Resection of a bone invading meningioma and reconstruction of the skull in a single surgery using a custom made bone implant (Xilloc®): a case report

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Introduction:
We present a case of a 76-year old woman with a history of resection of an extradural, bone invading meningioma in 2008. During follow up recurrence of the tumor was noticed.

Materials and methods:
Preoperatively the margins of resection were defined. Based on the information a patient specific implant and a cutting mold were produced. We performed a craniectomy with a total resection of the invaded bone. First we used a preoperative fabricated surgical cutting guide to remove the invaded bone. Then we inserted the implant, which fitted perfectly. For reconstruction of the skull we used a custom made PEEK-bone implant (Xilloc®).

Results:
With this custom made implant we were able to resect a large piece of invaded bone and do a reconstruction in a single surgery. Postoperative imaging showed a good reconstruction of the skull.

Conclusion:
Using a custom made cutting guide and implant allows us to resect a large piece of invaded skull and do a reconstruction with good esthetic result in a single surgery.