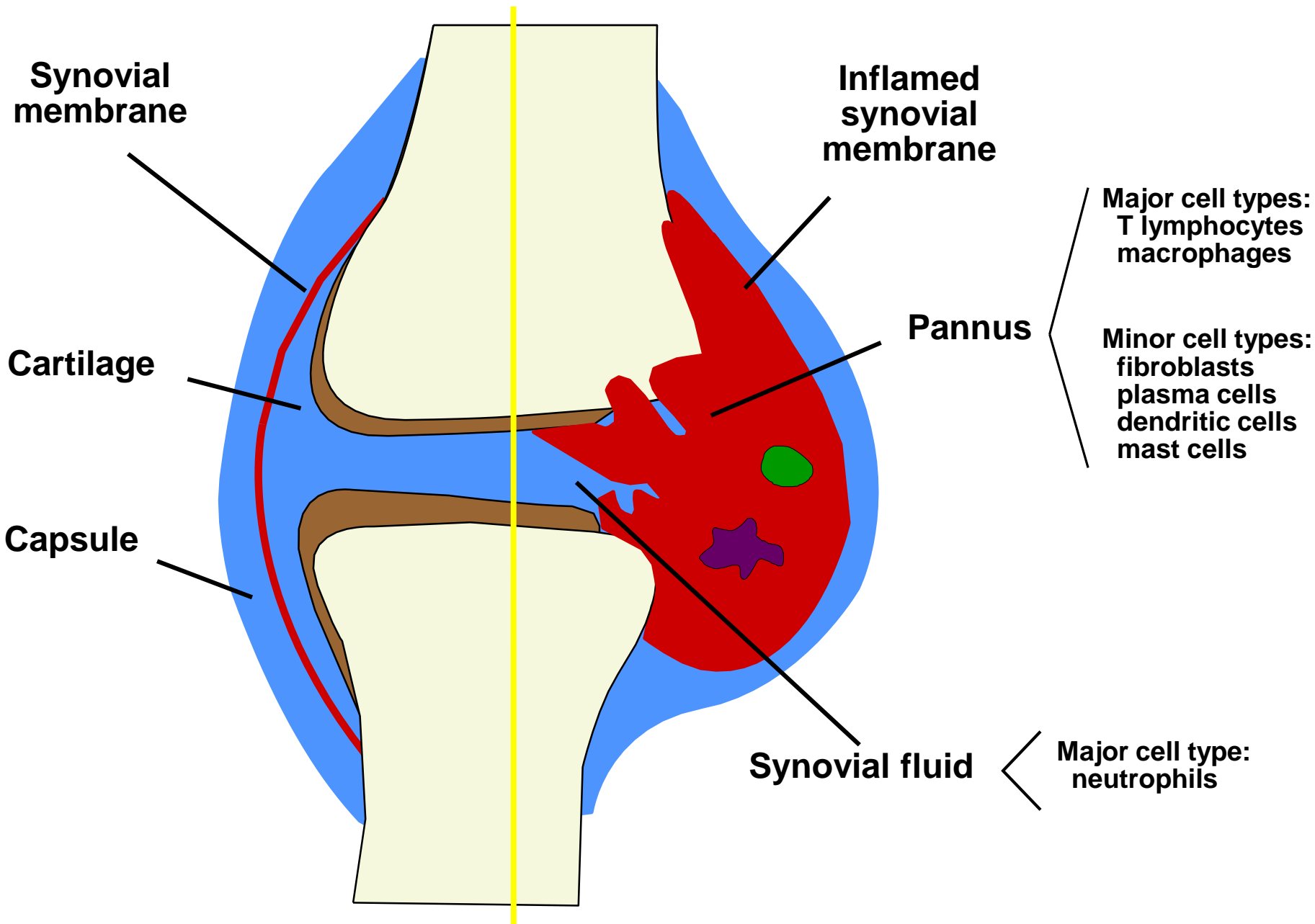


WHAT IS GOING ON INSIDE THESE JOINTS?

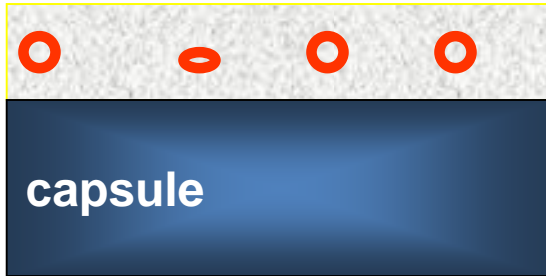


NORMAL

RHEUMATOID ARTHRITIS



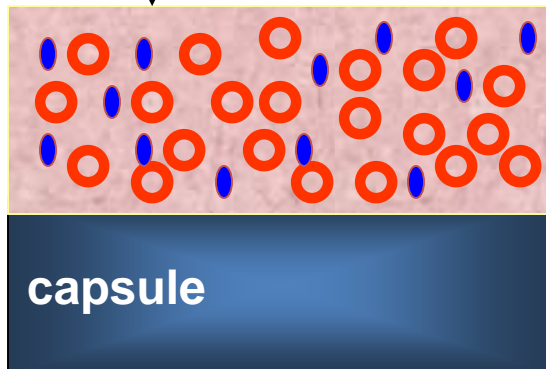
Blood vessel



The normal joint lining is

- very thin.
- it has a few blood vessels
- no white blood cells in it.

White blood cells



The inflamed joint lining is very different:

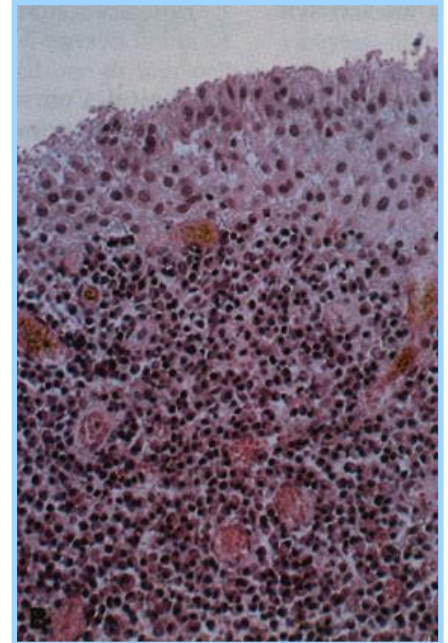
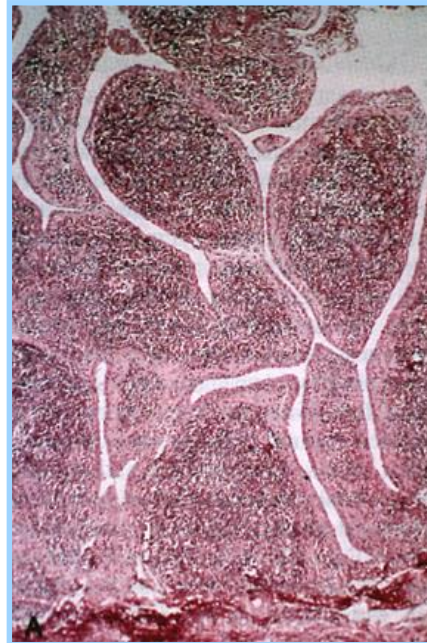
- it is thickened
- it is crowded with white blood cells
- it has many new blood vessels

Macroscopic view of inflamed synovial membrane in RA



INFLAMMED SYNOVIAL MEMBRANE

- Thickening of the synovial membrane
- Inflammatory infiltrate of immune cells
- Increased numbers of blood vessels



Rosenberg A. In: Cotran RS, Kumar V, Collins T, eds. *Robbins Pathologic Basis of Disease*. 6th ed. Philadelphia, PA: WB Saunders; 1999:1215–1268.

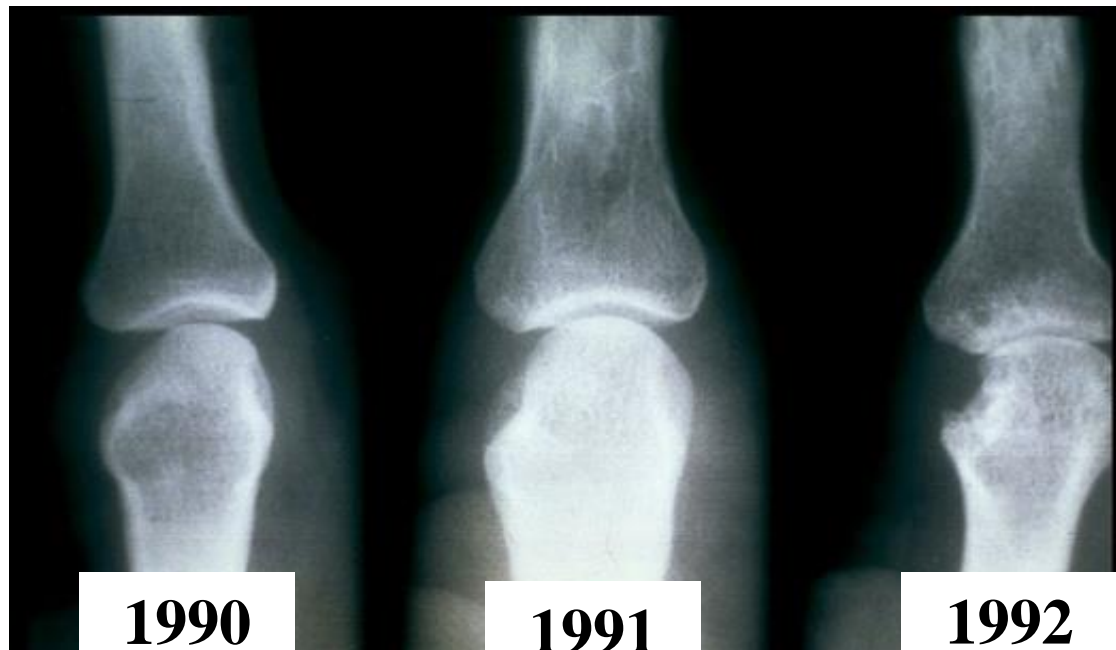
What are my treatment goals in Rheumatology?

- Improving patients lives - pain reduction and restored function are the top two goals of therapy for people with RA
- Treating to target is the strategy to maximise improvement
- Use measurable outcomes

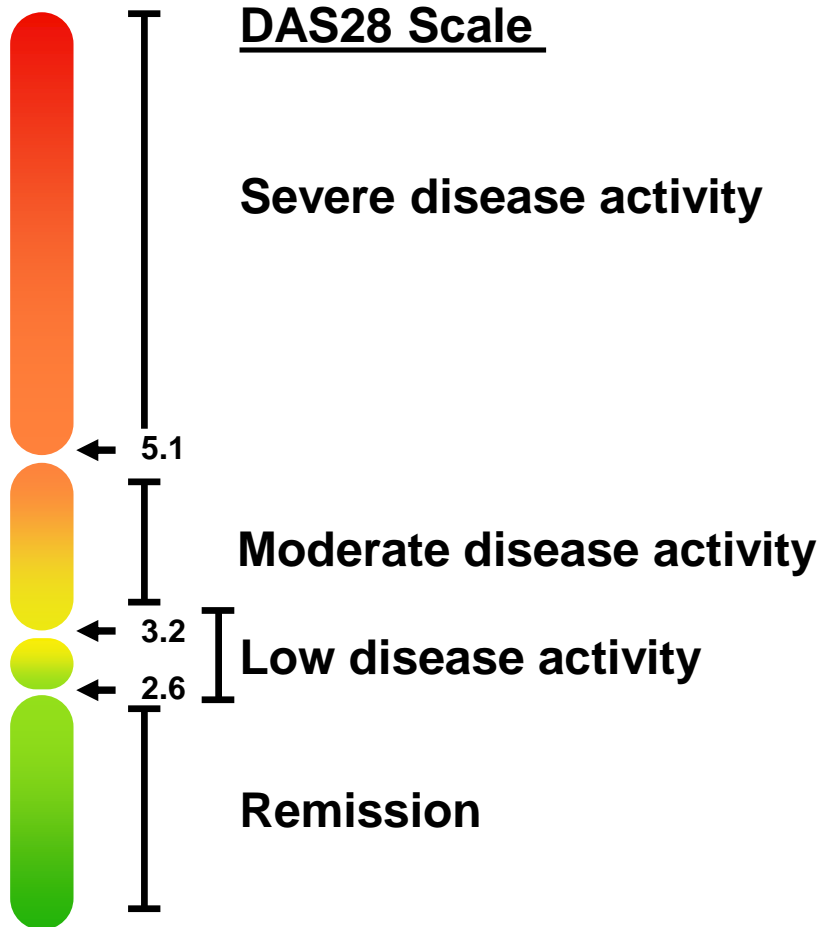
What are my treatment goals in Rheumatology?

Prevent progressive joint damage

- Uncontrolled RA causes joint damage
- Once joint damage has occurred it produces irreversible loss of function
- Remission results in much lower rates of joint damage



Treatment Goal: Remission



- Disease activity
 - Normal labs (ESR, CRP)
 - DAS28 <2.6
 - DAS44 <1.6
- Quality of life
 - Zero disability (HAQ <0.5)
- X-rays
 - No radiographic progression (Change of TSS ≤ 0)
- True remission: absence of symptoms, inflammation, and damage progression

Mr AH - Electrician

- Onset of inflammatory arthritis – 10/05
- NSAID's little response – difficult to get out of bed
- Rheumatologist – Diagnosis RA – Rx MTX
- Serious difficulty working
- Abnormal LFT – ALP & GGT - ? Liver Bx
- Seen by nurse – SJC 3, ESR 104, CRP 80

Mr AH - Electrician

- Seen RA Centre – 02/06
- DAS score 7.1 – SJC 15 – about to stop job
- Rx Pred 30mg/d, increase MTX
- 04/06 – DAS 4.3 – Working well- Triple Rx
- 08/06 - DAS 2.3 – In remission - feels normal, 'can do everything except running'
- MTX/SASP/HCQ – No prednisolone

Work disability occurs early

- The Early RA Study (ERAS)
- A prospective longitudinal UK study
- 22% (80 of 353) of patients employed at the study start had stopped working by 5 years due to RA (Young 2002)

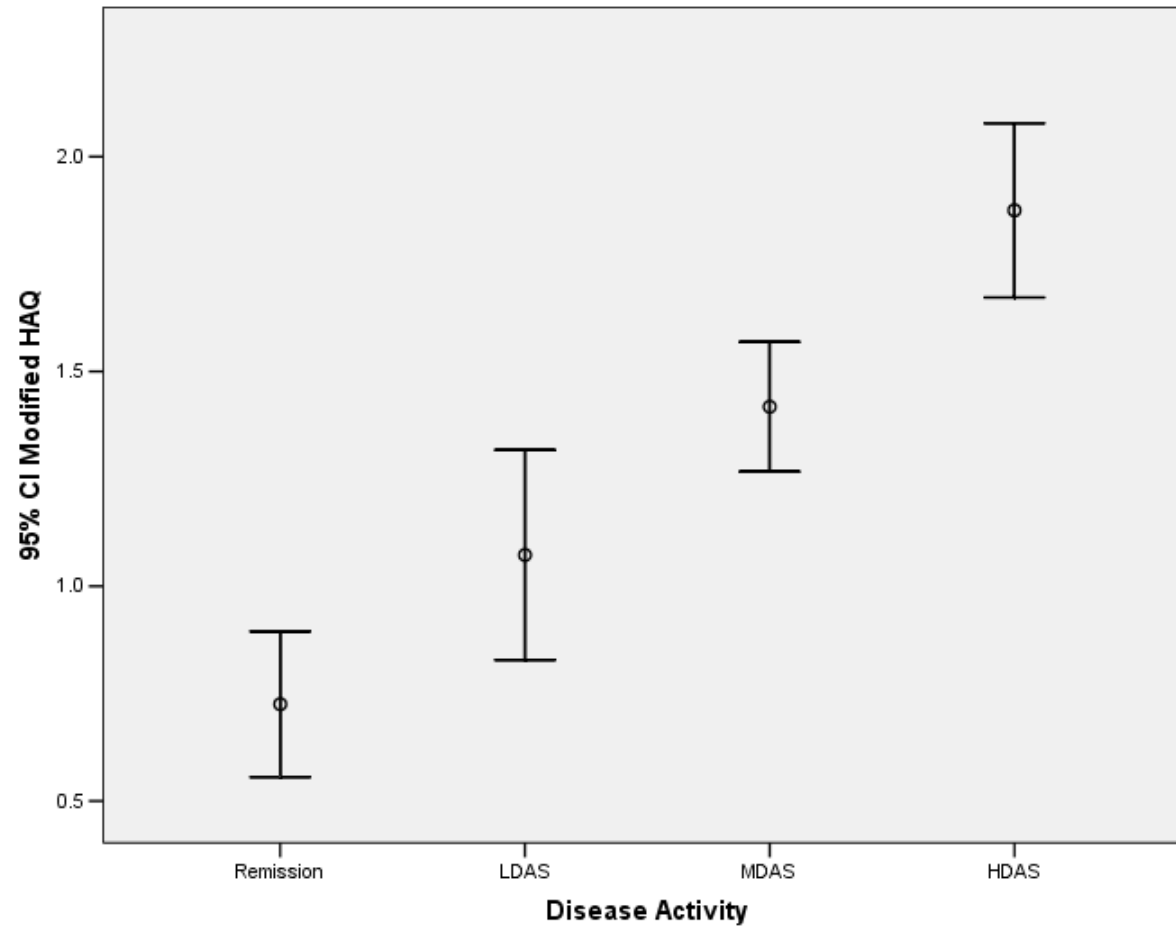


RA: treatment makes a difference

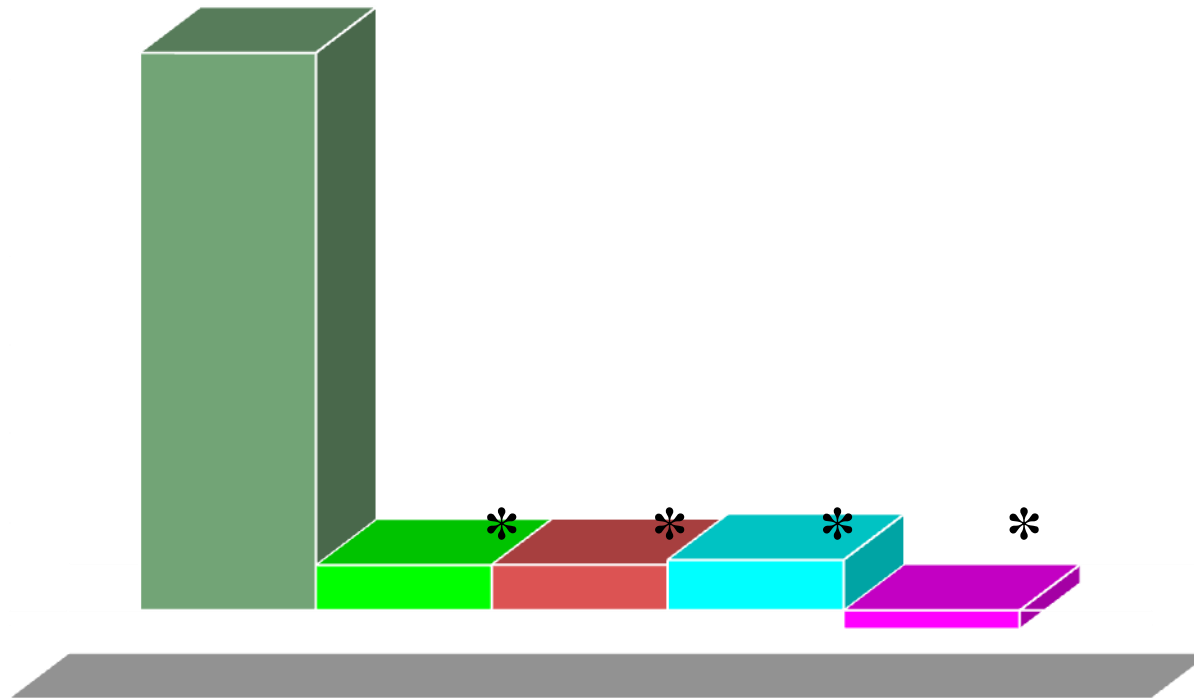
- Treatment:
 - must begin early (within 3 months)
 - must be effective
- Drugs and biologics:
 - slow/halt joint damage
 - improve quality of life
- Methotrexate and biologics reduce the higher mortality rate

Function improves with better control

Gullick et al (In preparation)



Infliximab: Change in Mean Total Sharp Score at 2 years



n= 50

n= 58

n= 66

n= 69

n= 66

* $p < 0.001$ vs MTX Data from Maini RN et al Arth Rheum 2004; 50: 1051-1065

Early treatment has better results

- Rapid access to our clinics – we work with local GPs
- Rapid diagnosis, sometimes this is not easy
- Imaging arthritis can help early diagnosis

Conclusion

- Treat-to-Target strategy is highly effective
- Optimises individual patient needs to achieve important patient-related outcomes
- Multiple therapy options are necessary
- Achievable within normal NHS resource

