

# Anterior and Posterior Allografts in Symptomatic Thoracolumbar Deformity

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## Abstract

The radiographic and clinical results of 105 patients with symptomatic spinal deformities were categorized retrospectively based on surgical approach and type of bone autograft or allograft used for each patient's fusion surgery into seven different groups and compared with one another. The three bone autograft control groups were posterior autograft only (n = 20), anterior autograft only (n = 6), and combined anterior and posterior autograft (n = 12). The allograft groups were posterior morcellized allograft (n = 7), posterior morcellized allograft and anterior autograft (n = 11), anterior structural interbody allografts and posterior mixture of allograft and autograft (n = 37), and anterior strut allograft with posterior mixture of allograft and autograft (n = 12). Radiographs revealed high pseudoarthrosis rates for adults with a posterior-only allograft and with anterior strut allografts spanning four or more levels. Results of the self-assessment outcomes questionnaire, at a mean follow-up period of 52 months, revealed less pain and improved cosmesis for all groups, and improved function in patients who had undergone combined anteroposterior fusion. The authors conclude that posterior cancellous allograft is a poor substitute for autograft bone and that strut allografts spanning more than four levels require technique modifications to enhance their effectiveness. In general, anterior structural allografts are effective in maintaining correction, result in fusion rates comparable to those of autografts, and correlate to improved outcomes.