

## SUPPLEMENTARY MATERIAL 7

### The Detailed Performance of the two Target Detection Model

The detailed performance including precision, recall, F1-score and FPs of Faster R-CNN and YOLOv3 are shown in Table 1.

**Table 1. Comparison of Faster R-CNN and YOLOv3**

Metrics	Faster R-CNN			YOLOv3		
	Fresh Fracture	Healing Fracture	Old Fracture	Fresh Fracture	Healing Fracture	Old Fracture
Precision	434/509 = 0.853 (0.805–0.893)	536/594 = 0.902 (0.862–0.929)	319/384 = 0.831 (0.786–0.886)	288/488 = 0.590 (0.564–0.611)	342/475 = 0.720 (0.711–0.726)	195/279 = 0.699 (0.689–0.714)
Recall	434/480 = 0.904 (0.898–0.919)	536/611 = 0.877 (0.858–0.894)	319/389 = 0.820 (0.785–0.855)	288/480 = 0.600 (0.564–0.638)	342/611 = 0.560 (0.545–0.591)	195/389 = 0.501 (0.491–0.525)
F1-score	1.542/1.757 = 0.878 (0.847–0.906)	1.582/1.779 = 0.889 (0.878–0.903)	1.363/1.651 = 0.826 (0.806–0.849)	0.708/1.190 = 0.595 (0.567–0.633)	0.806/1.280 = 0.630 (0.613–0.652)	0.700/1.200 = 0.583 (0.564–0.601)
FPs	75 (52–105)	58 (41–86)	65 (41–87)	200 (183–223)	133 (129–139)	84 (78–88)

Corresponding 95% confidence intervals were estimated by using bootstrapping with 1000 bootstraps and randomly sampled at annotations level. Faster R-CNN = faster region-based convolutional neural network, YOLOv3 = you only look once v3