

Supplementary Tables for:

Targeting ultrasound remission in early rheumatoid arthritis – the results of the TaSER Study

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Supplementary Table 1. Intra-reader Agreement of MRI and Plain Radiographic Outcomes
 Single measures intra-class correlation coefficient (95CI) based on re-scoring of 30 randomly selected pairs of images for each modality

	Reader 1		Reader 2	
	Baseline	18 months	Baseline	18 months
<i>MRI RAMRIS</i>				
Erosions	0.93 (0.87, 0.97)	0.90 (0.81, 0.95)	0.99 (0.98, 0.99)	1.00 (0.99, 1.00)
Synovitis	0.93 (0.85, 0.96)	0.83 (0.68, 0.92)	0.87 (0.75, 0.94)	0.91 (0.83, 0.96)
Osteitis	0.98 (0.95, 0.99)	0.94 (0.89, 0.97)	0.98 (0.96, 0.99)	0.97 (0.94, 0.98)
<i>Modified Sharp Score</i>				
Erosions	0.90 (0.81, 0.95)	0.91 (0.81, 0.96)	0.82 (0.67, 0.91)	0.95 (0.89, 0.98)
Joint Space Narrowing	0.84 (0.70, 0.92)	0.85 (0.72, 0.93)	0.95 (0.90, 0.98)	0.96 (0.92, 0.98)
Total Score	0.90 (0.81, 0.95)	0.92 (0.84, 0.96)	0.93 (0.85, 0.96)	0.98 (0.95, 0.99)

Supplementary Table 2. Inter-reader Agreement of MRI and Plain Radiographic Outcomes

	Difference		Estimated Intraclass Correlation	
	Mean (SD)		Coefficient (95CI)	
	Baseline	18 months	Baseline	18 months
<i>MRI RAMRIS</i>				
Erosions	-3.52 (3.62)	-5.3 (3.64)	0.80 (0.71, 0.86)	0.73 (0.61, 0.82)
Synovitis	0.59 (3.12)	-1.63 (3.31)	0.84 (0.77, 0.89)	0.60 (0.43, 0.74)
Osteitis	-2.09 (3.58)	-1.41 (2.63)	0.88 (0.82, 0.92)	0.84 (0.76, 0.89)
<i>Modified Sharp Score</i>				
Erosions	0.68 (2.81)	0.14 (3.08)	0.86 (0.80, 0.90)	0.86 (0.80, 0.90)
Joint Space Narrowing	-0.27 (2.20)	-0.13 (2.41)	0.96 (0.94, 0.97)	0.96 (0.94, 0.97)
Total Score	0.41 (3.95)	0.01 (4.15)	0.95 (0.92, 0.96)	0.95 (0.93, 0.97)

Supplementary Table 3. – RAMRIS Score

Median (IQR) and Mean (SD) value at each time point. SDC = smallest detectable change

	Baseline	18 Months	p*	Increase >SDC N (%)
Erosions				
Control				
Median (IQR)	4.0 (2.0, 6.0)	5.0 (3.0, 8.0)	<0.0001*	8 (24)
Mean (±SD)	5.7 (±8.5)	6.9 (±7.9)		
Intervention				
Median (IQR)	4.0 (1.5, 6.0)	4.3 (2.5, 7.0)	0.0001*	6 (16)
Mean (±SD)	5.6 (±8.1)	6.6 (±8.8)		
p	0.82**	0.51**		0.39***
Synovitis				
Control				
Median (IQR)	11.0 (5.0, 16.5)	6.0 (3.0, 9.8)	0.0008*	1 (3)
Mean (±SD)	10.8 (±6.4)	6.3 (3.9)		
Intervention				
Median (IQR)	11.5 (8.5, 14.5)	5.5 (4.0, 8.5)	<0.0001*	0 (0.0)
Mean (±SD)	11.7 (±4.4)	6.1 (3.6)		
p	0.54**	0.93**		0.44***
Osteitis				
Control				
Median (IQR)	3.0 (1.0, 7.0)	2.0 (1.0, 5.0)	0.008*	0 (0.0)
Mean (±SD)	6.3 (±8.6)	3.8 (±4.4)		
Intervention				
Median (IQR)	4.0 (1.5, 6.0)	2.3 (1.0, 3.5)	0.002*	2 (5.3)
Mean (±SD)	5.9 (±7.5)	3.7 (±5.7)		
p	0.85**	0.74**		0.50***

* within group comparison – difference in median of baseline vs 18 months (Wilcoxon Signed Rank test)

** between group comparison - difference in median of Control vs Intervention (Mann- Whitney U test)

*** between group comparison – Control vs Intervention (Fisher's Exact test)

Supplementary Table 4. Modified Sharp Score – Hands and Feet

Median (IQR) and Mean (SD) at each time point. SDC = smallest detectable change

	Baseline	18 Months	p	Increase >SDC N (%)
<i>Erosion Score</i>				
Control				
Median (IQR)	1.5 (0.5, 2.5)	2.0 (1.0, 4.0)	<0.0001*	11 (23)
Mean (±SD)	2.8 (±4.4)	3.5 (±4.6)		
Intervention				
Median (IQR)	1.5 (1.0, 3.0)	1.5 (1.0, 3.0)	0.02*	5 (11)
Mean (±SD)	3.5 (±6.3)	3.7 (±6.6)		
p	0.49**	0.41**		0.17***
<i>Joint Space Narrowing Score</i>				
Control				
Median (IQR)	0.0 (0.0, 1.0)	0.5 (0.0, 1.5)	0.004*	3 (6)
Mean (±SD)	2.4 (±6.0)	2.6 (±6.2)		
Intervention				
Median (IQR)	0.0 (0.0, 3.0)	0.5 (0.0, 4.0)	0.008*	6 (13)
Mean (±SD)	4.1 (±9.6)	4.5 (±10.2)		
p	0.75**	0.92**		0.31***
<i>Total Score</i>				
Control				
Median (IQR)	2.0 (0.5, 4.5)	3.5 (1.0, 5.5)	<0.0001*	9 (18)
Mean (±SD)	5.1 (±9.8)	6.1 (±10.1)		
Intervention				
Median (IQR)	1.5 (1.0, 8.0)	2.0 (1.0, 8.5)	0.0007*	5 (10)
Mean (±SD)	7.6 (±15.2)	8.2 (±16.2)		
p	0.54**	0.79**		0.39***

* within group comparison – difference in median of baseline vs 18 months (Wilcoxon Signed Rank test)

** between group comparison - difference in median of Control vs Intervention (Mann-Whitney U test)

*** between group comparison – Control vs Intervention (Fisher's Exact test)