**Supplementary material**
**Supplementary material 1 Retrieval strategy.**
PubMed
#1 ((((Mesenchymal Stromal Cell*[Title/Abstract]) OR (Mesenchymal Stem Cell*[Title/Abstract])) OR (Mesenchymal Progenitor Cell*[Title/Abstract])) OR (Bone Marrow Stromal Cell*[Title/Abstract])) OR (Stem cell*[Title/Abstract])
#2 ((((((Osteoarthritis[MeSH Terms]) OR (Osteoarthritides[Title/Abstract])) OR (Osteoarthrosis[Title/Abstract])) OR (Osteoarthroses[Title/Abstract])) OR (knee osteoarthritis[Title/Abstract])) OR (knee osteoarthrosis[Title/Abstract])) OR (KOA[Title/Abstract])
#3 (((((((platelet-rich plasma[MeSH Terms]) OR (PRP[Title/Abstract])) OR (plasma rich in growth factors[Title/Abstract])) OR (platelet derived growth factor[Title/Abstract])) OR (platelet derived[Title/Abstract])) OR (platelet gel[Title/Abstract])) OR (platelet lysate[Title/Abstract])) OR (platelet rich plasma[Title/Abstract])
#4 #1 AND #2 AND #3

EMBASE
#1 'mesenchymal stromal cell*':ab,ti OR 'mesenchymal stem cell*':ab,ti OR 'mesenchymal progenitor cell*':ab,ti OR 'bone marrow stromal cell*':ab,ti
#2 osteoarthritis:ab,ti OR osteoarthritides:ab,ti OR osteoarthrosis:ab,ti OR osteoarthroses:ab,ti OR 'knee osteoarthritis':ab,ti OR 'knee osteoarthrosis':ab,ti OR koa:ab,ti
#3 'platelet-rich plasma':ab,ti OR prp:ab,ti OR 'plasma rich in growth factors':ab,ti OR 'platelet derived growth factor':ab,ti OR 'platelet derived':ab,ti OR 'platelet gel':ab,ti OR 'platelet lysate':ab,ti
#4 #1 AND #2 AND #3

Cochrane Library
#1 (knee osteoarthritis):ti,ab,kw OR (knee osteoarthritides):ti,ab,kw OR (osteoarthritis of Knee):ti,ab,kw OR (Osteoarthritis):ti,ab,kw OR (KOA):ti,ab,kw
#2 (platelet-rich plasma):ti,ab,kw OR (plasma rich in growth factors):ti,ab,kw OR (PRP):ti,ab,kw OR (platelet gel):ti,ab,kw OR (platelet lysate):ti,ab,kw
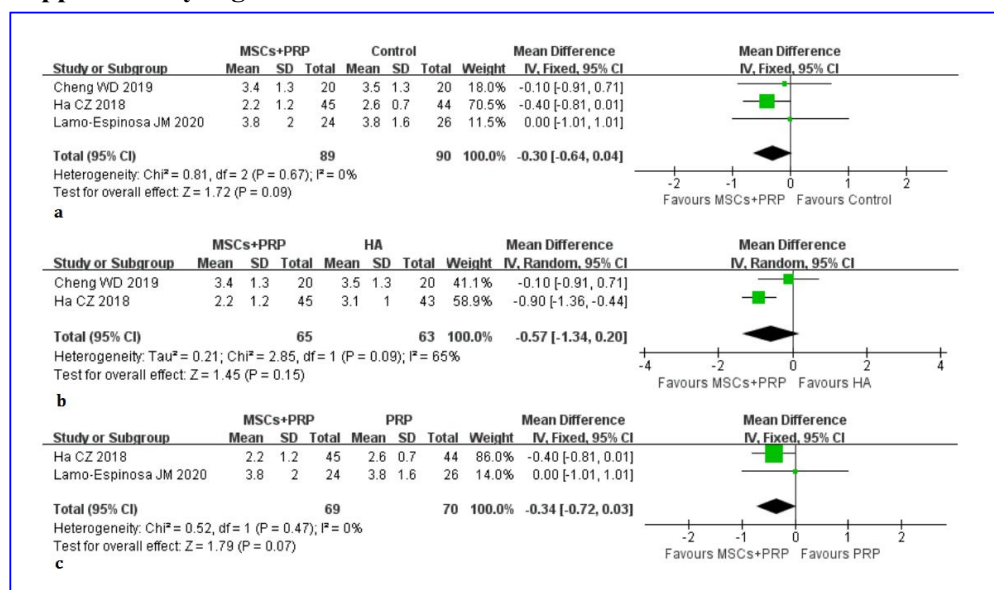#3 (platelet-rich plasma):ti,ab,kw OR (plasma rich in growth factors):ti,ab,kw OR (PRP):ti,ab,kw OR (platelet gel):ti,ab,kw OR (platelet lysate):ti,ab,kw
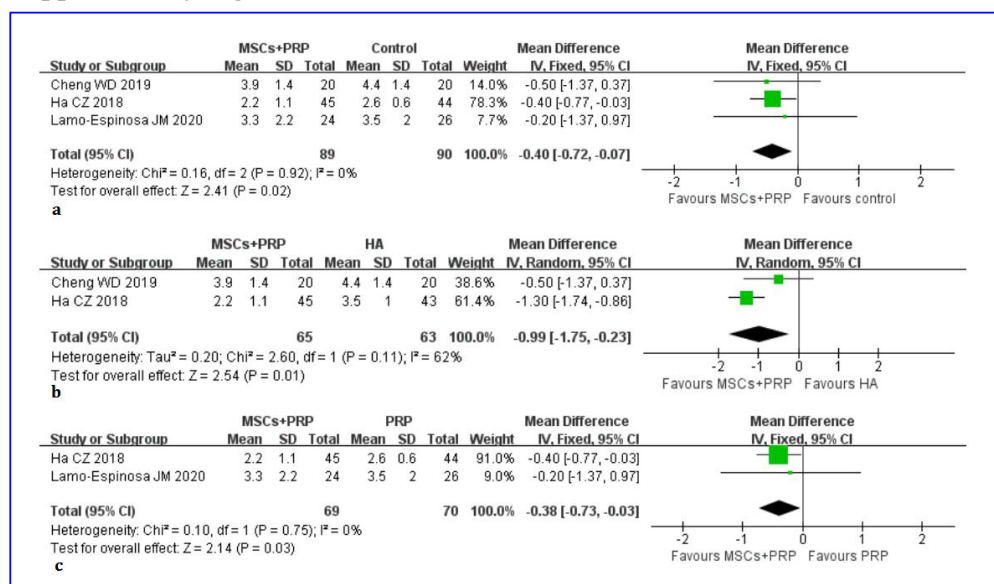#4 #1 AND #2 AND #3

CNKI
(TKA = '干细胞') AND (TKA = '富血小板血浆' OR TKA = '血小板凝胶' OR TKA = '血小板') AND (TKA = '膝骨关节炎' OR TKA = '关节炎' OR TKA = '膝关节炎')
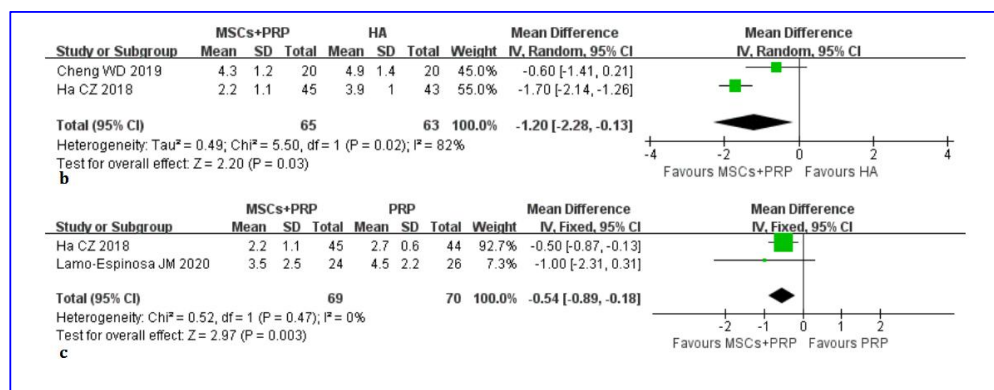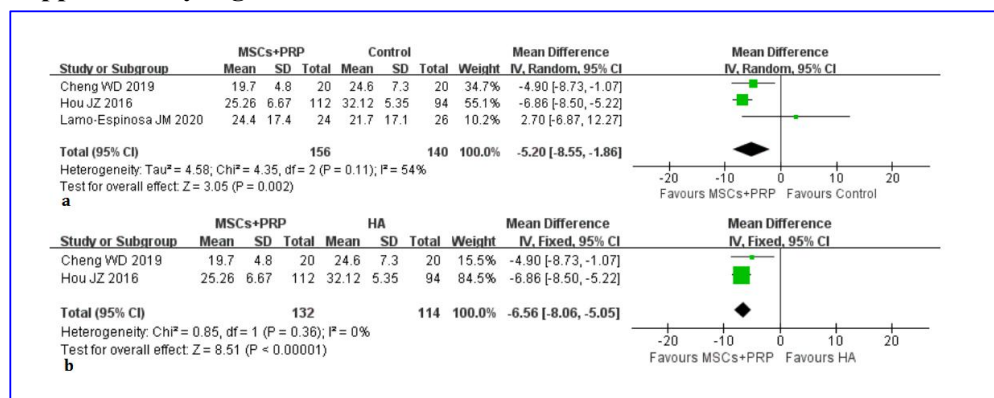
**Supplementary Figure 1**



Supplementary Figure 1 Forest plot of VAS score 3 months after treatment : (a) MSCs+PRP *vs* control group (PRP and HA in control group); (b) MSCs+PRP *vs* HA; (c) MSCs+PRP *vs* PRP.

**Supplementary Figure 2**



Supplementary Figure 2 Forest plot of VAS score 6 months after treatment : (a) MSCs+PRP *vs* control group (PRP and HA in control group); (b) MSCs+PRP *vs* HA; (c) MSCs+PRP *vs* PRP.
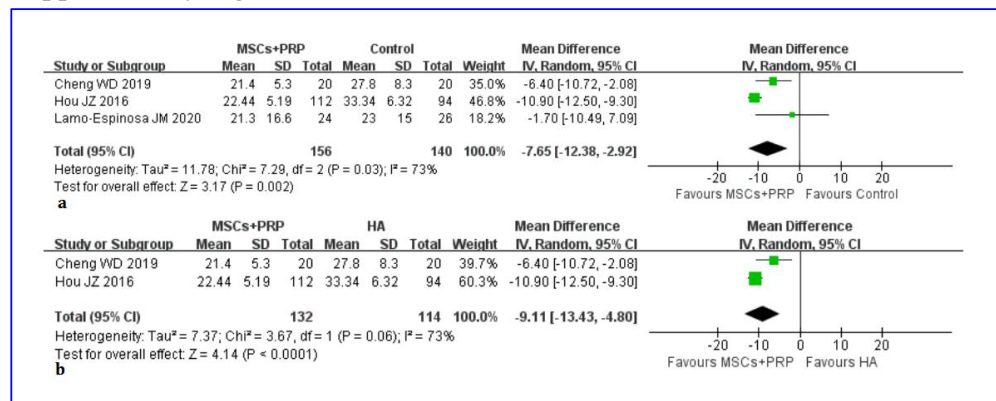
## Supplementary Figure 3



Supplementary Figure 3 Forest plot of VAS score 12 months after treatment : (b) MSCs+PRP *vs* HA; (c) MSCs+PRP *vs* PRP.
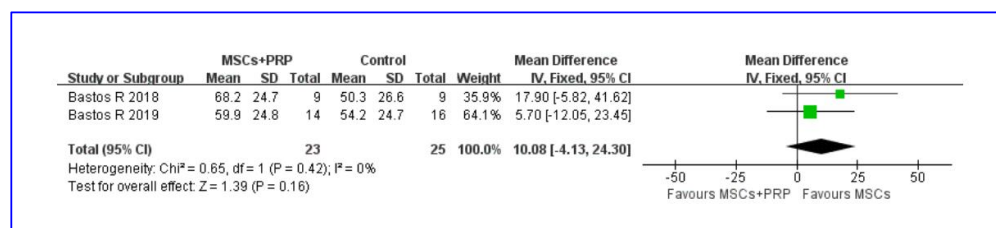
## Supplementary Figure 4



Supplementary Figure 4 Forest plot of WOMAC score 3 months after treatment : (a) MSCs+PRP *vs* control group (PRP and HA in control group); (b) MSCs+PRP *vs* HA.
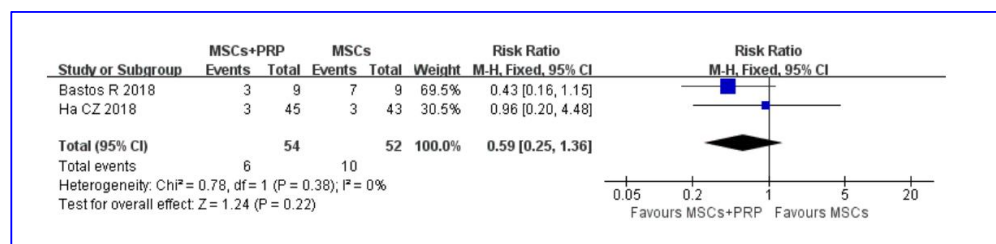
**Supplementary Figure 5**



Supplementary Figure 5 Forest plot of WOMAC score 6 months after treatment : (a) MSCs+PRP *vs* control group (PRP and HA in control group); (b) MSCs+PRP *vs* HA.

**Supplementary Figure 6**



Supplementary Figure 6 Forest plot of KOOS 12 months after treatment : MSCs+PRP *vs* MSCs.

**Supplementary Figure 7**



Supplementary Figure 7 Forest plot of adverse reaction : MSCs+PRP *vs* MSCs.