

Radiation Dosing of mCTA and CTP

Table 1: Mean effective radiation dose with our protocol for multi-modal imaging including multi-phase CTA when compared to a conventional protocol for multi-modal imaging.

Type of Examination	Mean Estimated Effective Dose in an established center (mSv)	Mean Estimated Effective Dose at our center (mSv)
Unenhanced CT head	2.7 ± 0.3	2.0 ± 0.5
Routine CT angiogram Head and Neck	5.4 ± 2.2	5.0 ± 0.5
Two additional phases of multi-phase CTA	N/A	1 ± 0.5
CT perfusion	4.9 ± 0.0	3.5 ± 0.5
CT permeability	0.7 ± 0.0	N/A
Post-contrast CT head	2.6 ± 0.2	N/A
Smart prep	0.1 ± 0.1	0.1 ± 0.1
Total Dose	16.4	12

Table 2: A randomly selected recent patient from Calgary. Total radiation dose for 1) CTA head and neck and mCTA and 2) Perfusion CT

Patient	Dose-length product	mSv*
CTA Head and Neck with mCTA	2005.63	4.211
CT perfusion	2052.92	4.311
TOTAL	4058.55	8.522

*mSv = 0.0021 * DLP

For comparison, a CT scan chest > 10 mSv.