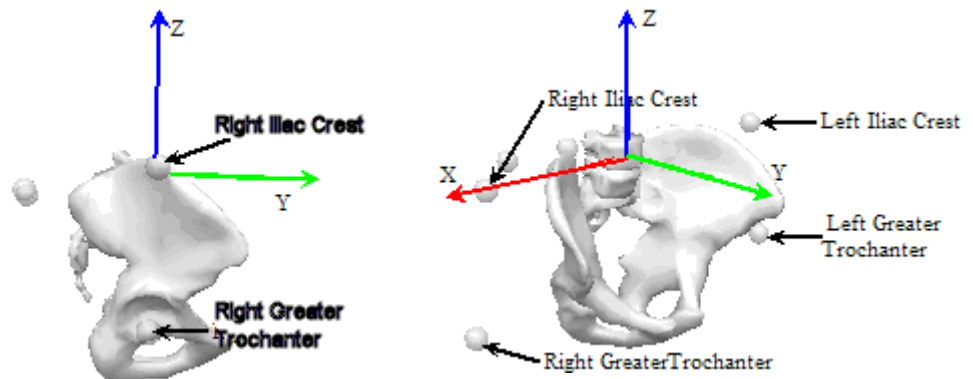


Visual3D Pelvis

The Visual3D pelvis refers to a pelvis segment defined as a default Visual3D segments. Markers on the Iliac Crest specify the proximal end of the segment. Markers on the Greater Trochanter specify the distal end of the segment. The length of the Pelvis segment is defined as the distance from the



proximal end to the distal end.

One of the advantages of this definition of the pelvis segment is repeatability. The greater trochanter landmarks can be identified reliably on most subjects (including patients). The Iliac Crest marker is placed pragmatically (i.e. such that it is placed to have anatomical meaning). For example, the Iliac Crest marker is placed to ensure that the angle of the pelvis relative to the laboratory computed in Visual3D is the same as the clinical measure of pelvis tilt. This can be accomplished by placing the Iliac Crest marker along the Iliac Crest such that the position of the marker relative to the Greater Trochanter marker yields pelvis tilt. In the figure to the left the Iliac Crest marker is placed slightly anterior to the greater trochanter marker to yield a slightly forward leaning pelvis tilt.

Note that the Visual3D pelvis does not generate landmarks at the Hip Joint Center automatically.

In the Visual 3D pelvis what part of the iliac crest is used as the landmark (i.e. do you just pick the point on the iliac crest that is at the midline -so inline with the greater trochanter, or is there something more particular that is palpated)? I am a little concerned about repeatability of marker placement on the crest since it is a larger bony protuberance and several spots could be selected?

The greater trochanter can be located quite reliably. As you point out, however, there isn't an identifiable landmark on the iliac crest. The Iliac Crest landmark should be placed consistently with a clinical measure of pelvic tilt. For example, if the pelvic tilt during the physical examination is considered to be zero degrees. The Iliac Crest marker is placed directly superior to the greater trochanter marker. This is a bit of a reliance on common sense, but it is always important that the results of your motion analysis are consistent with your clinical measures.

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