The department of radiation oncology at Hotel-Dieu de France in Beirut Lebanon has recently acquired a 2nd TrueBeam system equipped with a 6 degree-of-freedom (6DoF) couch dedicated for radiosurgery. In addition to X, Y, Z translation and couch rotation, the 6DoF couch (Figure 1) also known as robotic couch, is capable of correcting pitch and roll patient positioning errors. Such corrections are important in radiosurgery where high degree of precision is required. The 6DoF couch is also valuable in fractionated radiation therapy for several anatomical sites primarily, brain, spine, lung, prostate, and abdomen.

The addition of the 6DoF couch is yet one more step fulfilling the mission of the radiotherapy department as a center of excellence in Lebanon and the Middle-East region recognized by our patients for exceptional clinical care.

Figure 1

Figure 2 shows a misaligned pitch positioning on a patient with respect to the planning CT (blue), detected with the on-line cone-beam CT (amber).

Figure 3 is an on-line repeat cone-beam CT showing perfect pitch alignment with respect to the planning CT; after automatic repositioning by the 6DoF couch.