Hemipelvectomy for Chondrosarcoma With Custom Pelvic Reconstruction

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This video demonstrates the surgical technique for reconstruction after combined type II/III pelvic resection of a periacetabular grade II chondrosarcoma. The case presentation of a 30-year-old woman with no medical history is reviewed. The patient presented for oncological workup because of an anterior pelvic mass found on investigation for groin pain and swelling, which had persisted for several months. Biopsy revealed a grade II chondrosarcoma involving the right acetabulum, bilateral inferior and superior pubic rami, pubic symphysis, ipsilateral abductor thigh musculature, pelvic floor musculature, and rectus abdominis muscle. The patient underwent negative margin resection of the pelvic chondrosarcoma and reconstruction with the use of a three-dimensionally printed custom pelvic implant. A patient-specific cutting guide was used to create the periacetabular cut; the geometry of the cutting guide matched the implant accurately and precisely. This allowed for easier and more accurate implantation of the component during reconstruction and allowed for early weight bearing at 6 weeks postoperatively with the use of an assistive device.