

## **Supplementary Information 4. Study characteristics of included studies: abbreviations and references**

### **Abbreviations**

#### **Biomaterial**

ACI: autologous chondrocyte implantation  
BCP: bicalcium phosphate  
CDBM: cancellous demineralized bone matrix  
CS: chondroitin sulfate  
DABM: demineralized allogeneic bone matrix  
DCBM: decellularized cancellous bone matrix  
DCCBM: decalcified cortical-cancellous bone matrix  
DTBM: demineralized trabecular bone matrix  
DCBM: demineralized cortical bone matrix  
DCM: decellularized cartilage matrix  
GMP: gelatin microspheres  
ICP: Injectible calcium phosphate  
KLD hydrogel: self-assembling hydrogel from peptide sequences (RADA)<sub>4</sub> and (KLDL)<sub>3</sub>  
LLDPE: low-density polyethylene  
MA: methacrylate  
OPF: oligo(poly(ethylene glycol) fumarate)  
PAMPS-PDMAAm DN hydrogel: poly-(2-Acrylamido-2-methylpropane sulfonic acid/poly-(N,N'-Dimethyl acrylamide double network hydrogel  
PCL: polycaprolactone  
PCLPU: polycaprolactone-polyurethane  
PEG: poly(ethylene glycol)  
PEOT/PBT: poly(ethylene oxide terephthalate)/poly(butylene terephthalate)  
PHBV: (poly(3-hydroxybutyric acid-co-3-hydroxyvaleric acid)  
pHEMA-[MMA-co-AA]: poly(2-hydroxyethyl methacrylate)-poly(methacrylate of acrylic methyl co-acid  
PGA: poly(glycolic acid)  
PLA: poly(lactic acid)  
PLCL: poly(L-lactide-co-caprolactone)  
PLGA: poly(lactic-co-glycolic acid)  
PDLA: poly(d-lactide)  
PVA: poly(vinyl alcohol)  
SPU: segmented polyurethane  
TCP: tricalcium phosphate  
TMC: N,N,N-trimethylchitosanchloride  
UHMWPE: Ultra-high molecular weight polyethylene

#### **Cells**

ACI: autologous chondrocyte implantation  
ASCs: adipose-derived stem cells  
BM-MNCs: bone marrow-derived mononuclear cells  
EPCs: endothelial progenitor cells  
MPCs: bone marrow-derived progenitor cells  
MSCs: mesenchymal stem cells  
SDMSCs: synovium derived mesenchymal stem cells  
BMAC: bone marrow aspiration concentrate

#### **Biologicals**

BMP: bone morphogenetic protein  
bBMPs: bovine bone morphogenetic proteins  
FGF: fibroblast growth factor

IGF: insulin-like growth factor  
OP-1: osteogenic protein-1 (BMP-7)  
PRP: platelet-rich plasma  
SDF-1: stromal cell-derived factor-1  
SVF: stromal vascular fraction  
TGF- $\beta$ : transforming growth factor- $\beta$

## Conditions

IAM: intermittent active motion  
CPM: continuous passive motion  
Imm: immobilized

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