What is claimed is:

1. A non-transitory computer readable medium having stored thereon instructions for facilitating individualized kinematically aligned total knee replacements comprising executable code which when executed by a hardware processor, causes the processor to perform steps comprising:

obtaining prosthesis data for a selected prosthesis;

generating anatomical and pathoanatomical data for a specific patient, wherein the anatomical data comprises at least a coronal mechanical lateral distal femoral angle and a posterior condylar axis that is specific to the patient;

determining an alignment of one or more guides that facilitate a plurality of cuts to be made to a tibia and a femur of the patient comprising generating bone and cartilage resection data based at least in part on the prosthesis data, the anatomical data, and the pathoanatomical data, wherein the bone and cartilage resection data comprises one or more femoral component coronal alignment angles, one or more femoral distal thicknesses, a femoral component axial external rotation angle, one or more femoral posterior resection thicknesses, a tibial component coronal alignment angle relative to the coronal mechanical axis of a tibia of the patient, one or more tibia resection thicknesses, and a tibia sagittal slope; and

outputting a recommended three-dimensional total knee replacement surgeon plan for the patient via a graphical interface, the recommended three-dimensional total knee replacement surgeon plan comprising the bone and cartilage resection data for facilitating implantation of the prosthesis in the patient.

2. The non-transitory computer readable medium as set forth in claim 1, wherein:

the anatomical data comprises one or more of a coronal femoral mechanical axis of the femur, coronal anatomic axis of the femur, coronal tibial mechanical axis, coronal femoral mechanical axis-anatomic axis angle, sagittal proximal tibial slope, patella thickness, or position of a tibial tubercle of the patient; and

the pathoanatomical data comprises one or more of a hip-knee-ankle angle, estimated coronal medial joint line percentage wear, estimated coronal lateral joint line percentage wear, estimated coronal medial femoral condyle wear, estimated coronal lateral femoral condyle wear, estimated patellofemoral subluxation, or sagittal patellar thickness adjusted from a sagittal magnification adjusted radiograph.

3. The non-transitory computer readable medium as set forth in claim 1, wherein the prosthesis data comprises a femoral distal medial, distal lateral, posterior medial thickness, posterior lateral prosthesis thickness, tibial prosthesis thickness, or a recommended slope.

4. The non-transitory computer readable medium as set forth in claim 1, wherein the executable code when executed by the processor further causes the processor to perform at least one additional step comprising:

obtaining outcome data for the patient comprising demographic information for the patient and one or more of range of motion data, one or more outcome scores, patient satisfaction data, a prosthesis size, or reoperation data; and

storing the outcome data in a database correlated with at least the bone and cartilage resection data and actual bone and cartilage resection data.

5. The non-transitory computer readable medium as set forth in claim 1, wherein the obtaining further comprises obtaining preference data and observed data for a patient and the bone and cartilage resection data is further generated based on the preference data and observed data.

6. The non-transitory computer readable medium as set forth in claim 5, wherein the preference data limits an alignment of the prosthesis and a limb of the patient to within a predetermined number of degrees of a mechanical axis of the femur, tibia, and limb of the patient.

7. The non-transitory computer readable medium as set forth in claim 5, wherein the executable code when executed by the processor further causes the processor to perform at least one additional step comprising determining when one or more special considerations are applicable based on one or more of the preference data, the observed data, the prosthesis data, or the anatomical data, or the pathoanatomical data, wherein the special considerations comprise at least whether there is a need for one or more releases, an additional external rotation of a femoral component, or a relatively narrow component in a same family as the prosthesis and the three-dimensional total knee replacement surgeon plan comprises an indication of the special considerations, when the determining indicates the special considerations are applicable.

8. The non-transitory computer readable medium as set forth in claim 5, wherein the obtaining the preference data further comprises receiving the preference data via a

questionnaire graphical interface provided to a client device associated with the surgeon over a communications network.

9. The non-transitory computer readable medium as set forth in claim 5, wherein the preference data comprises a maximum distal femoral valgus angle and the executable code when executed by the processor further causes the processor to perform at least one additional step comprising:

determining when the mechanical lateral distal femoral angle subtracted from 90 degrees is greater than the maximum distal femoral valgus angle;

modifying one or more portions of the bone and cartilage resection data based on a difference between the mechanical lateral distal femoral angle subtracted from 90 degrees and the maximum distal femoral valgus angle so that the femoral component axial external rotation angle matches the difference, when the determining indicates that the mechanical lateral distal femoral angle subtracted from 90 degrees is greater than the maximum distal femoral valgus angle.

10. An individualized kinematic total knee replacement (TKR) analysis computing device, comprising a processor and a memory coupled to the processor, wherein the processor is configured to be capable of executing programmed instructions comprising:

obtaining prosthesis data for a selected prosthesis;

generating anatomical and pathoanatomical data for a specific patient, wherein the anatomical data comprises at least a coronal mechanical lateral distal femoral angle and a posterior condylar axis that is specific to the patient;

determining an alignment of one or more guides that facilitate a plurality of cuts to be made to a tibia and a femur of the patient comprising generating bone and cartilage resection data based at least in part on the prosthesis data, the anatomical data, and the pathoanatomical data, wherein the bone and cartilage resection data comprises one or more femoral component coronal alignment angles, one or more femoral distal thicknesses, a femoral component axial external rotation angle, one or more femoral posterior resection thicknesses, a tibial component coronal alignment angle relative to the coronal mechanical axis of a tibia of the patient, one or more tibia resection thicknesses, and a tibia sagittal slope; and

outputting a recommended three-dimensional total knee replacement surgeon plan for the patient via a graphical interface, the recommended three-dimensional total knee

replacement surgeon plan comprising the bone and cartilage resection data for facilitating implantation of the prosthesis in the patient.

11. The individualized kinematic TKR analysis computing device as set forth in claim 10, wherein:

the anatomical data comprises one or more of a coronal femoral mechanical axis of the femur, coronal anatomic axis of the femur, coronal tibial mechanical axis, coronal femoral mechanical axis-anatomic axis angle, sagittal proximal tibial slope, patella thickness, or position of a tibial tubercle of the patient; and

the pathoanatomical data comprises one or more of a hip-knee-ankle angle, estimated coronal medial joint line percentage wear, estimated coronal lateral joint line percentage wear, estimated coronal medial femoral condyle wear, estimated coronal lateral femoral condyle wear, estimated patellofemoral subluxation, or sagittal patellar thickness adjusted from a sagittal magnification adjusted radiograph.

12. The individualized kinematic TKR analysis computing device as set forth in claim 10, wherein the prosthesis data comprises a femoral distal medial, distal lateral, posterior medial thickness, posterior lateral prosthesis thickness, tibial prosthesis thickness, a prosthesis size, or a recommended slope.

13. The individualized kinematic TKR analysis computing device as set forth in claim 10, wherein the processor is further configured to be capable of executing at least one additional programmed instruction comprising:

obtaining outcome data for the patient comprising demographic information for the patient and one or more of range of motion data, one or more outcome scores, patient satisfaction data, or reoperation data; and

storing the outcome data in a database correlated with at least the bone and cartilage resection data and actual bone and cartilage resection data.

14. The individualized kinematic TKR analysis computing device as set forth in claim 10, wherein the obtaining further comprises obtaining preference data and observed data for a patient and the bone and cartilage resection data is further generated based on the preference data and observed data.

15. The individualized kinematic TKR analysis computing device as set forth in claim 14, wherein the preference data limits an alignment of the prosthesis and a limb of the patient to within a predetermined number of degrees of a mechanical axis of the femur, tibia, and limb of the patient.

16. The individualized kinematic TKR analysis computing device as set forth in claim 14, wherein the processor is further configured to be capable of executing at least one additional programmed instruction comprising determining when one or more special considerations are applicable based on one or more of the preference data, the observed data, the prosthesis data, or the anatomical data, or the pathoanatomical data, wherein the special considerations comprise at least whether there is a need for one or more releases, an additional external rotation of a femoral component, or a relatively narrow component in a same family as the prosthesis and the three-dimensional total knee replacement surgeon plan comprises an indication of the special considerations, when the determining indicates the special considerations are applicable.

17. The individualized kinematic TKR analysis computing device as set forth in claim 14, wherein the obtaining the preference data further comprises receiving the preference data via a questionnaire graphical interface provided to a client device associated with the surgeon over a communications network.

18. The individualized kinematic TKR analysis computing device as set forth in claim 14, wherein the preference data comprises a maximum distal femoral valgus angle and the processor is further configured to be capable of executing at least one additional programmed instruction comprising:

determining when the mechanical lateral distal femoral angle subtracted from 90 degrees is greater than the maximum distal femoral valgus angle;

modifying one or more portions of the bone and cartilage resection data based on a difference between the mechanical lateral distal femoral angle subtracted from 90 degrees and the maximum distal femoral valgus angle so that the femoral component axial external rotation angle matches the difference, when the determining indicates that the mechanical lateral distal femoral angle subtracted from 90 degrees is greater than the maximum distal femoral valgus angle.