

Tissue remodeling macrophages morphologically dominate at the interface of polypropylene surgical meshes in the human abdomen

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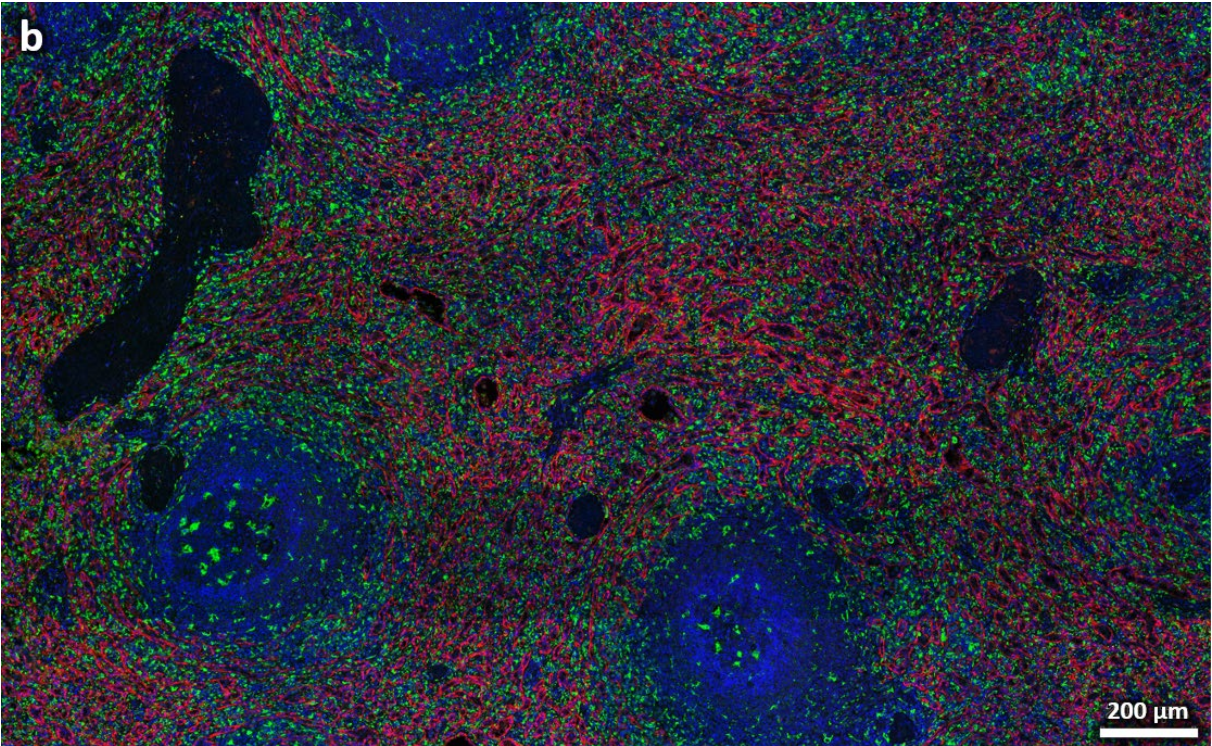
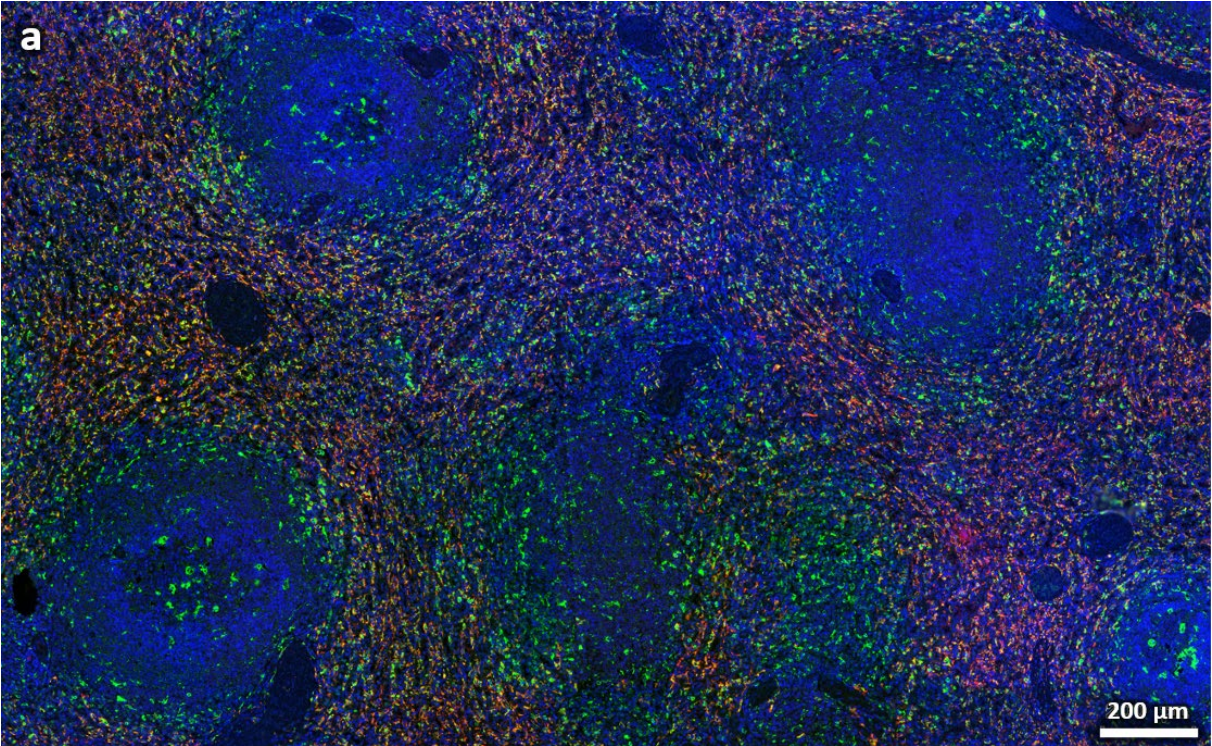
Control tissues

In healthy human control tissues of tonsil and spleen we always found some cells that stained positive for CD68, CD86, CD163, or CD206, but M1 (CD68⁺CD86⁺) and M2 macrophages (CD68⁺CD163⁺ or CD68⁺CD206⁺) were rare (<2% of all cells) (s-Table 1).

In the spleen, we found CD68⁺ cells in the marginal zone as well as the red and white pulp (s-Fig. 1). In addition, we observed abundant CD206⁺ cells (14.4%) in the marginal zone rarely co-expressing CD68 and as expected CD163⁺ red pulp macrophages (5.8%), 31% of which co-expressed CD68.

Figures

s-Fig. 1 Immunofluorescence labelling of macrophages in human spleen tissue. (a) Labelling of CD68 (FITC, green), CD163 (Cy5, red), and nuclei (DAPI, blue), and (b) of CD68 (FITC, green), CD206 (Cy5, red), and nuclei (DAPI, blue). 31% of the red pulp macrophages (CD163⁺) co-expressed CD68, whereas co-expression with CD206 was rare (<0.1%)



Tables

s-Table 1 Percentages of macrophages in control tissues. Results of the examination of healthy human tonsil and spleen tissues for M1 macrophages (CD68⁺CD86⁺) and M2 macrophages (CD68⁺CD163⁺ or CD68⁺CD206⁺). In each tissue we selected 3 non-overlapping rectangular regions of interest (ROIs) with an area of 2 mm². Cells with a mean staining intensity above 100 were considered “positive”. The data are presented as mean (SE).

| Parameter (n = 3 ROIs; area = 2 mm ²) | Control Tissues | |
|---|-----------------|-----------------|
| | <i>Tonsil</i> | <i>Spleen</i> |
| cell density [cells/mm ²] | 16047.7 (241.0) | 11343.7 (303.4) |
| % CD68 ⁺ cells | 2.4 (0.2) | 6.8 (0.5) |
| % CD86 ⁺ cells | 0.2 (0.0) | 0.3 (0.1) |
| % CD68 ⁺ CD86 ⁺ cells | 0.0 (0.0) | 0.0 (0.0) |
| % CD68 ⁺ CD86 ⁺ /CD68 ⁺ | 1.0 (0.3) | 0.0 (0.0) |
| % CD163 ⁺ cells | 0.1 (0.0) | 5.8 (1.2) |
| % CD68 ⁺ CD163 ⁺ cells | 0.0 (0.0) | 1.9 (0.5) |
| % CD68 ⁺ CD163 ⁺ /CD68 ⁺ | 0.2 (0.0) | 31.1 (5.4) |
| % CD206 ⁺ cells | 0.1 (0.1) | 14.4 (1.7) |
| % CD68 ⁺ CD206 ⁺ cells | 0.0 (0.0) | 0.1 (0.0) |
| % CD68 ⁺ CD206 ⁺ /CD68 ⁺ | 0.2 (0.1) | 0.8 (0.2) |