cancers

Supplementary Material

An Osteosarcoma Model by 3D Printed Polyurethane Scaffold and In Vitro Generated Bone Extracellular Matrix

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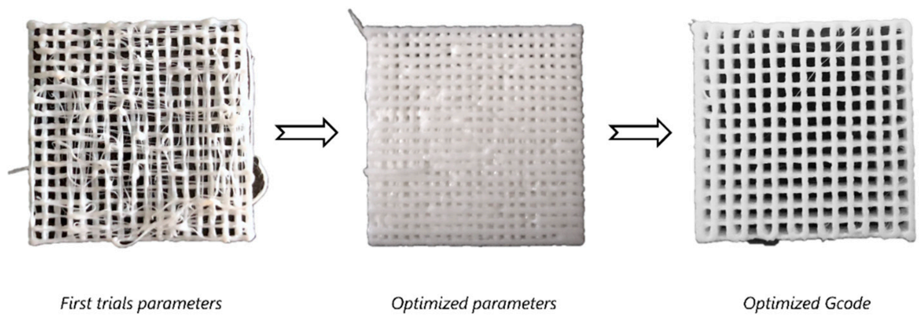

Figure S1. Optimization of the polyurethane printing process. Initial trials were performed to print samples, but clear defects can be macroscopically observed (left). Printing parameters were then optimized, but the movements of the printing head lead to undesired deposition of material (center). Finally, the G-code was optimized to obtain scaffolds with controlled printed geometry (right).

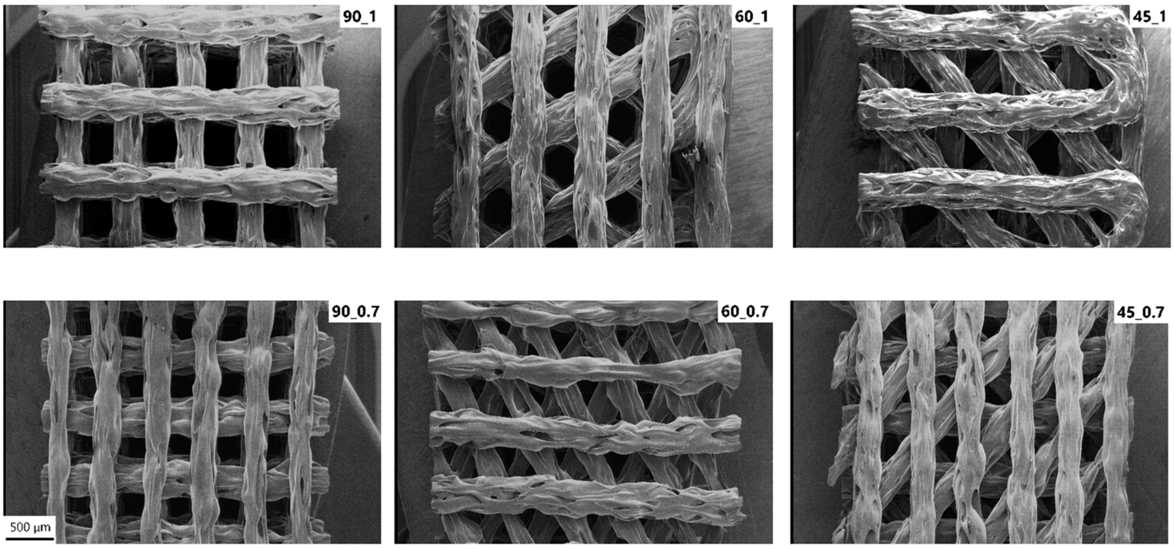

Figure S2. Representative scanning electron microscopy (SEM) micrographs of polyurethane scaffolds printed with different angle shifts between subsequent layers (i.e., 90°, 60° and 45°) and distance between filaments (i.e., 1.0 and 0.7 mm); scale bar = 500 μm. Samples were gold sputter-coated (Edward Sputter Coater S150B0) and imaged in secondary electron detection mode by StereoScan 360 (Cambridge Instruments).

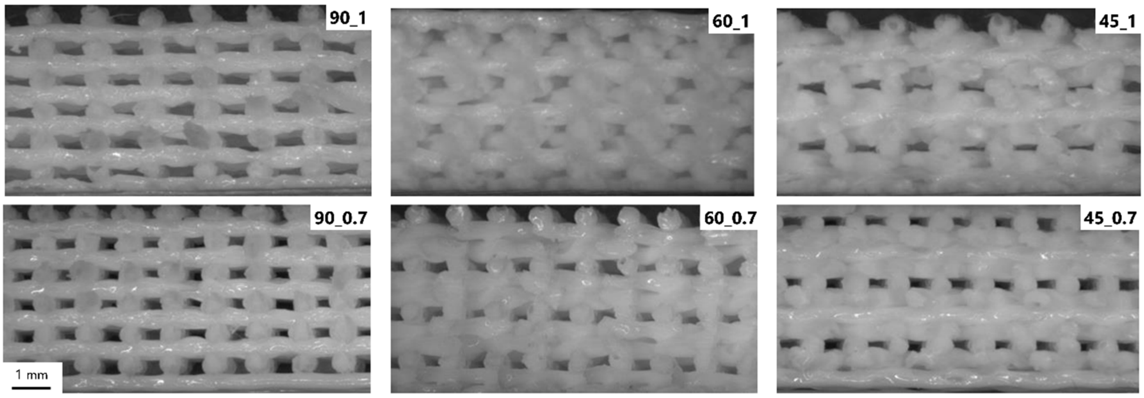

Figure S3. Representative images of the section of polyurethane scaffolds printed with different angle shifts between subsequent layers (i.e., 90°, 60° and 45°) and distance between filaments (i.e., 1.0 and 0.7 mm); scale bar = 1 mm.

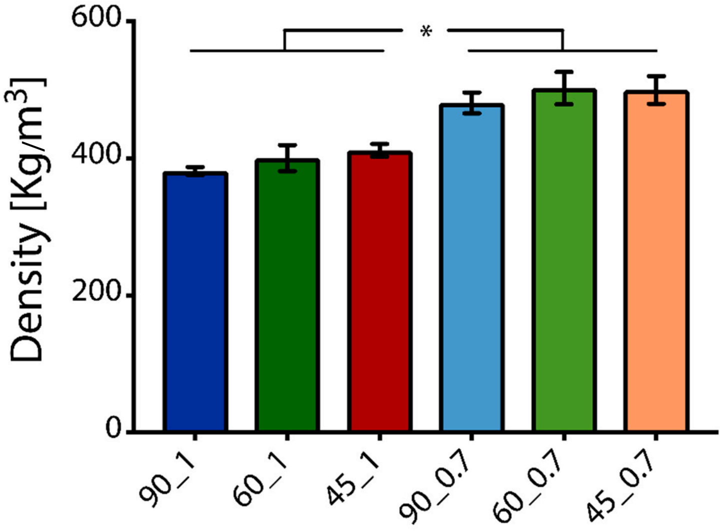

Figure S4. Average density of the printed polyurethane scaffolds measured as mass to volume ratio (* $p < 0.05$).