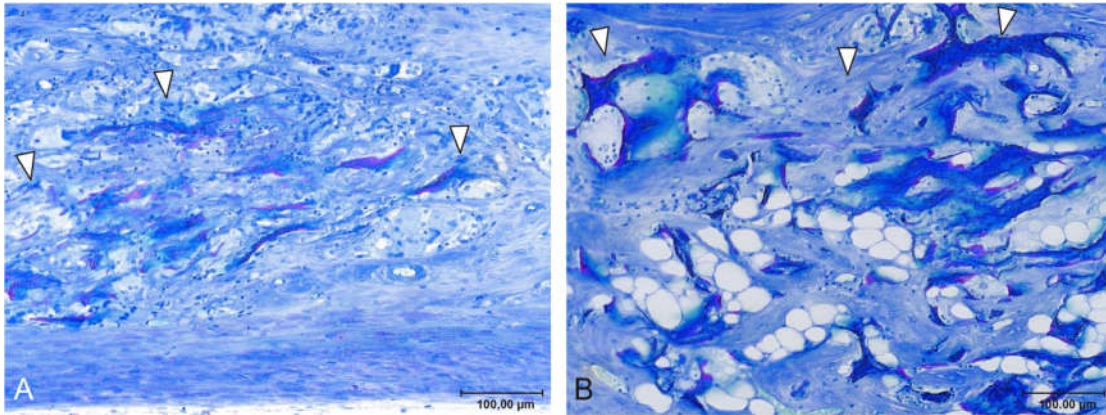
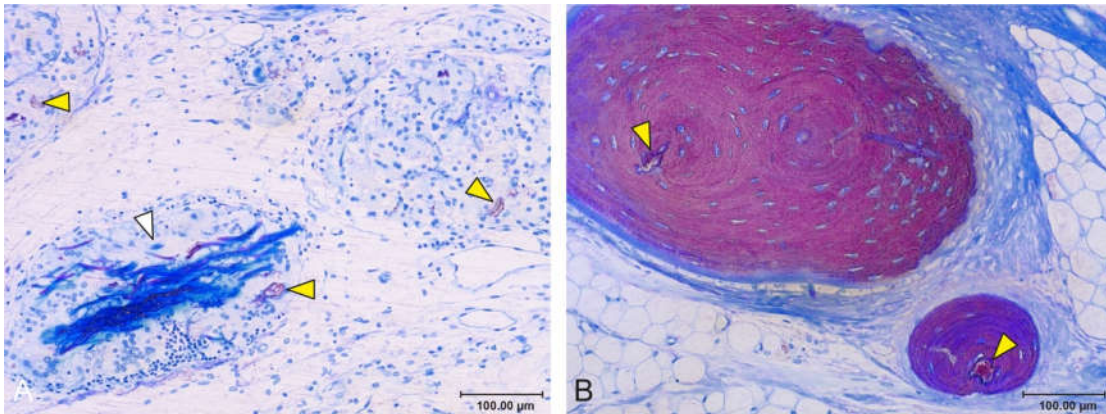


## Supplementary material



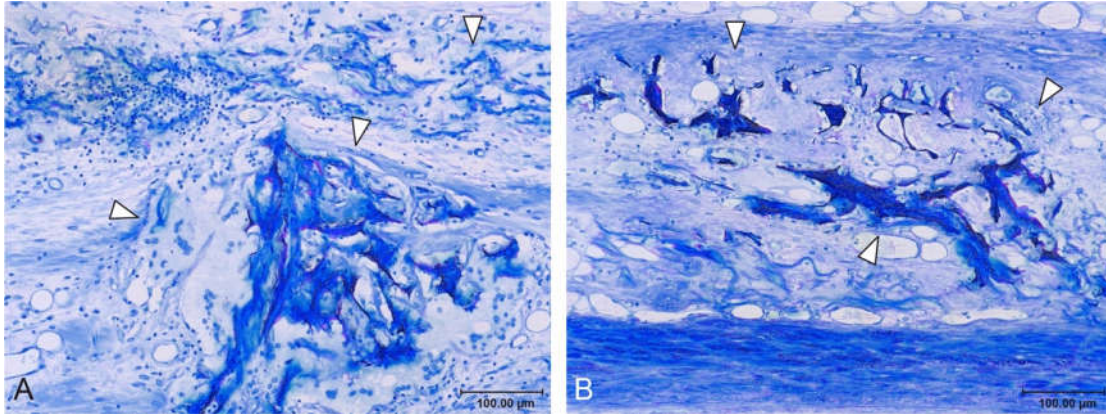
Suppl Figure 1. Observation of residual materials in CM group at 12 weeks after surgery.

(A), (B); Residual collagen fibers surrounded by MNGCs (indicated with white arrowheads, bar = 100µm)



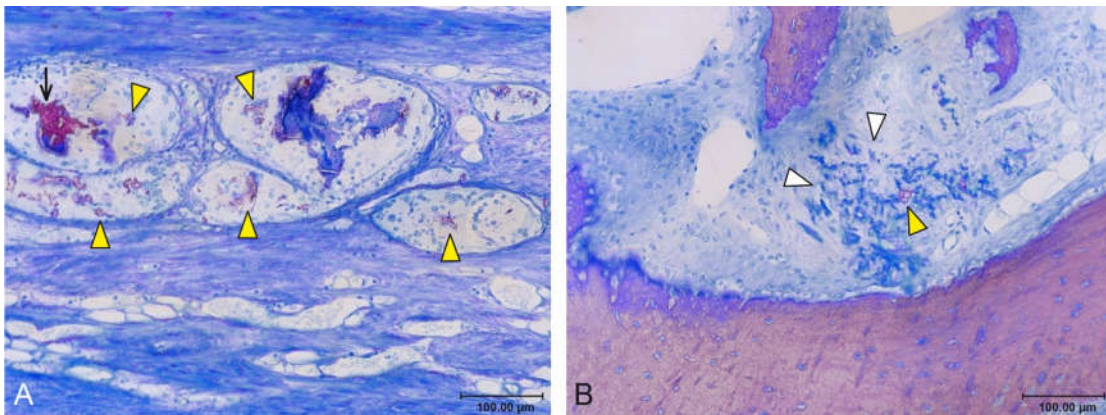
Suppl Figure 2. Observation of residual materials in mCM group at 12 weeks after surgery.

(A); Residual collagen fibers (white arrowheads) and, hydroxyapatite particles (yellow arrowheads). (B); residual hydroxyapatite particles surrounded by new bone (yellow arrowheads).



Suppl Figure 3. Observation of residual materials in CM/M group at 12 weeks after surgery.

(A); Residual collagen fibers surrounded by MNGCs accompanying the lymphocytic infiltration (white arrow heads). (B); Residual collagen fibers surrounded by dense fibrous connective tissue and few MNGCs.



Suppl Figure 4. Observation of residual materials in mCM/M group at 12 weeks after surgery.

(A), (B); Residual collagen fibers (white arrowheads), and hydroxyapatite particles (yellow arrowheads), and osteoid was sometimes observed near hydroxyapatite (arrow).