Cardiovascular CT (CVCT) protocols are being developed at Duke University Medical Center; to our knowledge, no organ dose data is available. To obtain organ dose estimation from CVCT protocols, we used an anthropomorphic phantom (RANDO) containing thermo luminescent dosimeters (TLD-100). GE QX/i scanner with CINE capability was used with the following scan parameters: 140 kVp, 170mA, 2.5 mm slice thickness, 0.8 sec, pitch 4. The scan region included RANDO sections 13 through 21. Individual organ doses were as follows: thyroid 8.4 mGy, lungs 15.1 - 64.9 mGy (range apices - base), irradiated marrow 52.2 mGy and breasts 48.1 mGy (average right and left). The total lung dose (48.5 mGy) was estimated as the weighted average of the values for the apices, upper, lower, and middle lung fields (0.25 each). The dose for total marrow (20.4 mGy) was estimated based on the fraction of the total skeletal distribution of red marrow that was in the field (about 39%). Considering the above assumptions and using the ICRP 26 tissue weighting factors, the effective dose equivalent was calculated to be 23.4 mSv (2.34 rem).