WEBVTT Kind: captions Language: en

00:00:08.890 --> 00:00:12.310 - Orthopaedic surgery is geared towards functionality

00:00:12.310 --> 00:00:15.253 and getting patients back to their normal life.

00:00:16.380 --> 00:00:17.560 Patients come to us,

00:00:17.560 --> 00:00:20.643 and they're debilitated because of pain and dysfunction.

00:00:21.610 --> 00:00:25.100 We can get them back to their functionality very quickly,

00:00:25.100 --> 00:00:27.270 and so it's great to be able to solve a problem

00:00:27.270 --> 00:00:30.143 with innovative technology for our patients.

00:00:33.920 --> 00:00:36.630 Really anything within orthopaedic surgery

00:00:36.630 --> 00:00:38.903 lends itself to virtual surgical planning.

00:00:40.060 --> 00:00:44.010 What we do is we capture images on the CT scan,

00:00:44.010 --> 00:00:47.600 and run that through a specialized type of software.

00:00:47.600 --> 00:00:50.000 By virtue of being able to manipulate those images,

00:00:50.000 --> 00:00:53.520 we can plan our surgery without ever making a cut.

00:00:53.520 --> 00:00:55.280 So once we go into the operation,

00:00:55.280 --> 00:00:58.280 we're simply executing the plan that we did on the computer.

00:01:00.970 --> 00:01:03.770 For certain diagnoses, it's definitely a game-changer,

00:01:03.770 --> 00:01:07.640 but you still have to understand the basics of the problem

00:01:07.640 --> 00:01:10.460 and how the problem used to be addressed.

00:01:10.460 --> 00:01:12.990 So you have to have your knowledge base

00:01:12.990 --> 00:01:14.460 and skills to fall back on.

00:01:14.460 --> 00:01:16.853 The surgery isn't planned for you.

00:01:21.330 --> 00:01:23.070 So one of the most common types of deformity

00:01:23.070 --> 00:01:25.260 that I use this technology for is something called

00:01:25.260 --> 00:01:29.130 a chronic missed Monteggia fracture dislocation.

00:01:29.130 --> 00:01:31.500 What that means is a lot of times in children,

00:01:31.500 --> 00:01:34.440 because their bones are relatively soft,

00:01:34.440 --> 00:01:36.620 they may bend without completely breaking,

00:01:36.620 --> 00:01:39.853 so you have a dislocation that is frequently missed.

00:01:44.350 --> 00:01:45.810 With this 3D technology,

00:01:45.810 --> 00:01:48.310 we're addressing for each individual patient,

00:01:48.310 --> 00:01:50.780 what their deformity is and not just making an assumption,

00:01:50.780 --> 00:01:52.500 well, it's always in this plane

00:01:52.500 --> 00:01:53.950 or it's always in that plane.

00:01:55.620 --> 00:01:57.130 So in this particular patient,

00:01:57.130 --> 00:02:00.500 what we could see was the patient had had previous surgery.

00:02:00.500 --> 00:02:03.550 So someone had already attempted to correct this,

00:02:03.550 --> 00:02:06.990 but they attempted to correct it based on the X-rays.

00:02:06.990 --> 00:02:09.680 We were able to specifically see that deformity,

00:02:09.680 --> 00:02:11.990 correct it virtually on the computer,

00:02:11.990 --> 00:02:13.543 and then execute that surgery.

00:02:23.510 --> 00:02:25.380 Surgery is stressful for families

00:02:25.380 --> 00:02:26.700 and stressful for patients,

00:02:26.700 --> 00:02:28.960 and it's extremely disappointing,

00:02:28.960 --> 00:02:31.430 especially when we're talking about a child.

00:02:31.430 --> 00:02:34.450 So to be able to offer parents hope for their child

00:02:34.450 --> 00:02:37.770 to get back to the way they were before the injury occurred

00:02:37.770 --> 00:02:39.284 is really rewarding.