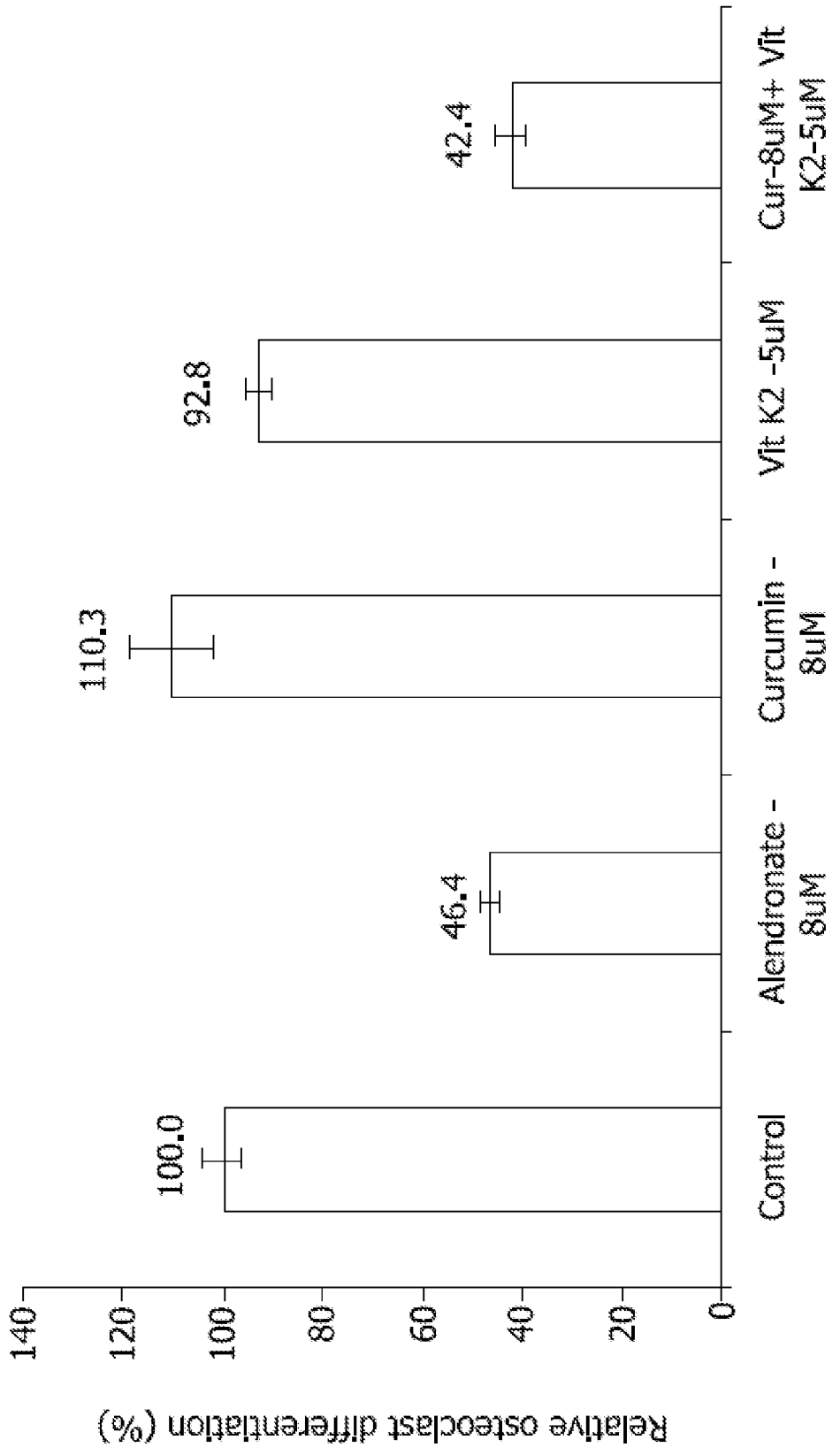

Relative osteoclast differentiation (%)
140
120
100
80
60
40
20
0
100.0
46.4
110.3
92.8
42.4
Control
Alendronate - 8uM
Curcumin - 8uM
Vit K2 -5uM
Cur-8uM+ Vit K2-5uM

FIG. 1

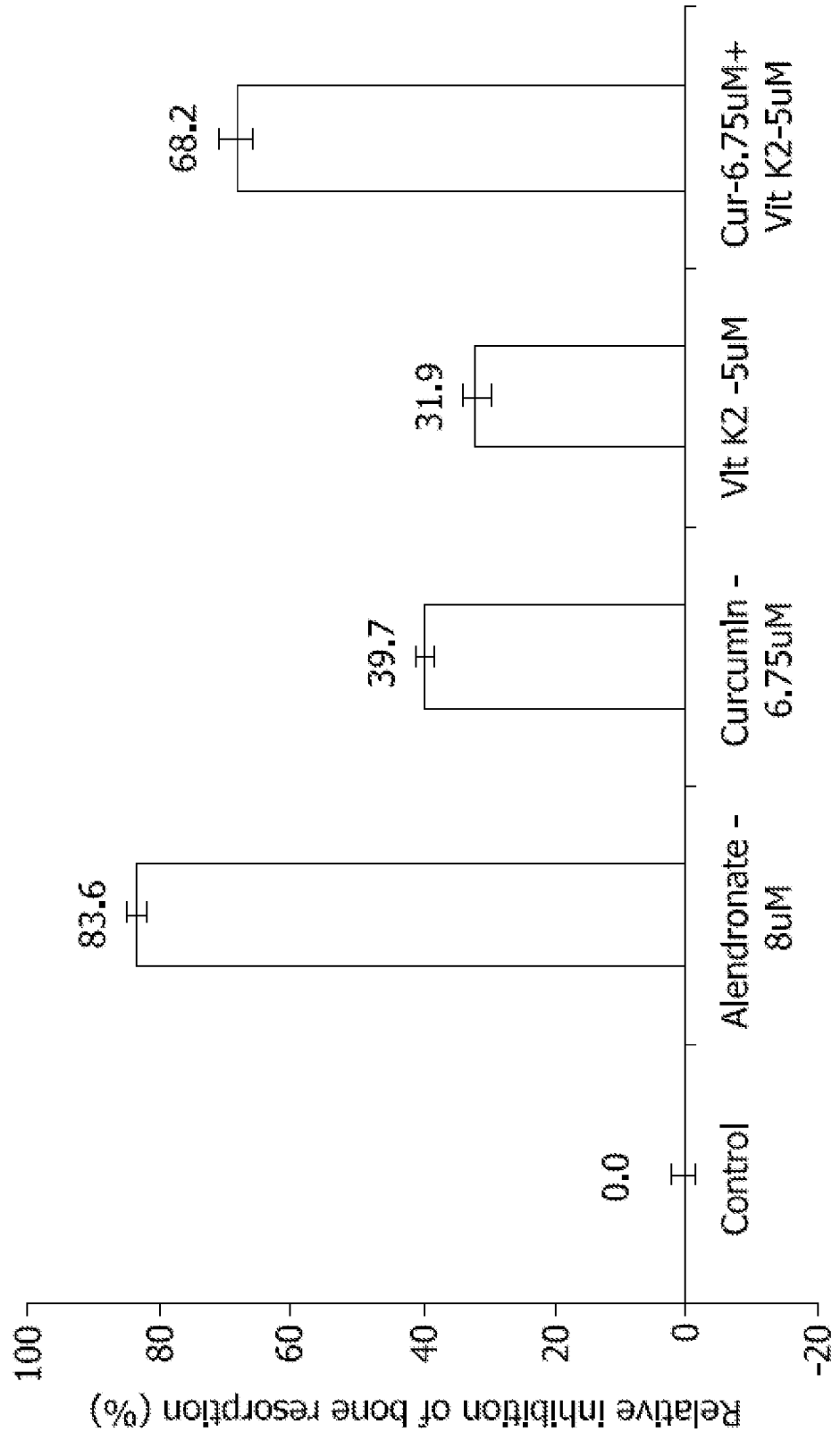

Relative inhibition of bone resorption (%)
100
80
60
40
20
0
-20
83.6
0.0
39.7
31.9
68.2
Control
Alendronate - 8uM
Curcumin - 6.75uM
Vit K2 -5uM
Cur-6.75uM+ Vit K2-5uM

FIG. 2

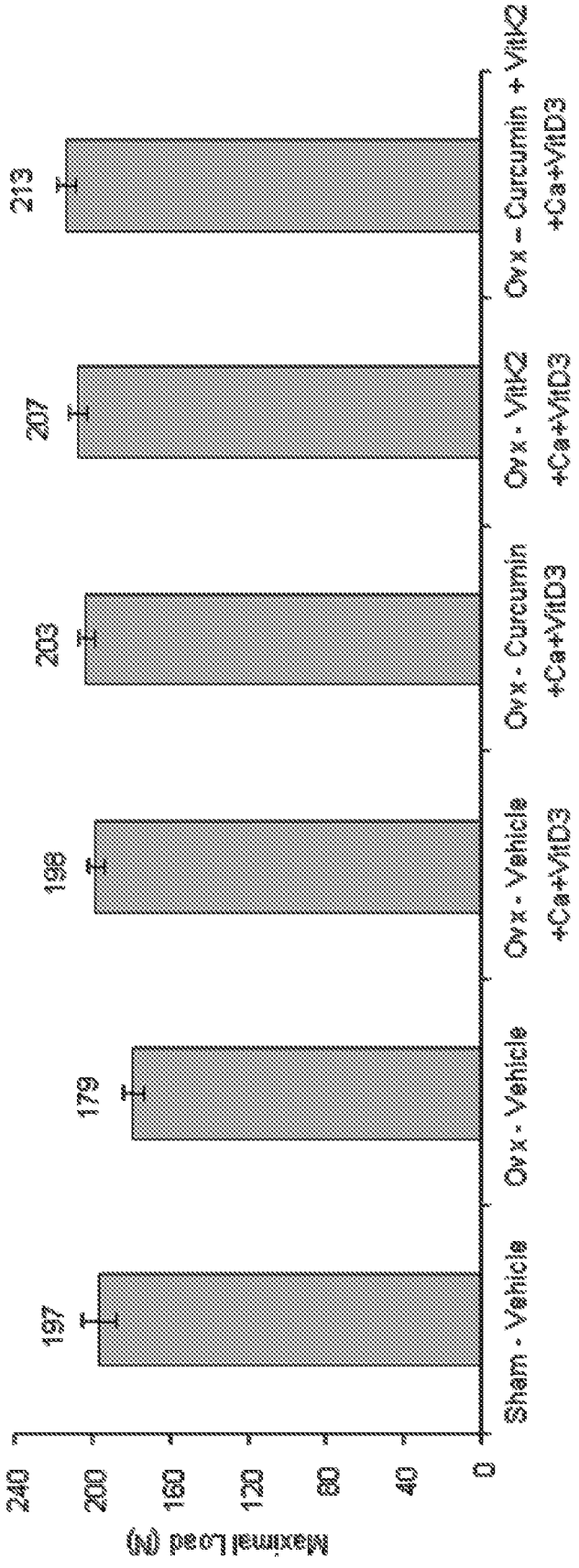

Maximal Load (N)
240
200
160
120
80
40
0
197
179
198
203
207
213
p<0.05
p<0.05
p<0.05
Sham - Vehicle
Ovx - Vehicle
Ovx - Vehicle +Ca+VitD3
Ovx - Curcumin +Ca+VitD3
Ovx - VitK2 +Ca+VitD3
Ovx – Curcumin + VitK2 +Ca+VitD3

FIG. 3

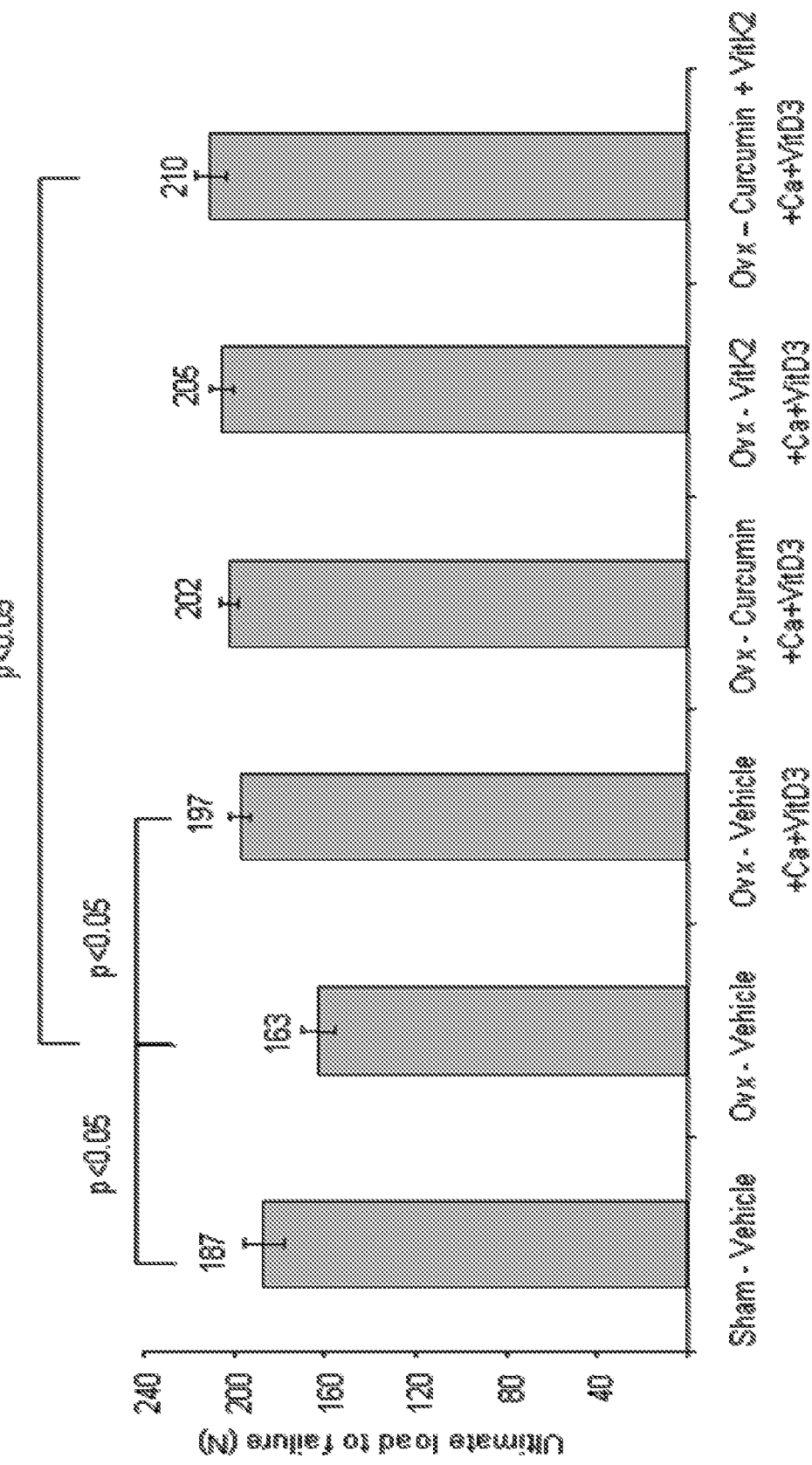

Ultimate load to failure (N)
240
200
160
120
80
40
187
163
197
202
205
210
p<0.05
p<0.05
p<0.05
Sham - Vehicle
Ovx - Vehicle
Ovx - Vehicle +Ca+VitD3
Ovx - Curcumin +Ca+VitD3
Ovx - VitK2 +Ca+VitD3
Ovx – Curcumin + VitK2 +Ca+VitD3

FIG. 4

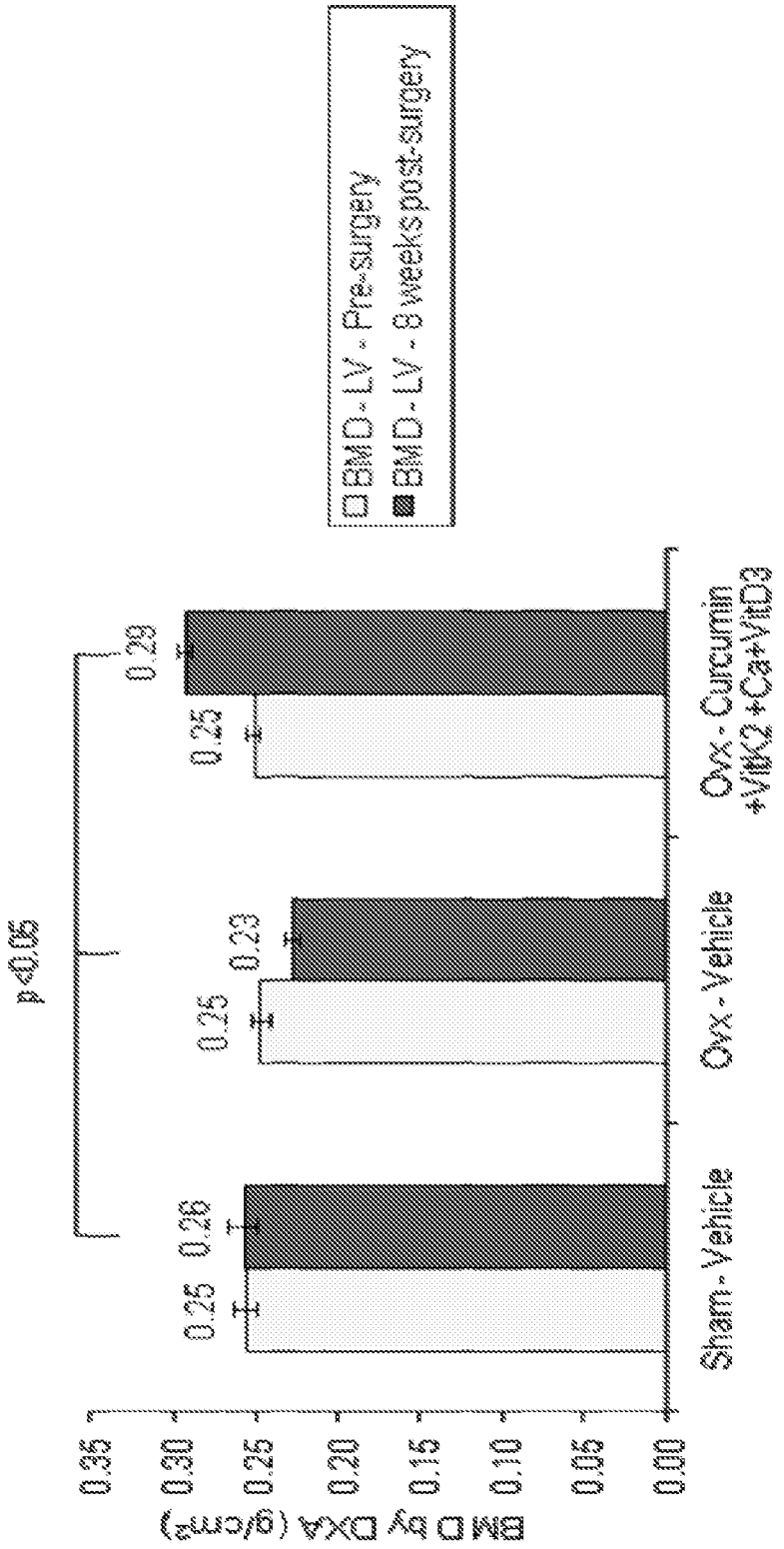

BMD-LV - Pre-surgery
BMD-LV - 8 weeks post-surgery
BMD by DXA (g/cm²)
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
p <0.05
0.25
0.26
0.25
0.23
0.25
0.23
Sham - Vehicle
Ovx - Vehicle
Ovx - Curcumin +VitK2 +Ca+VitD3

FIG. 5

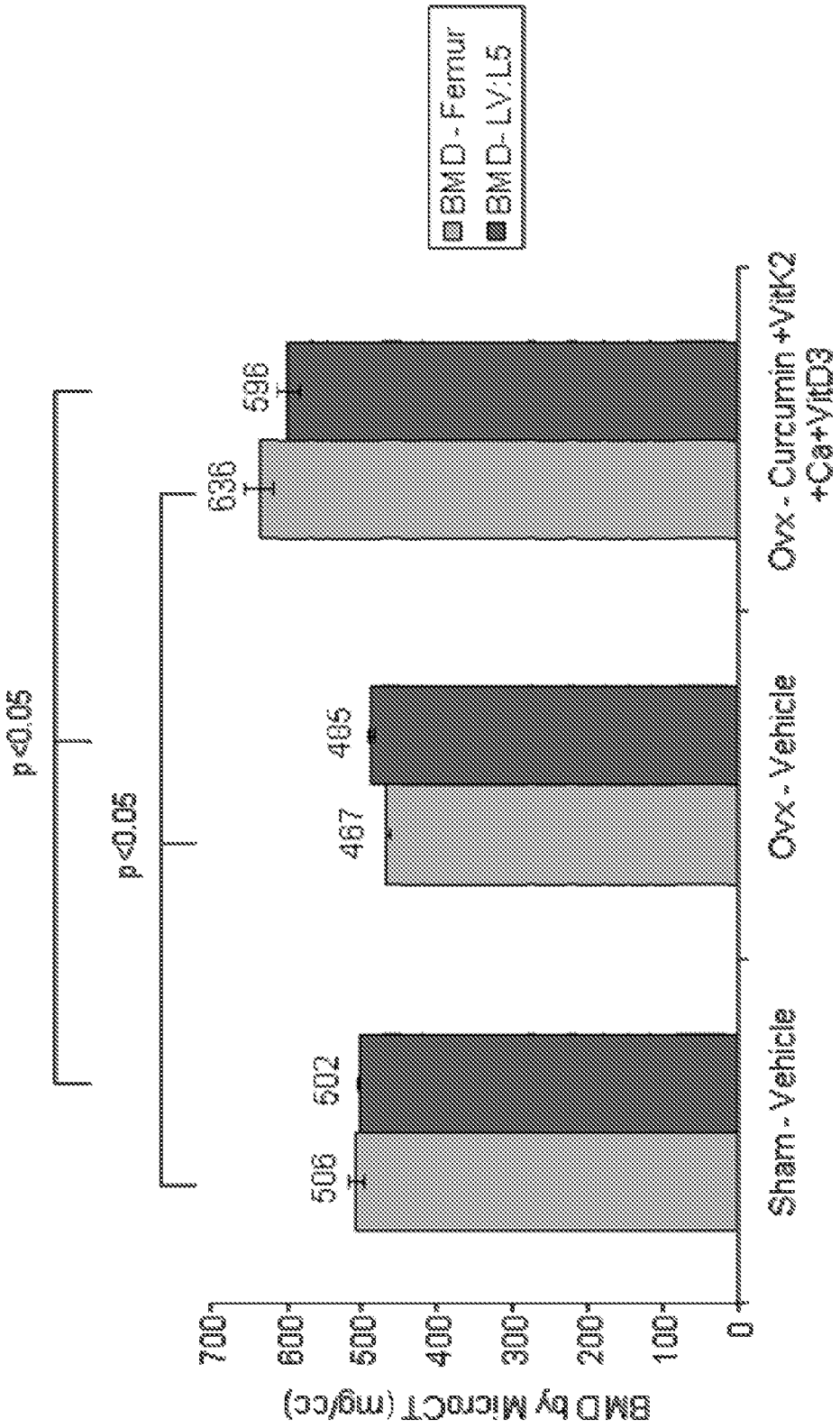

BMD by MicroCT (mg/cc)
0
100
200
300
400
500
600
700
BMD - Femur
BMD - LV-L5
506
502
467
485
636
596
p<0.05
p<0.05
Sham - Vehicle
Ovx - Vehicle
Ovx - Curcumin +VitK2 +Ca+VitD3

FIG. 6

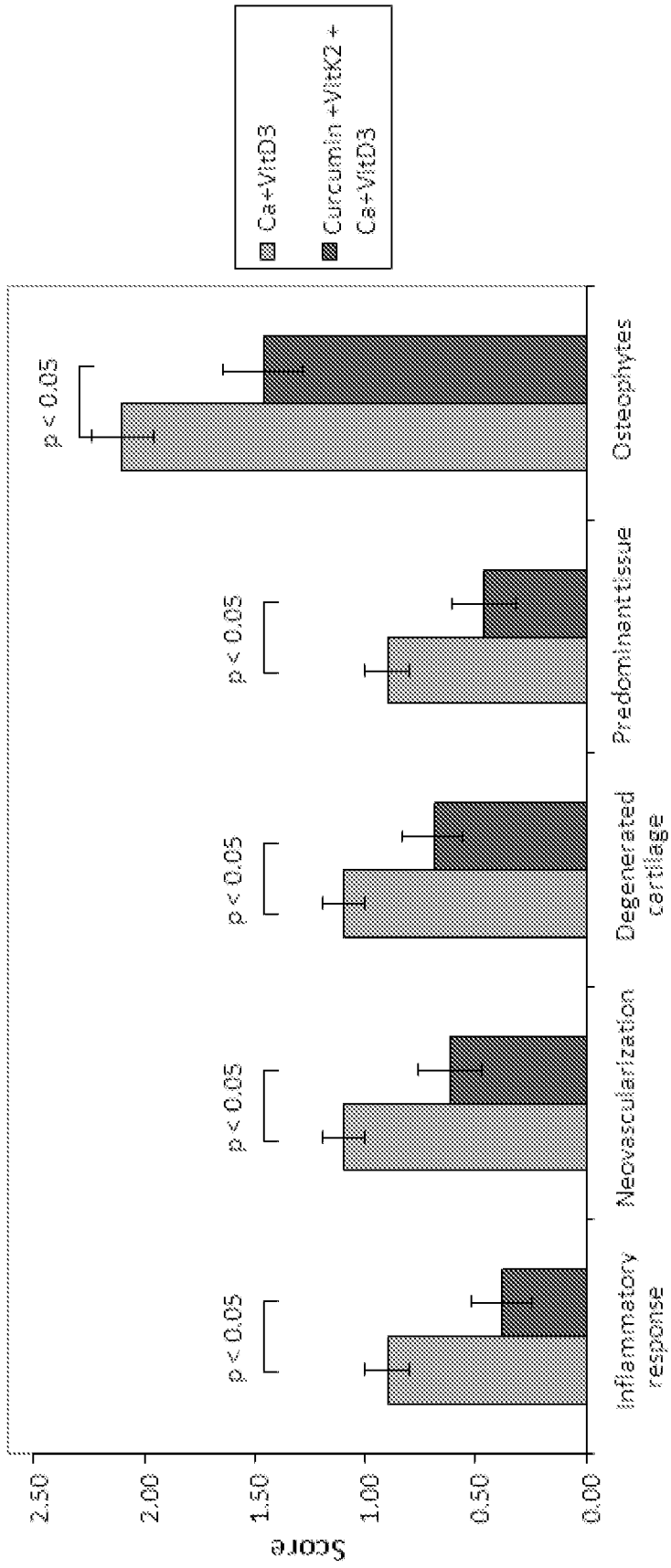

Ca+VitD3
Curcumin +VitK2 + Ca+VitD3
Score
2.50
2.00
1.50
1.00
0.50
0.00
p < 0.05
p < 0.05
p < 0.05
p < 0.05
p < 0.05
Inflammatory response
Neovascularization
Degenerated cartilage
Predominantissue
Osteophytes

FIG. 7

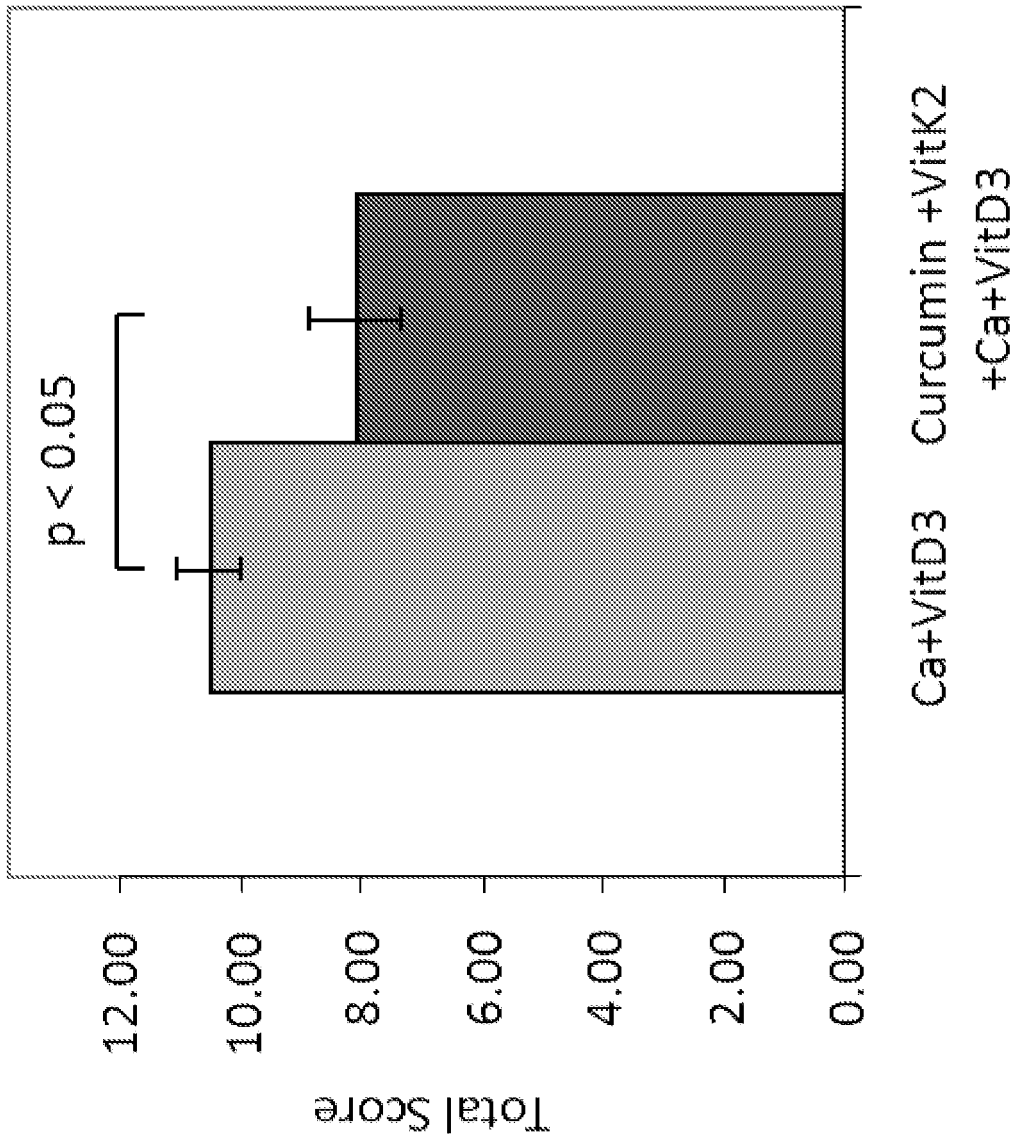

Total Score
12.00
10.00
8.00
6.00
4.00
2.00
0.00
p < 0.05
Ca+VitD3
Curcumin +VitK2
+Ca+VitD3

FIG. 8

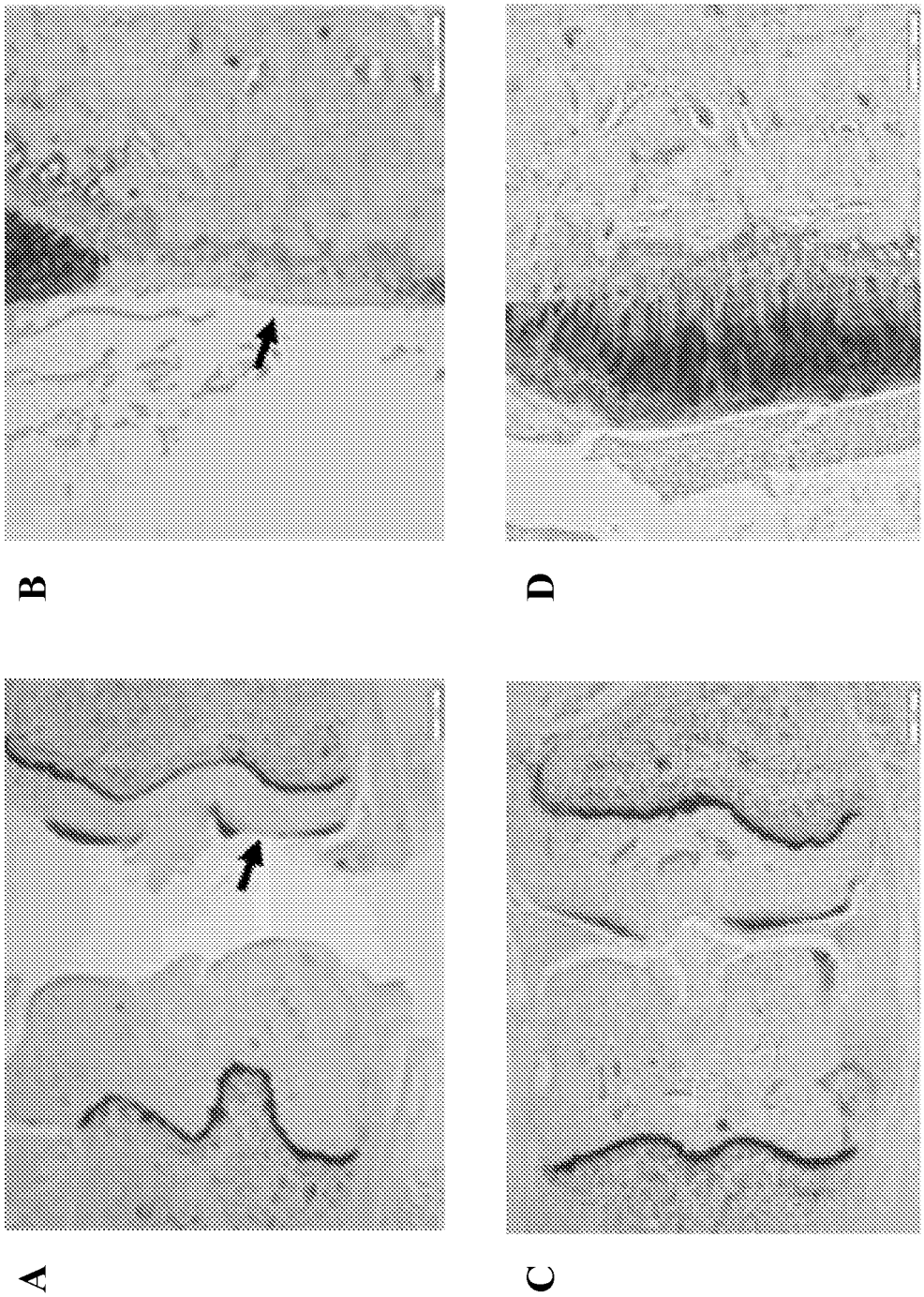


FIG. 9