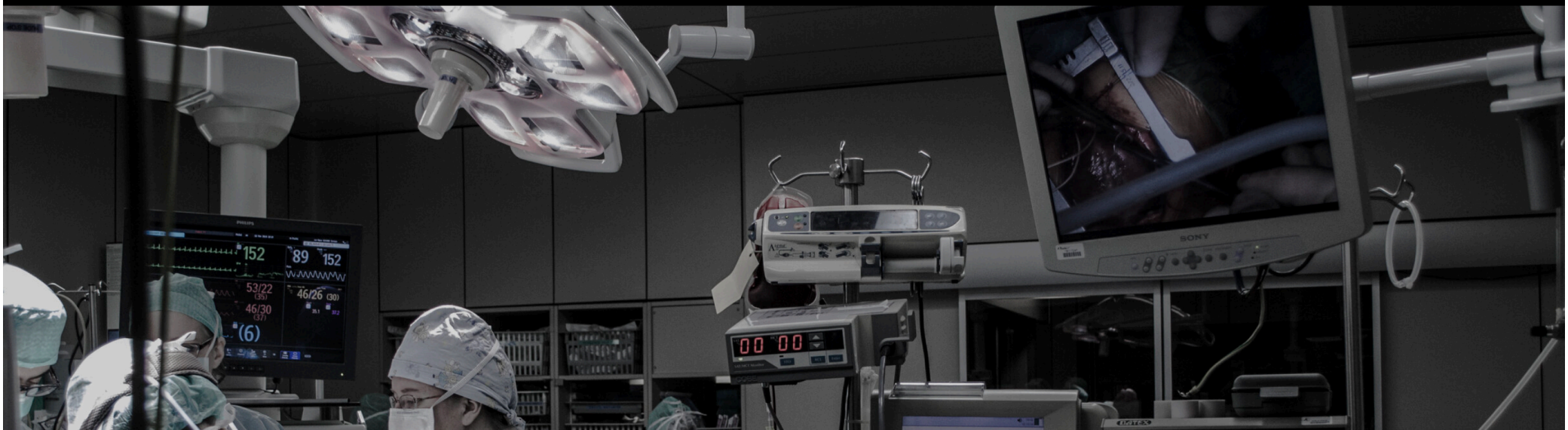
Applied Orthopedic Design, Inc. is an innovative medical device development company creating surgeon and practitioner driven orthopedic implants and instruments in the continental US and abroad.

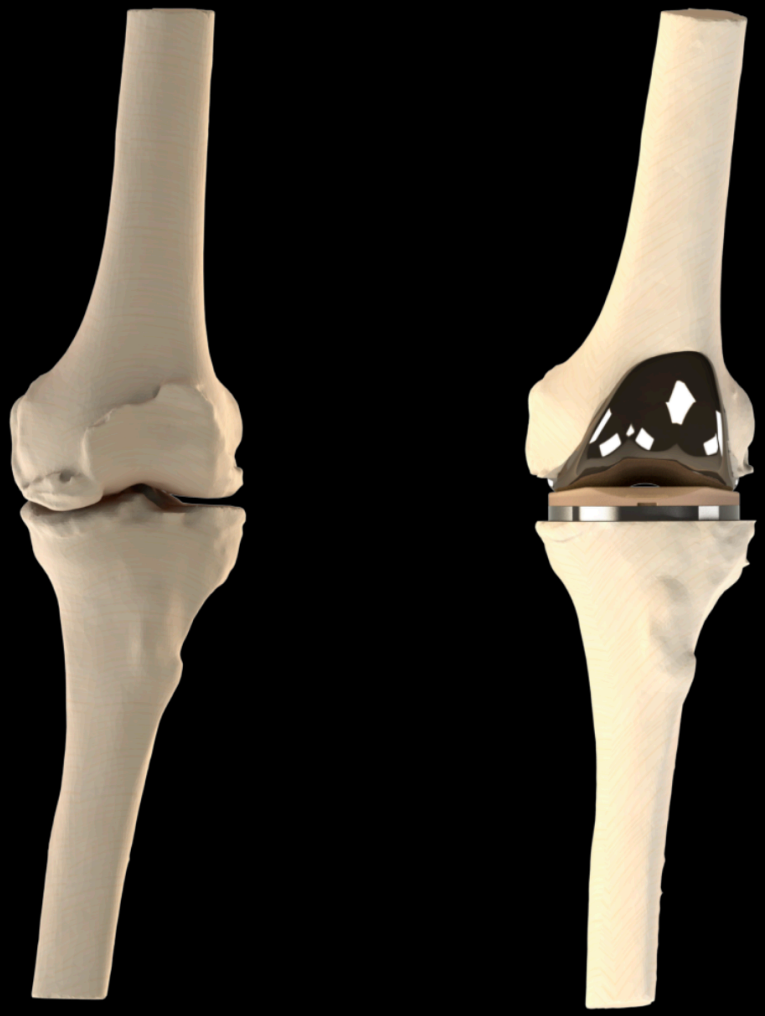
Our Services



Featured Work

nano™ and BluePrinting™ 3D Pre-Operative Modeling Services

Learn more



nano™ and BluePrinting™

AOD, Inc. offers and provides NANO pre-operative analysis and modeling services to assist the surgeon through kinematic restoration of the articular surfaces of each patient back to their pre-diseased state. The NANO service begins with the pre-operative acquisition of high-resolution images (either CT or MRI) of each patient's anatomy following our mandated imaging protocols. As part of the NANO modeling services, we also offer BLUEPRINTING which includes detailed 3D modeling prepared using the acquired pre-operative images. From these high-resolution images, we work with our team of biomedical engineers to create a detailed 3D CAD (Computer Aided Design) model of the patient's anatomy.

Using proprietary techniques, we calculate the wear that is present on each patient's diseased or worn anatomy, which allows us to virtually restore and correct the anatomy of each patient to their ideal pre-diseased state. With this information, we precisely match the virtually restored surface of each patient's bone and cartilage to the articulating surfaces of our selected implants. This allows for accurate restoration of natural kinematics unique to each patient. Our NANO and BLUEPRINTING pre-operative modeling services allow us to calculate the various bone resection depths and reference angle measurements before the surgeon enters the operating room. The result of these modeling processes is a surgical modeling guide given to the surgeon for each patient, outlining a step by step procedure for the upcoming surgery. These surgical modeling guides are then reviewed and validated by the surgeon prior to surgery. We are currently performing NANO and BLUEPRINTING 3D modeling services for both hip and knee (total and partial) patients.

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