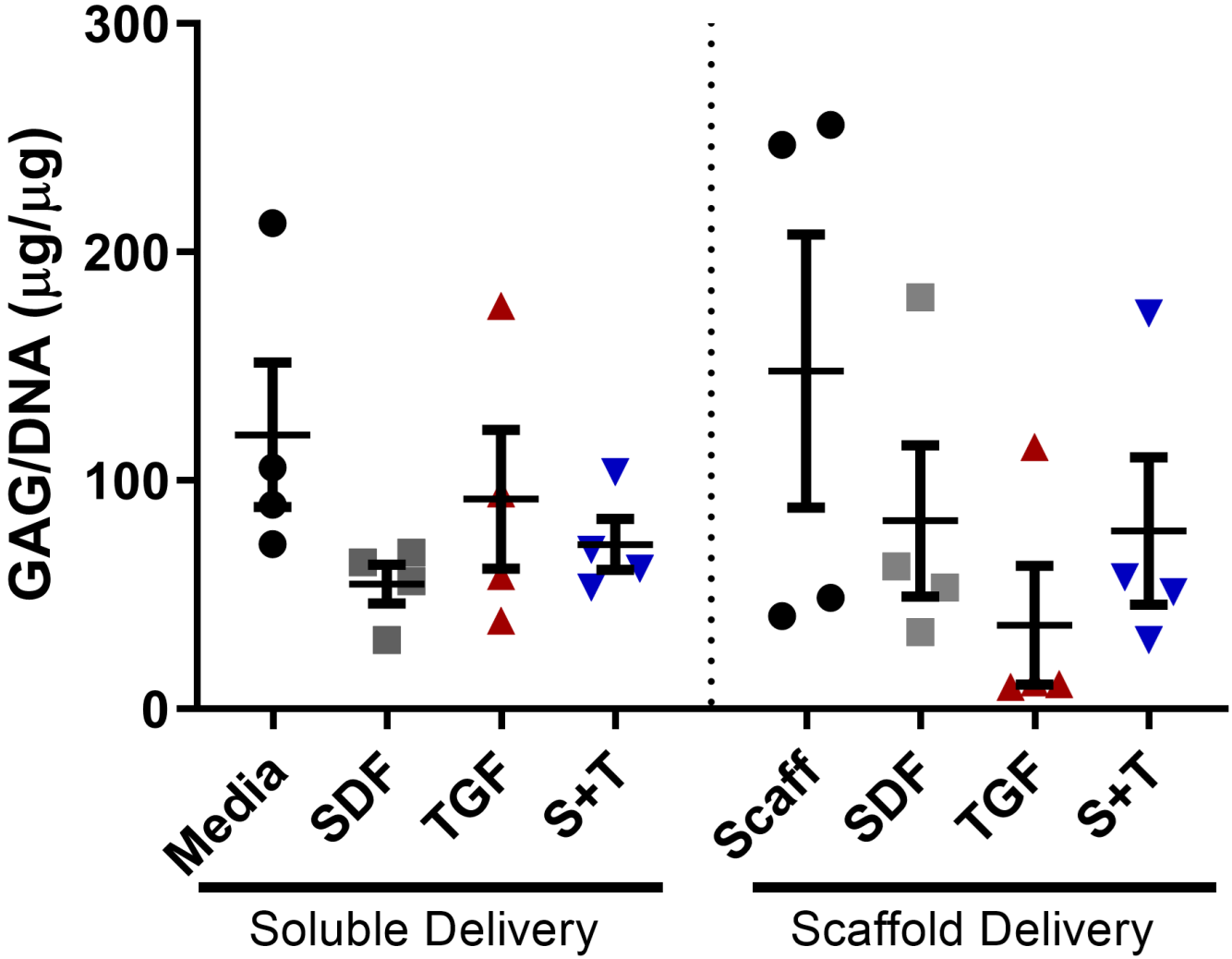
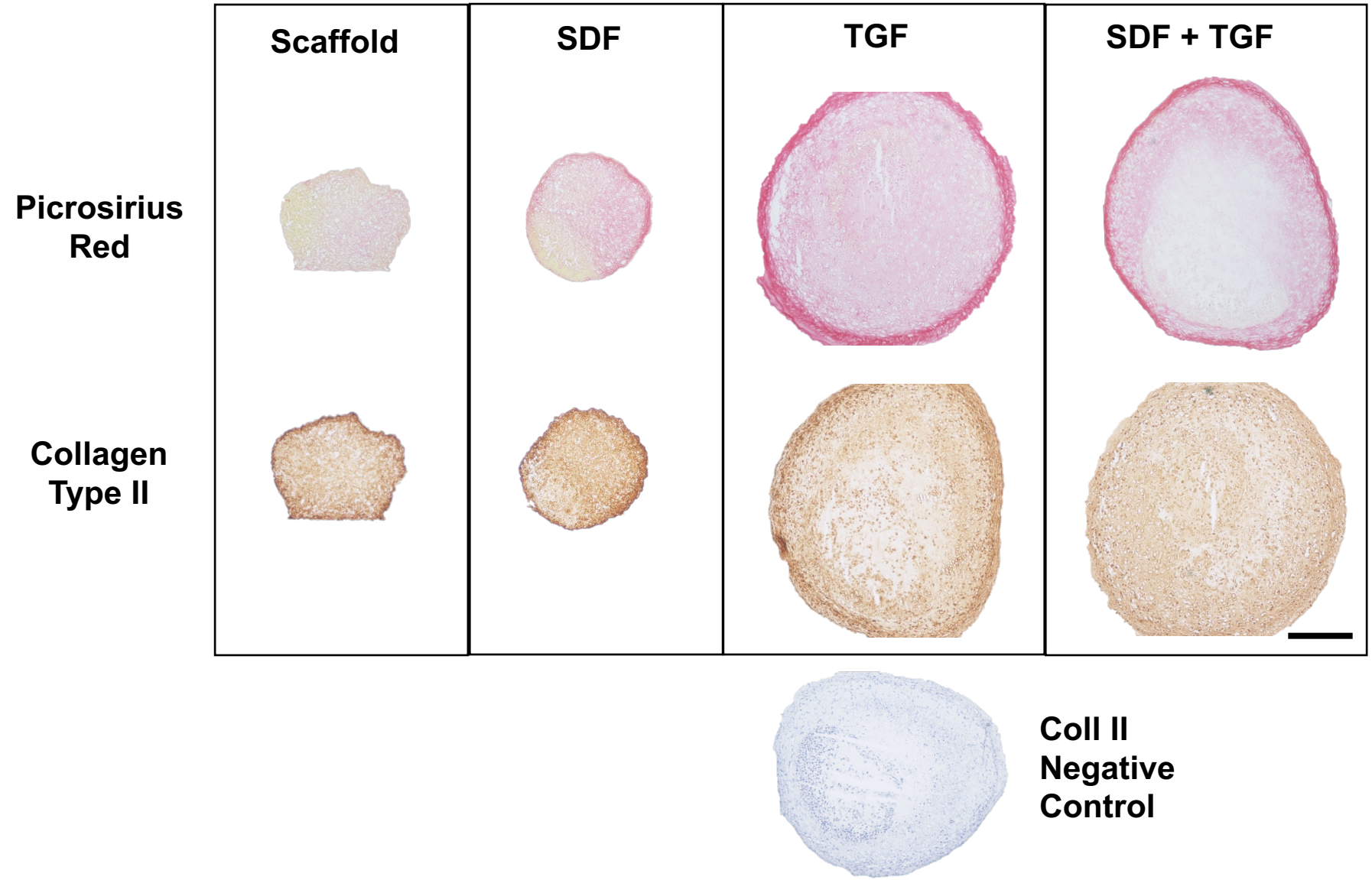
Supplementary Table 1

ICRS Cartilage Repair Assessment	
Degree of defect repair	
Level with surrounding cartilage	4
75% repair of depth	3
50% repair of depth	2
25% repair of depth	1
0% repair of depth	0
Integration to border zone	
Complete integration	4
Demarcating border <1mm	3
3/4 of graft integrated	2
1/2 of graft integrated	1
≤1/4 of graft integrated	0
Macroscopic Appearace	
Intact smooth surface	4
Fibrillated surface	3
Small, scattered fissures or cracks	2
Several small or few but large fissures	1
Total degradation of grafted area	0
Total	
Grade I normal	12
Grade II nearly normal	8-11
Grade III abnormal	4-7
Grade IV severely abnormal	1-3

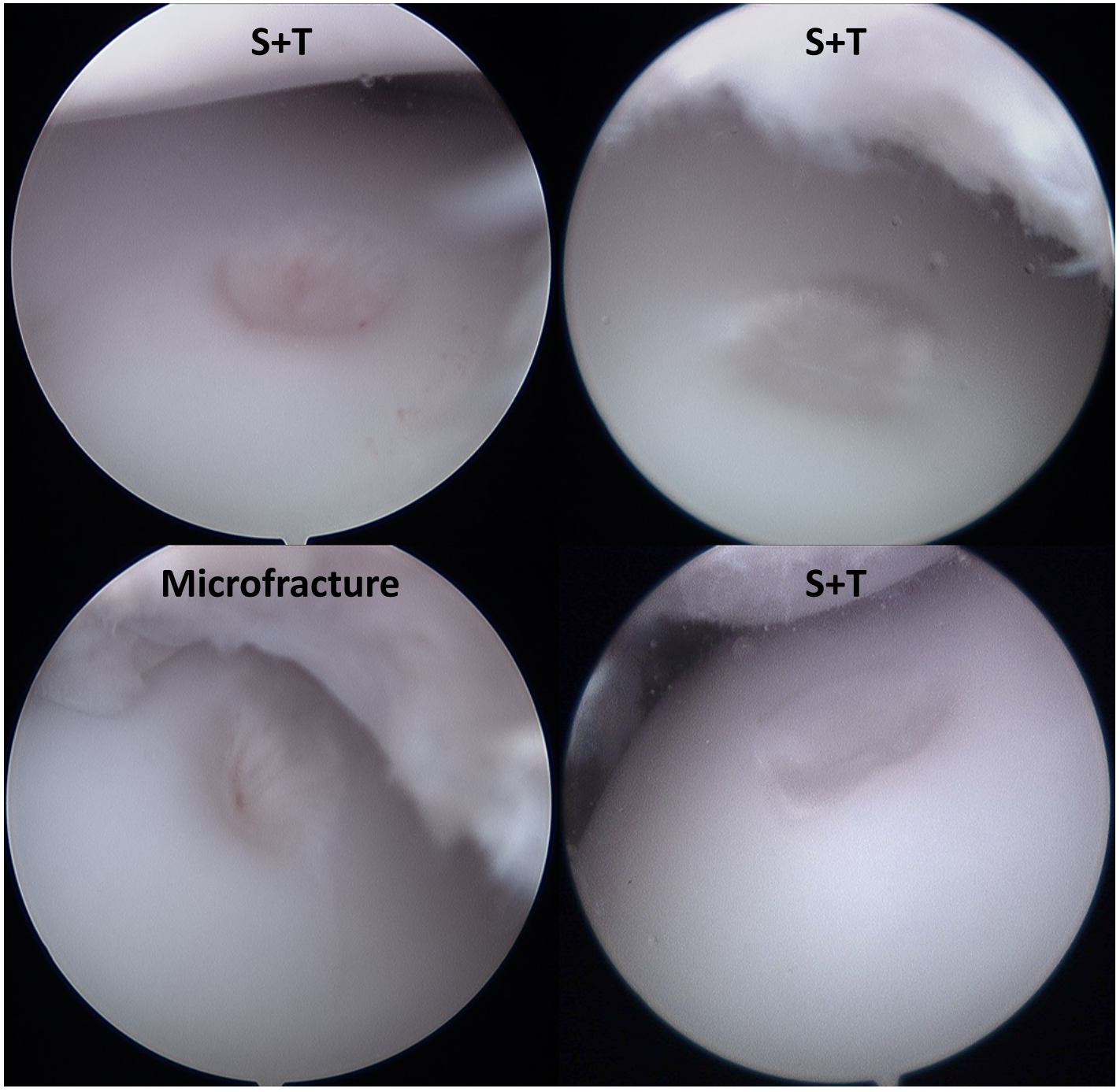
Oswestry Arthroscopy Score	
Graft level with surrounding cartilage	
Level	2
Rasied	1
Below	0
Integration with surrounding cartilage	
Complete	2
Minor disruption (<25% of area	1
Major disruption (>25% of area)	0
Appearance of surface	
Smooth	2
Fine fronds	1
Severe fronds/fibrillation	0
Color of graft	
Pearly, hyaline-like	2
White	1
Yellow bone	0
Stiffness on probing	
Normal compared to adjacent cartilage	2
Softer	1
Very soft/hard	0
Total	
Normal	10



Supplementary Figure 1 – GAG/DNA Content of MSC Pellets Co-Cultured with Scaffolds. *There was no significant difference between the groups, likely due to the small amount of DNA in SDF and control scaffolds.*



Supplementary Figure 2 – Collagen staining of MSC Pellets co-cultured with scaffold. *All pellet groups demonstrated staining for picrosirius red and type II collagen. There was more collagen deposition in the periphery of the pellets. Scale bar = 200um*



Supplementary Figure 3 – Arthroscopic observations at 12 weeks post-op*. Arthroscopic images showing three defects treated with the S+T group and one MFx control within the same joint. Defect size = 4mm.*