Phase 4/ CT-P13/ IMIDs/ non-inferiority

Switching from originator infliximab to biosimilar CT-P13 compared with maintained treatment with originator infliximab (NOR-SWITCH): a 52-week, randomised, double-blind, non-inferiority trial

Non inferiority, double blind phase 4 trial.

52 weeks follow-up.

Different autoimmune diseases treated with IFX randomised to switched to biosimilar CT-P13 or to remain on IFX originator.

Primary endpoint: disease worsening during follow-up

Secondary endpoints: time to disease worsening; study drug discontinuation; overall remission; changes in CRP and ESR.

Results:
- Overall disease worsening: 26% IFX vs 30% CT-P13, p=ns
- No differences in disease worsening or adverse events

Conclusions:
Switching from IFX originator to CT-P13 was not inferior to continued treatment with IFX originator.

	Baseline		52 weeks		Difference at 52 weeks (95% CI)
	Infliximab originator (n=202)	CT-P13 (n=206)	Infliximab originator (n=202)	CT-P13 (n=206)	
Change variables					
Physician's global assessment of disease activity	1·2 (1·2)	1·2 (1·3)	0·1 (1·6)	0·1 (1·6)	−0·15 (−0·39 to 0·09)
Patient's global assessment of disease activity	2·0 (1·9)	2·2 (2·0)	0·4 (1·9)	0·3 (2·2)	−0·04 (−0·37 to 0·29)
Erythrocyte sedimentation rate (mm/h), log10	0·9 (0·4)	0·9 (0·4)	0 (0·3)	0 (0·3)	−0·02 (−0·06 to 0·03)
C-reactive protein (mg/L), log10	0·4 (0·4)	0·4 (0·4)	0 (0·3)	0 (0·4)	−0·02 (−0·09 to 0·04)
Calprotectin (mg/kg), log10	1·8 (0·6)	1·9 (0·7)	0 (0·5)	0·1 (0·5)	0·03 (−0·12 to 0·18)
Harvey-Bradshaw Index (Crohn's disease)	2·6 (2·4)	2·6 (2·4)	0·3 (2·3)	0·5 (3·1)	−0·41 (−1·14 to 0·33)
Partial Mayo score (ulcerative colitis)	0·6 (1·3)	0·6 (1·3)	0·1 (1·3)	−0·2 (1·7)	0·14 (−0·30 to 0·59)
ASDAS (spondyloarthritis)	1·7 (0·7)	2·1 (0·8)	0·1 (0·6)	−0·2 (0·7)	−0·01 (−0·77 to 0·24)
DAS28 (rheumatoid arthritis and psoriatic arthritis)	2·5 (1·0)	2·2 (0·9)	0·3 (1·0)	0·1 (0·9)	0·27 (−0·07 to 0·61)
CDAI (rheumatoid arthritis and psoriatic arthritis)	5·0 (3·5)	4·0 (3·1)	1·5 (5·5)	0·7 (3·9)	1·29 (−0·35 to 2·94)
SDAI (rheumatoid arthritis and psoriatic arthritis)	5·4 (3·5)	4·5 (3·1)	1·6 (5·7)	0·7 (4·4)	1·09 (−0·68 to 2·86)
PASI (chronic plaque psoriasis)	2·2 (1·9)	3·1 (1·7)	−0·5 (1·9)	−0·4 (1·9)	−0·28 (−1·10 to 0·55)
State variables†					
HBI remission (Crohn's disease)	41 (62%)	43 (68%)	46 (70%)	41 (65%)	6·1% (−9·6 to 21·9)
PMS remission (ulcerative colitis)	30 (91%)	38 (90%)	29 (88%)	39 (93%)	−5·0% (−18·6 to 8·6)

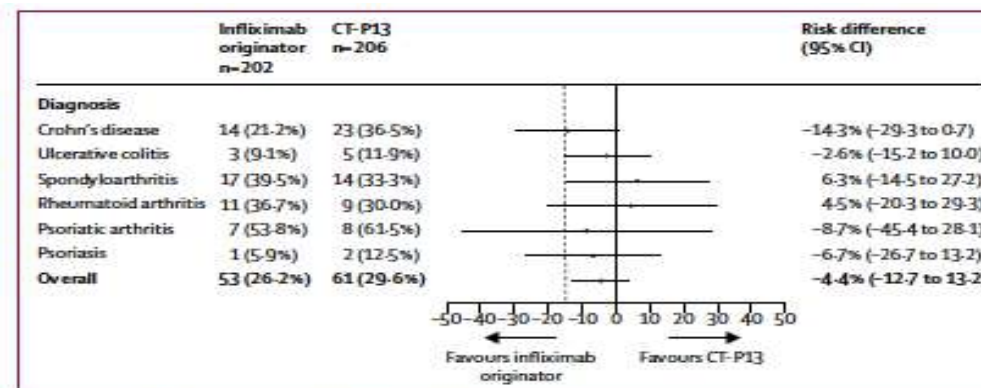|	Infliximab originator n=202	CT-P13 n=206	Risk difference (95% CI)
Diagnosis			
Crohn's disease	14 (21·2%)	23 (36·5%)	−14·3% (−29·3 to 0·7)
Ulcerative colitis	3 (9·1%)	5 (11·9%)	−2·6% (−15·2 to 10·0)
Spondyloarthritis	17 (39·5%)	14 (33·3%)	6·3% (−14·5 to 27·2)
Rheumatoid arthritis	11 (36·7%)	9 (30·0%)	4·5% (−20·3 to 29·3)
Psoriatic arthritis	7 (53·8%)	8 (61·5%)	−8·7% (−45·4 to 28·1)
Psoriasis	1 (5·9%)	2 (12·5%)	−6·7% (−26·7 to 13·2)
Overall	53 (26·2%)	61 (29·6%)	−4·4% (−12·7 to 13·2)

Figure 2: Forest plot of risk difference according to disease

Jorgensen KK et al. Lancet 2017; 389: 2304-2316