

The spectrum of arthritis: treatment strategies & challenges



Treatment chronic rheumatism

“Medicine for the Millions” London, 1906

tincture of *laudanum*

salicylate - *syrup of ginger*

a plaster - *opium* spread on leather

capsicum in warm bacon oil

acute - wineglass *gin & hot water*

No beer or wine, *malt whiskey & good
brandy with meals*

rich people - *health resort Bath*, Harrogate
or abroad

The rheumatic categories

Inflammatory

RA, psoriatic arth, spondyloarthritis, SLE etc

moderate control

Degenerative

OA –hands, weight bearing jts, spine

symptomatic relief only

Soft tissue

Tendonitis, bursitis, hypermobility

time often heals

Widespread body pain

prev. called fibromyalgia

>15 – good evidence!!!!

Ideal world: treatment objectives

- Modify the disease process
 - Prevent damage and progression
- Relieve symptoms
 - Non-pharma and pharma methods

The patient challenges: arthritis pain

Barriers

- Fear of drugs
- tolerate pain - stoic
- fear that pain relief will mask true disease
- worry about drug interactions
- fear addiction

Beliefs

- Herbs do no harm
- believe others should be well treated

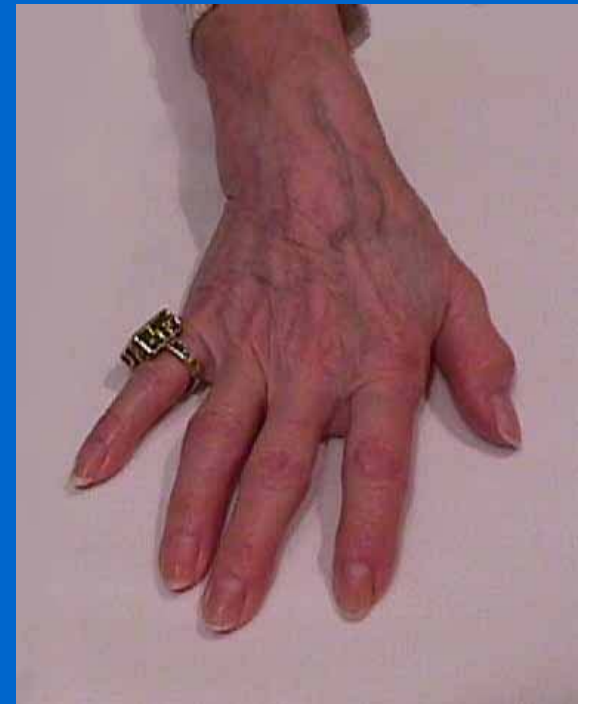
The treatments

- Non-pharmacologic – tried by 80%
- Pharmacologic
 - Local applications
 - Injections intraarticular/ soft tissue
 - analgesics
 - NSAID'S
- Disease modifying agents (DMARDS)
 - for inflammatory arthritis
 - Nothing for OA



The questions about arthritis pain?

- Does every pain need treatment
- Should we live with some pain as we get older
- what is normal



Simple analgesics: Acetaminophen

- 8 pills / day!!!
 - Patients hate taking pills
- Probably safest
- Liver abnormalities – ? ?

Rationale for NSAIDs in OA



- proinflammatory genes - in cartilage
- *activated chondrocytes*
 - NO synthetase, COX2, IL-1, 6 and 8,
matrix degradation, *metalloproteinases*

NSAIDs: the clinician view

- Work peripherally, dorsal horn, CNS
- COX-2 better GI safety
- **equivalent clinical efficacy between NSAIDs**
 - lab shows different ratios & intensities
- Side effects for all
 - renal, hypertension, CNS, CVS
- Poor compliance re continued use

Not every patient with OA needs an NSAID

Most patients - inflammatory arthritis need an NSAID

If needed - lowest dose for defined time

Continued efficacy

Topical agents (NSAIDs)

- 25 RCT various pains
- better than placebo
- Safety
 - Topical = placebo
 - Minimal systemic effect
- High conc in joint tissue
 - Good if target is close to skin
- ? *Convenience, continued use*





Is there anything else before surgery?

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Exercise & weight loss for OA

Common sense.....Now the proof

142 overweight (93kg), sedentary OA

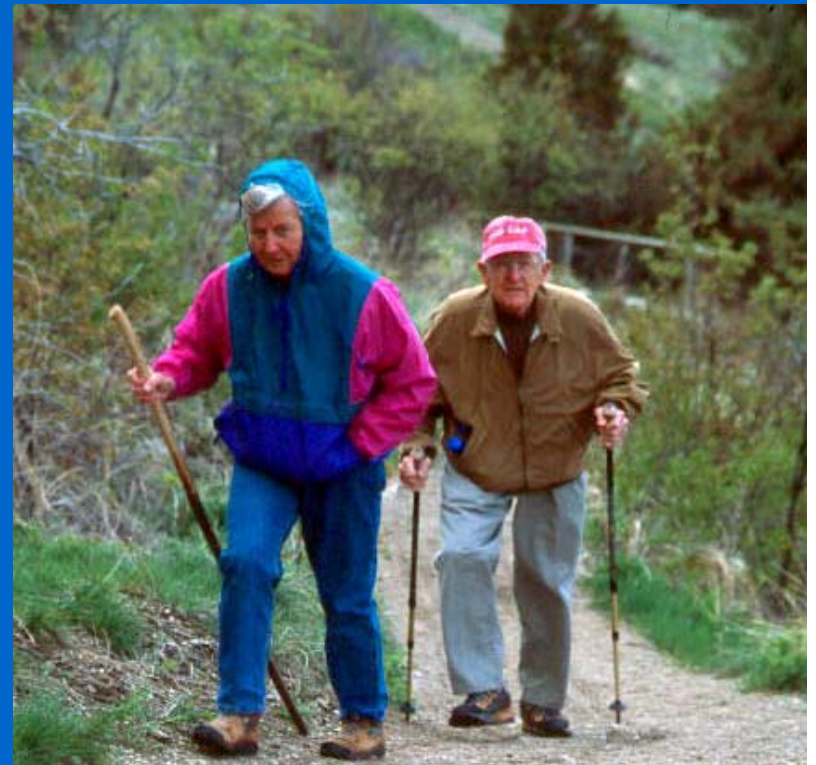
Weight loss + exercise

Biomechanical analysis gait / knee mechanics

3% weight loss

Diet & exercise did best at 18 months

1lb weight loss – 4-fold ↓ load knee/step



The OA knee

- Non-pharma
 - Weight loss & exercise
 - Shoes, cane, stool
- Topical NSAID – effect, compliance
- **Intra-articular**
 - Steroids, hyaluronic acid
- Strong analgesics

Steroid injections

- Safe
- Almost never harm
- Give it a shot – if in wrong spot... no big deal
- 3/site/year
- Rejuvenation of use

The complementary world

- Used for centuries
- Scientific proof mostly lacking
 - Not disproven
- Huge industry
- Patients believe – no harm
- Tried by >80% rheumatic patients

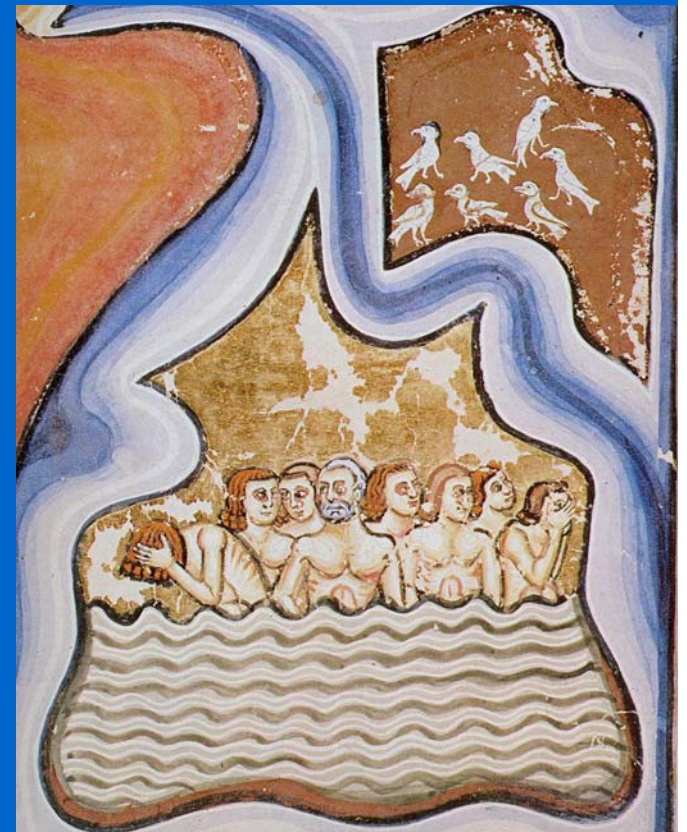
The evidence for complementary treatments MSK complaints?

- Acupuncture – insufficient
- Percut electrical nerve stim – promising
 - Needles placed along dermatomes, myotomes
- Herbs – modest
 - **Avocado/soya**
 - **Topical capsaicin**
 - **Devils claw**
- Homeopathy – ? Slightly better than placebo
- Spinal manipulation – conflicting

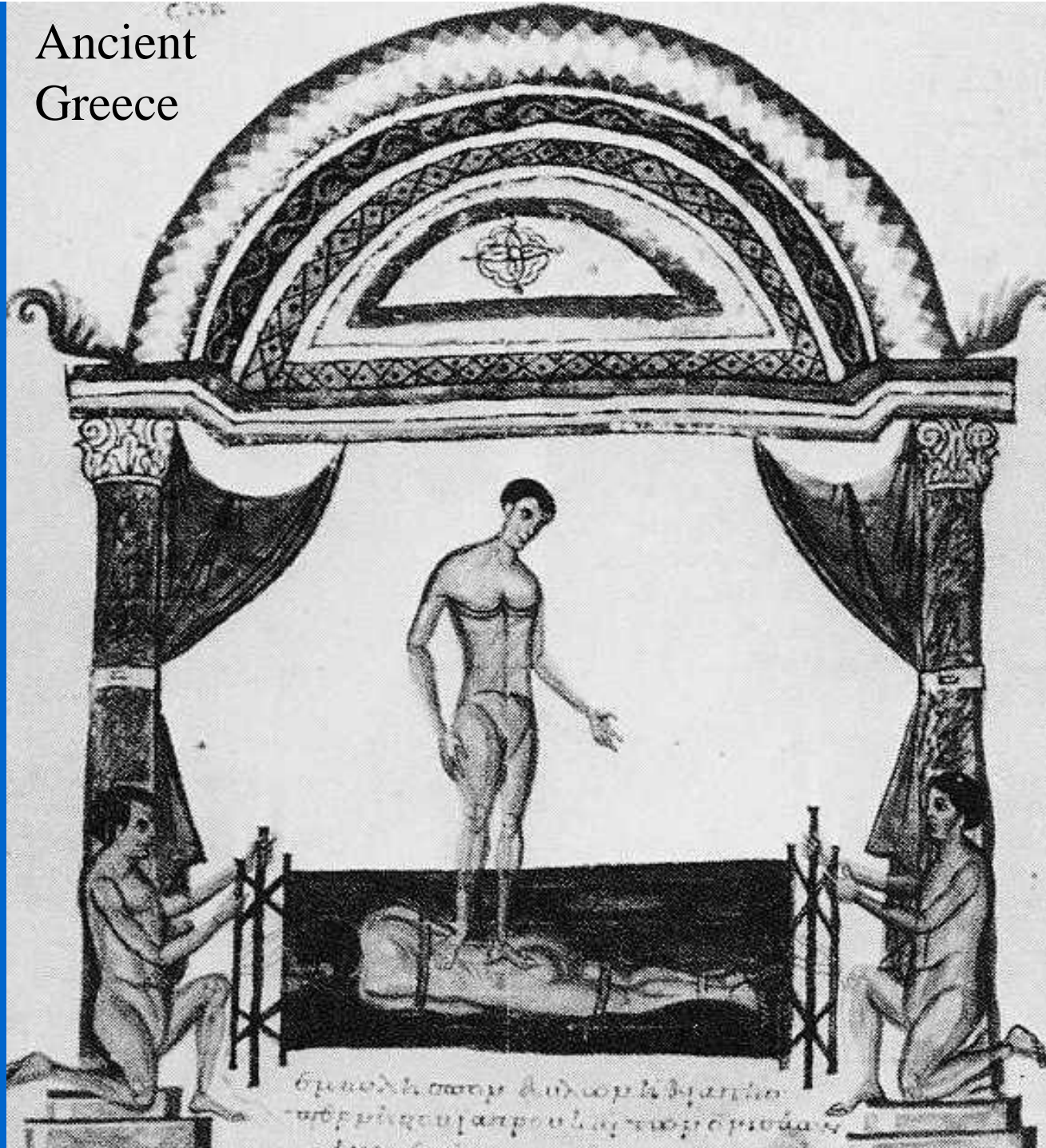
Ernst Clin J Pain 2004

Non-pharmacologic

- Reassurance and education
- Local applications
- Exercise
- Heat, cold
- Hands-on treatments
 - Massage, manipulation, etc
- Herbs !!!!
- Psychology – coping etc



Ancient
Greece



The glucosamine story unfolds

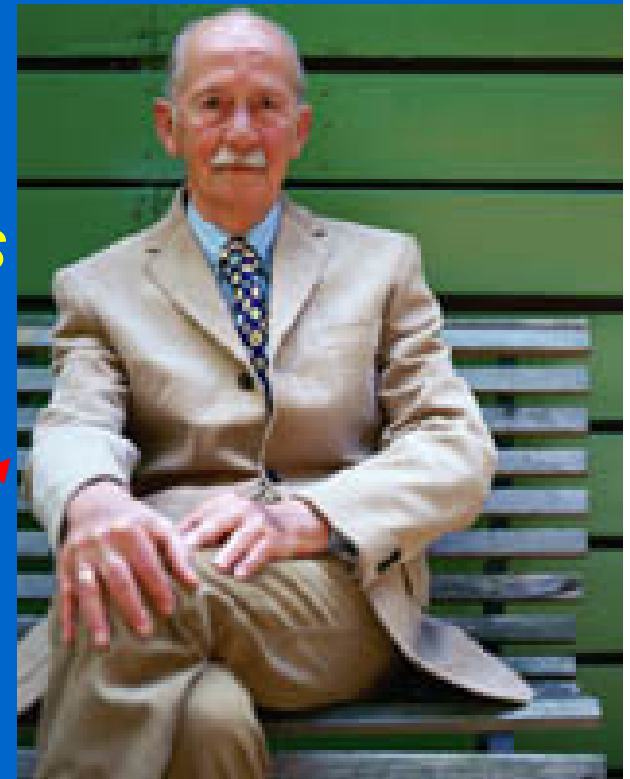
- NIH study 2006 - negative
- Greatest sales -alt products USA
- 2 good double blind 3 year studies
 - efficacy & X-ray protection
- 2 negative studies
 - Internet, no industry = placebo
 - Discontinuation study = placebo
- Horses - no glucosamine in synovial fluid

Chronic opioid treatment

- **Side effect profile miserable**
- ?? prn –before golf or weaving
- concern gradual ↑ dose
- Function +++
- **Long term safety and outcome needed**

NMDA receptor antagonists

- Methadone
 - *! a few drops may do wonders*
 - *Patient acceptance*
- Ketamine
 - *Cognitive problems*
- Dextromethorphan



Would he take
methadone?

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The cannabinoids – in the clinic

- We hear + responses!
- “distanced from pain”, less “hangover”
- Some rheum patients using “joints”
 - RA, SpA, FM
- buccal spray -RA study
 - moderate pain relief



Is there a neuropathic component to arthritic pain?

- Antidepressants
 - Also role of depression
 - The stigma- patients & insurers
 - Side effects
 - Not outstanding
 - Continued use – attrition over time
- Antiepileptics
 - Some effect animal arthritis
 - No human studies

Usual treatments in fibromyalgia

Patient “help thyself”

Avoid making the patient a passive receptacle of medical magic

Non pharmacologic treatments

coping, adjusting goals, a normal exercise program, relaxation

Pills

analgesics, NSAIDS, TCA, muscle relaxants, anticonvulsants, opioids

The best treatment for FM!

Good evidence for

- tricyclic antidepressants, SSRI, analgesics, anti-epileptics
- exercise
- multidisciplinary treatment, CBT, relaxation
- massage, acupuncture

!!!!!!!

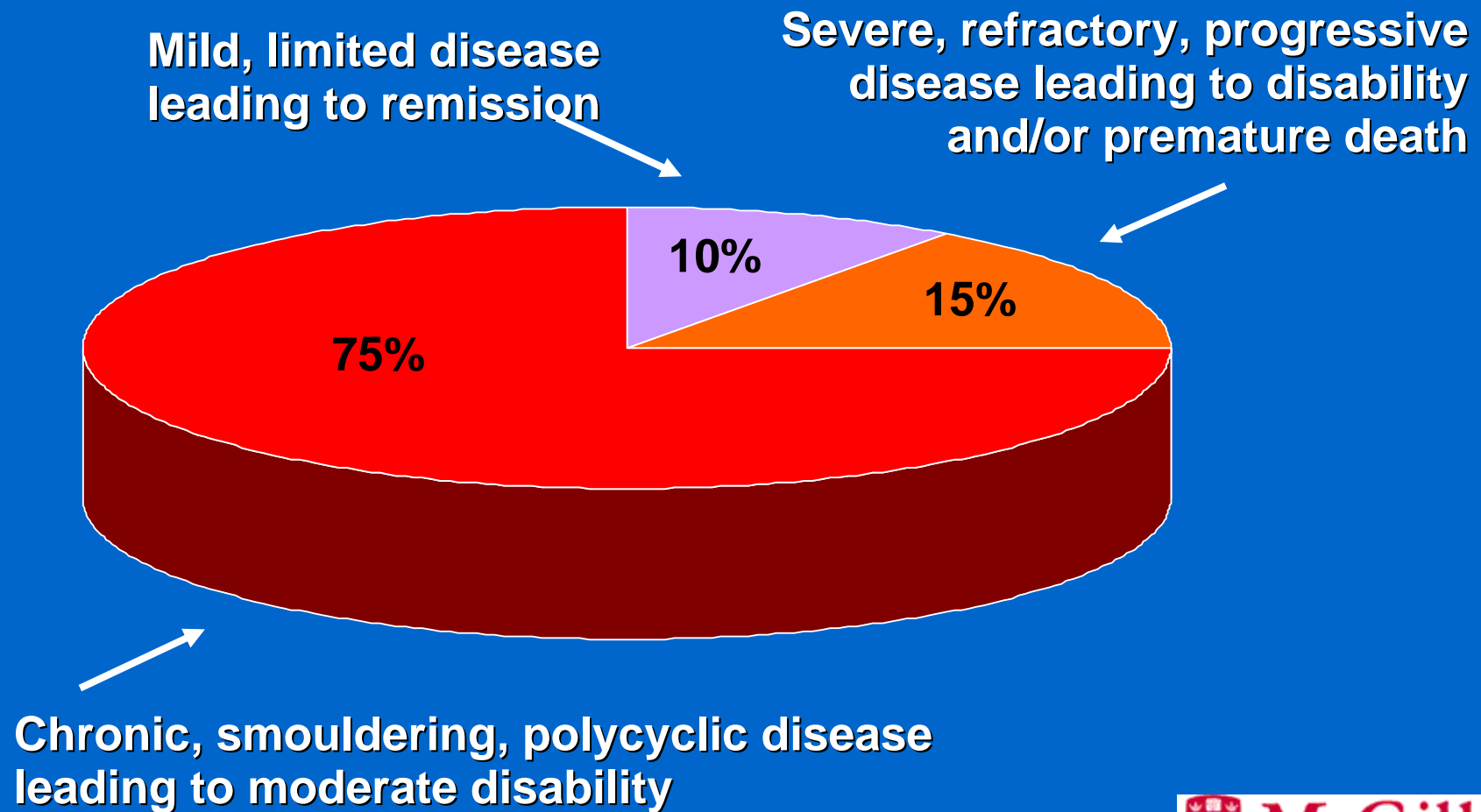
Inflammatory arthritis

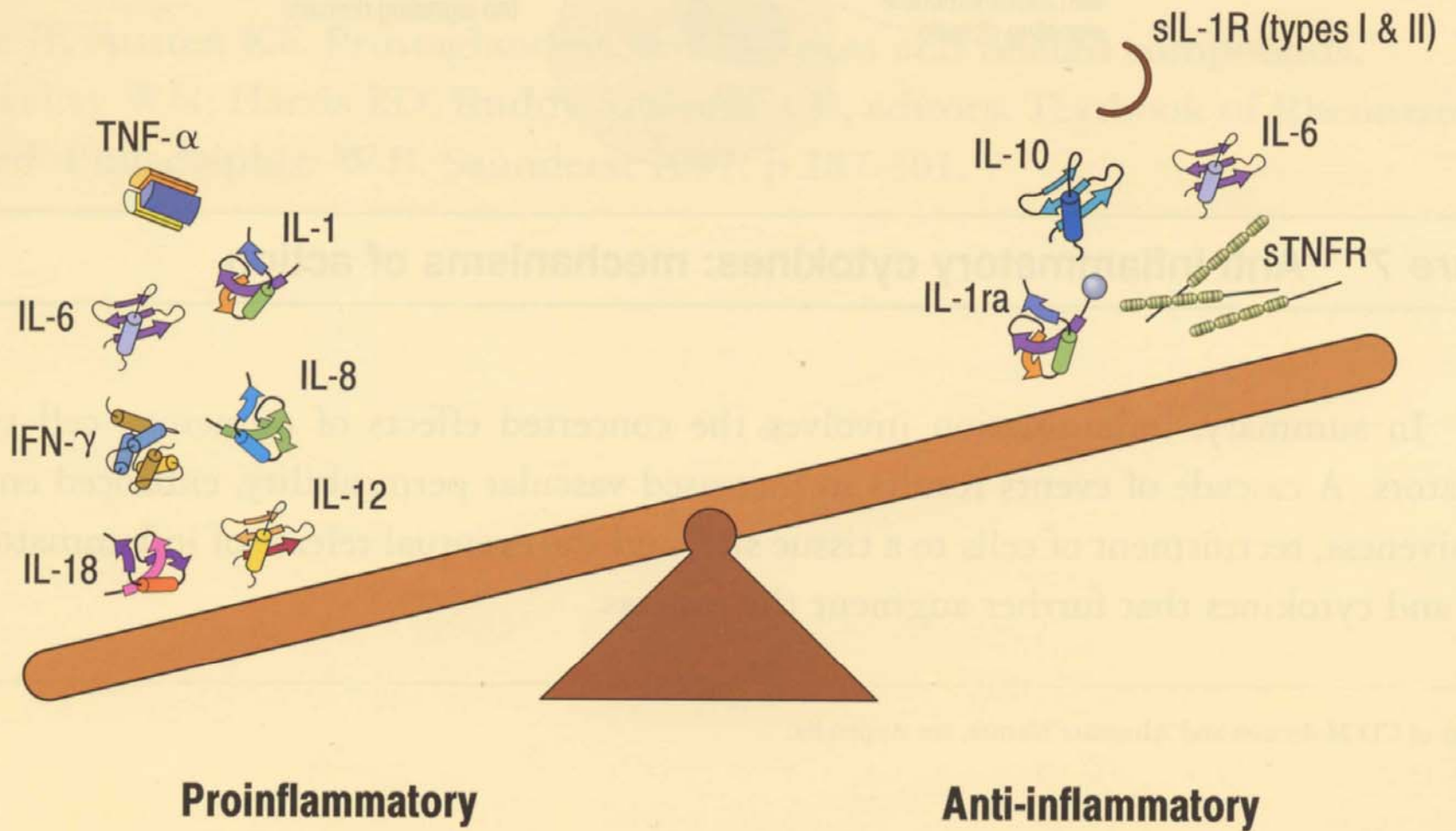
Control inflammation

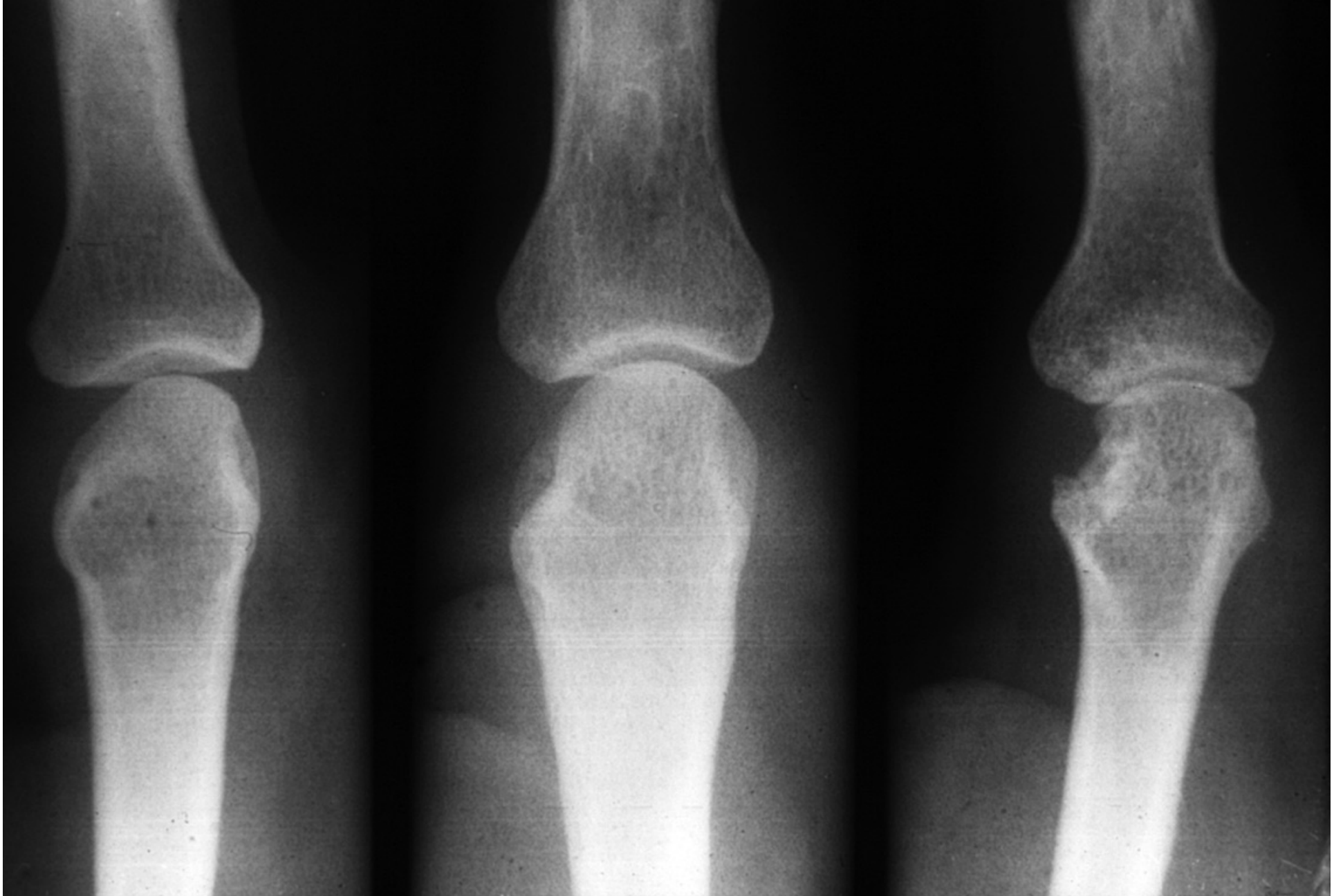
Prevent damage



Clinical course of inflammatory arthritis







The treatments

- Symptomatic relief
 - Analgesics, NSAID'S, others
- Disease modifying agents (DMARDS)
- Social, psychological and family support
- A patient for life

The ACR response to treatments

Most DMARD's – 20% global improvement in 1/2 patients

Some common DMARDs

The watering can effect

- Methotrexate
- leflunamide
- Salazopyrine
- Hydroxychloroquine, gold
- Immunosuppressives
 - Azathioprine, cyclosporin, cyclophosphamide

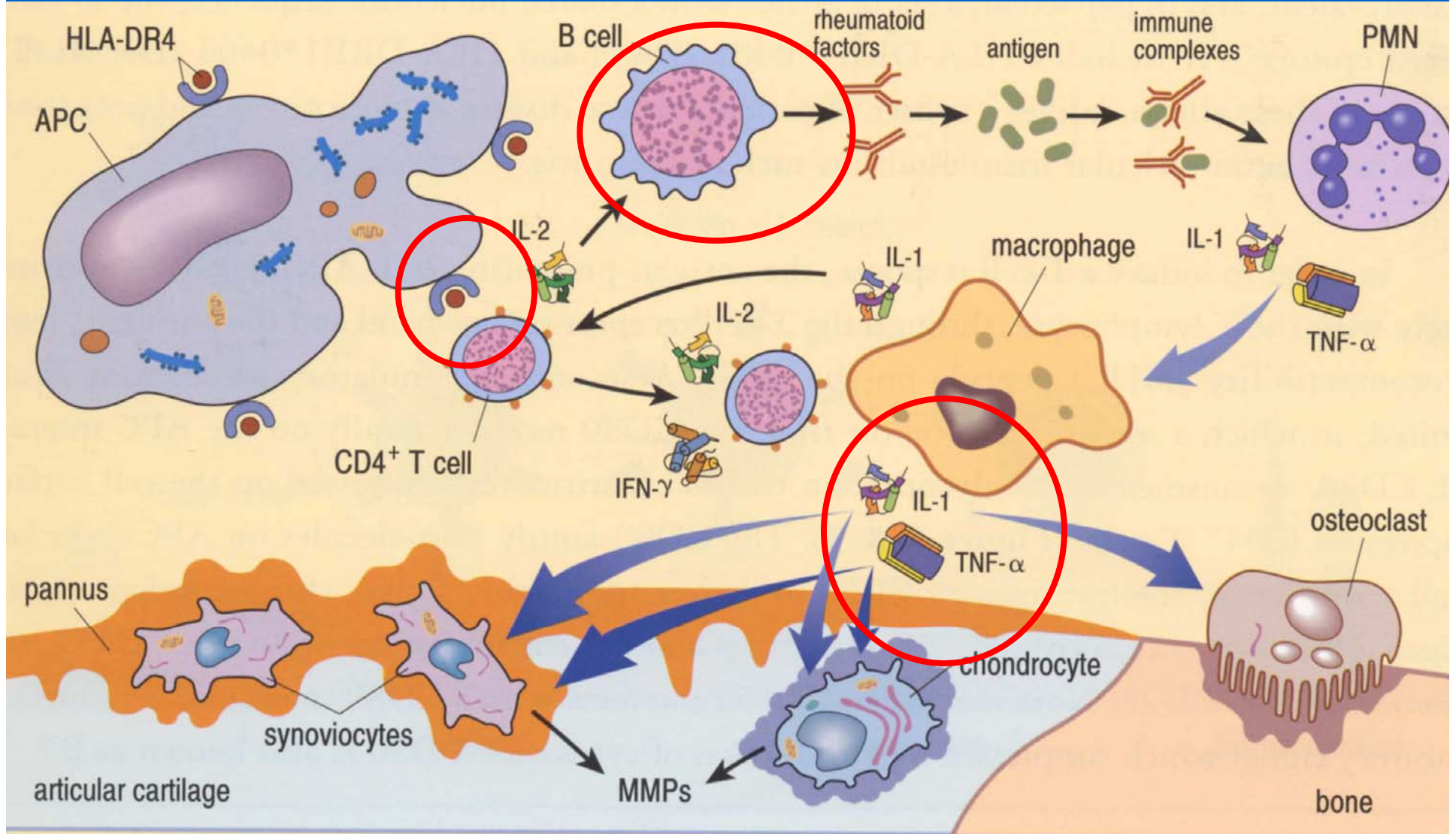
The challenge of DMARDs

- All have side effects
 - Tolerability
 - Serious
- Patients hate taking pills
- Need for continuous treatment
- Modest effect at best

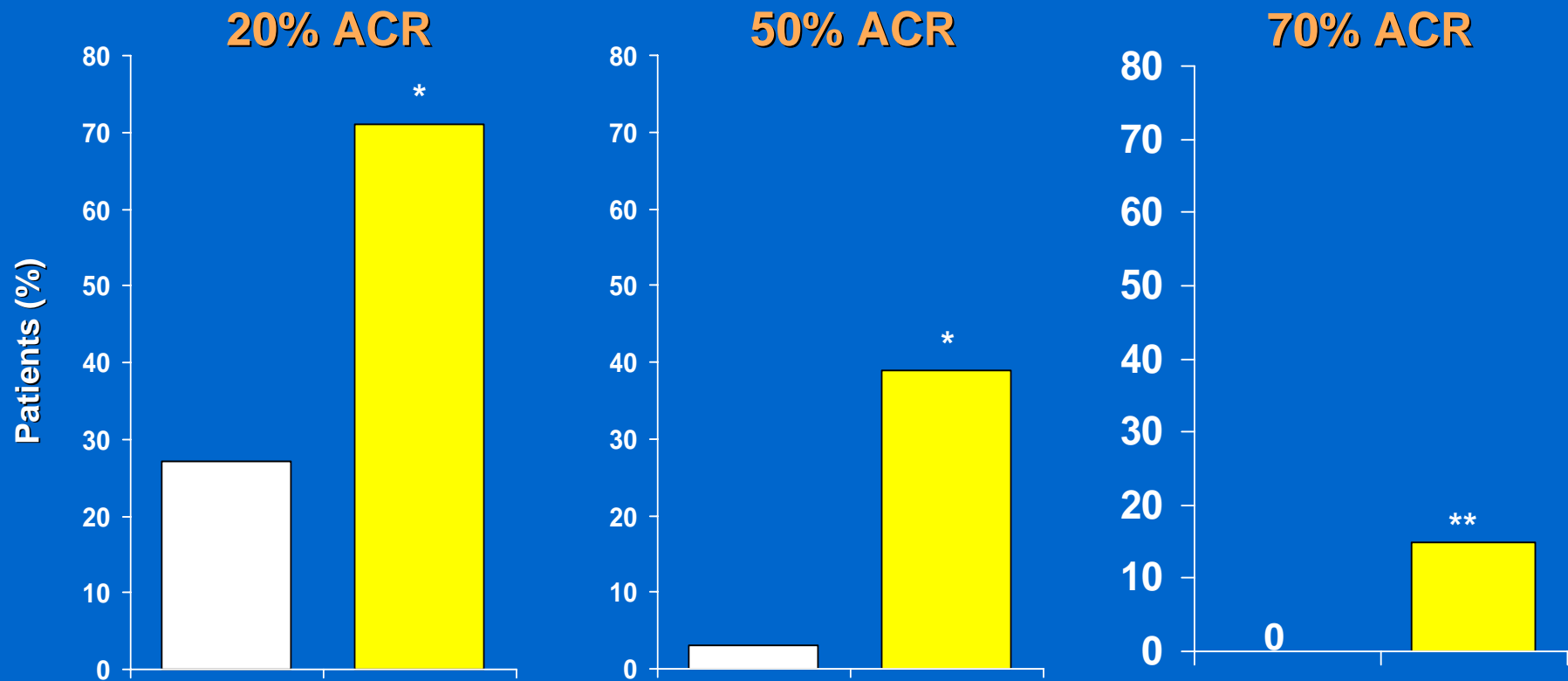
Steroids

- A rejuvenation of use
- Complex monitoring
 - Bones, BP, lipids, sugar

The biologics



The biologics



*p<0.001; **p=0.026

M. Fitzcharles



Summary of biologics

- Excellent clinical response
 - Comparable effect enbrel, remicade, humira
- Cost
- Side effects
 - Infections acute & chronic
 - Malignancy
- Use with vigilance

Ideal world – arthritic disease

- Prevention
 - The scientists to unravel inflammatory, degenerative arthritis and pain
- Environment
 - Lifestyle changes
 - Exercise, weight, healthy diet
 - Psyche - less reliance on passive treatments
- Drugs – no magic yet
- The genes
 - ??? In our lifetime