

TABLE E-1 Duke Classification System

Stage/Size	No. of Hips in Study
0 (no osteonecrosis)	
I (lesion seen on magnetic resonance image only)	0
II (sclerosis and necrosis on plain radiograph)	
A (<25%)*	8
B (25%-50%)*	10
C (>50%)*	3
III (crescent sign)	
A (<25%)	6
B (25%-50%)	9
C (>50%)	7
IV (partial collapse)	
A (flattening or ≤ 1 mm collapse)	17
B (2-3 mm collapse)	83
C (>3 mm collapse)	57
V (joint space narrowing, acetabular involvement)	0
VI (end-stage degenerative joint disease)	0

*As measured on orthogonal radiographs and magnetic resonance imaging.