

Fig. E-1A

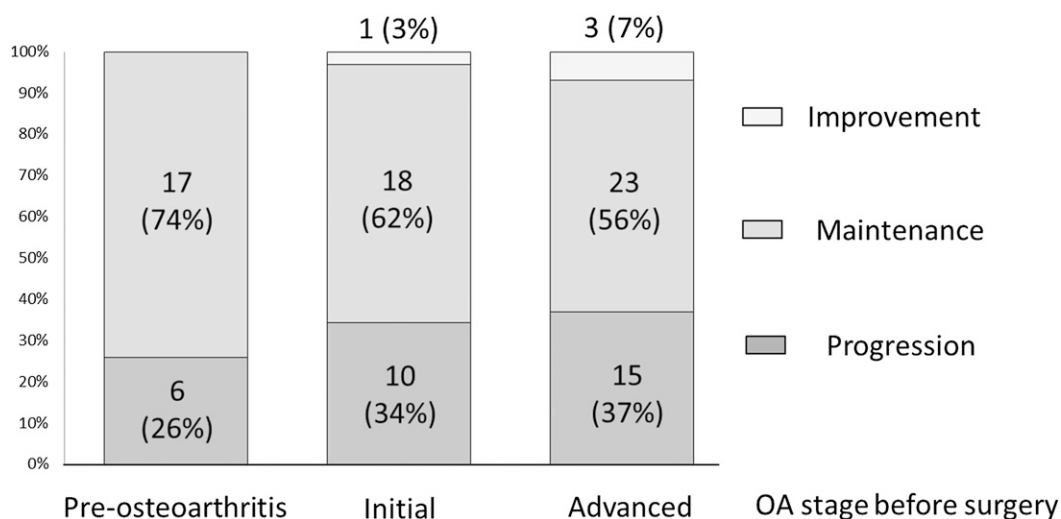


Fig. E-1B

Figs. E-1A and E-1B Data on the radiographic findings at the latest follow-up evaluation. The values are given as the number of hips, including those that were converted to total hip arthroplasty, with the percentage in parentheses. The percentage represents the number of hips in each stage divided by the preoperative number of hips in each stage. OA = osteoarthritis. **Fig. E-1A** The progression of joint-space narrowing. The differences between stages were significant (* $p < 0.05$ and ** $p < 0.01$). **Fig. E-1B** Changes in the stage of osteoarthritis. One hip with initial osteoarthritis and three hips with advanced osteoarthritis had a widened joint space and an improved osteoarthritis stage. The differences between stages were not significant.



Fig. E-2A

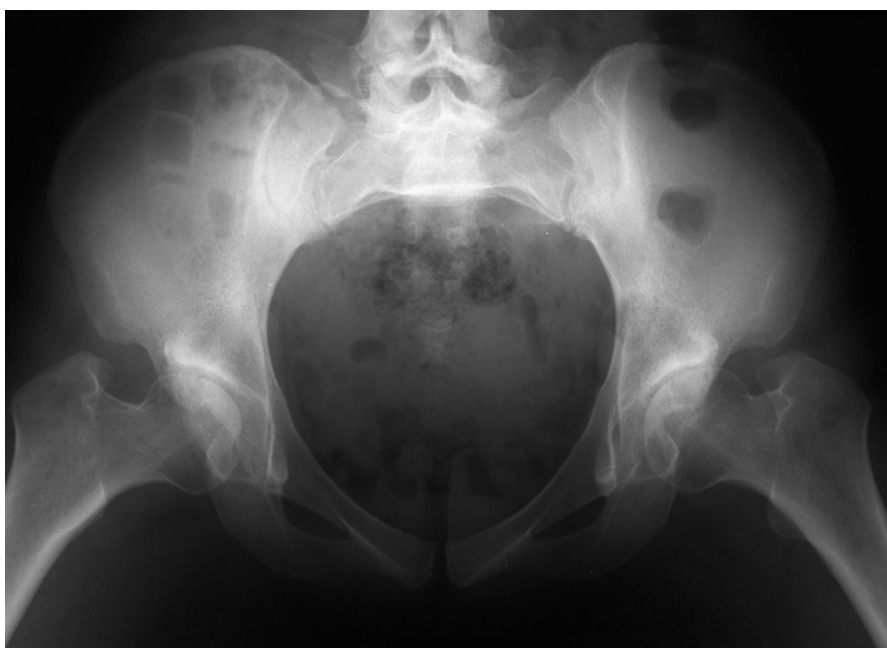


Fig. E-2B

Figs. E-2A through E-2E A thirty-seven-year-old patient who had advanced osteoarthritis in the left hip and initial osteoarthritis in the right hip. **Figs. E-2A and E-2B** Preoperative anteroposterior radiographs of both hips. **Fig. E-2A** Advanced osteoarthritis was evident in the left hip. The joint space in the right hip joint was 2 mm when the image was made, so the right hip joint was assessed as having initial osteoarthritis. **Fig. E-2B** A functional view radiograph of the left hip in abduction with an anterior pelvic tilt. The joint space in both sides became wider in the functional view position.



Fig. E-2C

A radiograph made two years after rotational acetabular osteotomy of the left hip. The osteoarthritis in the right hip joint had developed to the advanced stage, and rotational acetabular osteotomy was also performed on the right hip when the patient was thirty-nine years old because the joint space widened with abduction and anterior pelvic tilt.



Fig. E-2D

Anteroposterior radiograph made seven years after rotational acetabular osteotomy in the right hip and nine years after rotational acetabular osteotomy in the left hip. The hip-joint spaces were maintained on both sides.



Fig. E-2E
Anteroposterior radiograph made twenty-one years after rotational acetabular osteotomy in the right hip and at twenty-three years after rotational acetabular osteotomy in the left hip. Osteoarthritis had progressed to the terminal stage with pain in the right hip, which was converted to total hip arthroplasty. Osteoarthritis in the left hip was in the initial stage without pain.



Fig. E-3A



Fig. E-3B



Fig. E-3C

Figs. E-3A, E-3B, and E-3C A fourteen-year-old girl who was treated with rotational acetabular osteotomy for pre-osteoarthritis of the right hip. **Fig. E-3A** A preoperative radiograph of the hip showed that the center-edge angle²², acetabular roof angle²³, and acetabular head index²⁴ were -18° , 38° , and 40.7%, respectively. **Fig. E-3B** A radiograph made immediately after surgery showing two pieces of iliac bone grafted between the rotated bone fragment and host bone. The center-edge angle, acetabular roof angle, and acetabular head index had improved to 37° , 5° , and 92.1%, respectively. **Fig. E-3C** Anteroposterior radiograph made twenty-three years after surgery. The joint space in the right hip had not narrowed, and evaluation showed that the hip continued to be in the pre-osteoarthritis stage. The patient reported no pain in the hip.