INTRODUCTION: Ear malformations are mainly isolated deformations but exist also in combination with various syndromes. A visible malformation in cases of microtia is a problem for the entire family. Auricular reconstruction with autologous cartilage has been well established in the last decade. Optimization of the technique has led to improved and reliable results.

OPERATION AND RESULTS: Based on the experience of 120 cases we developed a concept that allows total ear reconstruction in two operative steps. In the first operation autologous rib cartilage is harvested and a natural framework is created following the template from the opposite ear. The ear remnant is transposed and the framework placed in a subcutaneous pocket on the mastoid plane. After a healing period of around 6 weeks the second operation reconstructs the auricular projection and the retroauricular fold. CONCLUSION: Based on an individualized surgical treatment, auricular reconstruction with autologous rib cartilage are possible from the age of around 8 to the advanced period of life with reproducibly good results.