**Table S1** Histological Scoring System

**Fiber Arrangement**

dense, neatly arranged 2

**Evaluation indicators**

**Score**

partially dense, loose or disordered 1

Cluttered and disordered 0

**Number of Cells**

normal 2

increased local cell density 1

abnormal increase of cells and decreased of ECM 0

**Cell Arrangement**

uniaxial arrangement 2

10-50% of cells are irregularly arranged 1 more than 50% cells are irregularly arranged 0

**Cell Distribution**

Uniform and physiological 1

cell clustering 0

**Nuclear Morphology**

Elongated or heterochromatic nucleus 2

large, oval, polymorphic heterochromatin nuclei in 10-30% of nuclei 1 large, oval, euchromatin and heterochromatin nuclei in more than 30% of nuclei 0

**Components of The Scar in Repaired Area**

Homogeneous (one component) 2

Local abnormal tissue composition 1

The entire tissue is completely replaced by other ingredients 0

**Appearance**

Normal form, normal gloss 2

Partial thickening and reduced gloss 1

Significantly thicker, less glossy, less elastic and less rigid 0

|  |  |
| --- | --- |
| **Evaluation indicators**  | **Score**  |
| **Tissue Metaplasia**  |  |
| none  | 3  |
| partial swelling  | 2  |
| fatty infiltration or scar fibrosis  | 1  |
| cartilage or heterotopic ossification **Neovascularization**  | 0  |
| few new capillaries  | 1  |
| Significant increase in new blood vessels **Inflammation**  | 0  |
| no inflammatory cells  | 1  |
| inflammatory cells infiltration  | 0  |