

## **3D printing from diagnostic images: a radiologist's primer with an emphasis on musculoskeletal imaging—putting the 3D printing of pathology into the hands of every physician**

### **Datenbank**

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### **Deskriptoren**

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### **Freie Begriffe**

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### **Abstract**

Three-dimensional (3D) printing has recently erupted into the medical arena due to decreased costs and increased availability of printers and software tools. Due to lack of detailed information in the medical literature on the methods for 3D printing, we have reviewed the medical and engineering literature on the various methods for 3D printing and compiled them into a practical “how to” format, thereby enabling the novice to start 3D printing with very limited funds. We describe (1) background knowledge, (2) imaging parameters, (3) software, (4) hardware, (5) post-processing, and (6) financial aspects required to cost-effectively reproduce a patient's disease ex vivo so that the patient, engineer and surgeon may hold the anatomy and associated pathology in their hands.

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