CLAIMS

1. A method for designing a surgical plan and orthopedic device to alter the joint anatomy of a patient, comprising

receiving image data associated with the joint;

creating a first electronic model of the anatomy of the joint utilizing at least a portion of the image data and altering the first electronic model of the joint anatomy to create a desired anatomical model of a desired anatomy of the joint;

utilizing the first electronic model and the desired anatomical model to design the orthopedic device; and

utilizing the first electronic model, the desired anatomical model and the orthopedic device design to design the surgical plan.

2. The method of claim 1, further comprising modifying the orthopedic device design using the first electronic model, the desired anatomical model and the designed surgical plan.

3. A method for designing a surgical plan and orthopedic device to alter the joint anatomy of a patient, comprising

receiving image data associated with the joint;

creating a first electronic model of the anatomy of the joint utilizing at least a portion of the image data and altering the first electronic model of the joint anatomy to create a desired anatomical model of a desired anatomy of the joint;

utilizing the first electronic model and the desired anatomical model to design the surgical plan; and

utilizing the first electronic model, the desired anatomical model and the designed surgical plan to design the orthopedic device.

CLAIMS

1. A method for designing a surgical guide for repairing a joint of a patient, comprising:

creating an electronic model of an anatomy of the joint of the patient from electronic image data of the joint of the patient;

creating an interactive computer display for a surgeon to select a desired position or orientation of an implant for replacing at least a portion of the joint of the patient;

creating a surgical guide configured to accommodate a surgical instrument to achieve the desired position or orientation of the implant, wherein the surgical guide is attached or linked to a mold having a patient-specific contact surface derived from the electronic image data for engaging at least a portion of the joint of the patient.

2. The method of claim 1, wherein the joint of the patient is a hip joint, wherein the desired position or orientation of the implant is a desried acetabular cup abduction, adduction, anteversion, retroversion or rotation.

3. The method of claim 2, wherein the patient-specific contact surface is configured to engage at least a portion of an acetabulum of the hip joint.

4. The method of claim 2, wherein the patient-specific contact surface is configured to engage at least a portion of an acetabular rim of the hip joint.

5. The method of claim 2, wherein the patient-specific contact surface is configured to engage at least a portion of an acetabulum fossa of the hip joint.

6. The method of claim 1, wherein the joint of the patient is a shoulder joint, wherein the desired position or orientation of the implant is a desried glenoid component abduction, adduction, anteversion , retroversion or rotation.

7. The method of claim 6, wherein the patient-specific contact surface is configured to engage at least a portion of a glenoid of the shoulder joint.

8. The method of claim 6, wherein the patient-specific contact surface is configured to engage at least a portion of a glenoid rim of the shoulder joint.

9. The method of claim 1, wherein the surgical instrument is a reamer.

10. The method of claim 1, wherein the patient-specific contact surface is configured to engage at least a portion of an articular surface of the joint of the patient.

11. The method of claim 10, wherein the at least a portion of the articular surface of the joint of the patient includes normal and/or diseased or damaged cartilage.

12. The method of claim 1, wherein the patient-specific contact surface is configured to engage at least a portion of a non-articular surface of the joint of the patient.

13. The method of claim 1, wherein the patient-specific contact surface is configured to engage at least a portion of an osteophyte of the joint of the patient.

14. A patient-specific reaming guide tool for use in joint arthroplasty for repairing a joint of a patient, comprising:

a mold having a patient-specific contact surface for engaging at least a portion of the joint of the patient and

an alignment hole configured to provide a desired pathway for orienting and inserting an alignment mechanism configured to guide a reaming device, wherein the the alignment mechanism includes a pin, a metal bushing, or an opening to accommodate and direct the movement of the reaming device, wherein the desired

pathway includes a desired position and/or orientation of an implant created for replacing at least a portion of the joint of the patient.