

Table S1: Excluded studies with reasons following full-text review.

Author (year)	Summary comment for exclusion
El Sayed (2012) [39]	No time scale for collected data
Glatz (2014) [40]	Includes patients >18 years old
Kawasaki (2015) [41]	Phantoms utilized
Keiller (2015) [42]	No cumulative data
Manica (2020) [43]	No cumulative data
Kottou (2018) [44]	No cumulative data
Harbron (2015) [45]	Includes patients >18 years old
Martinez (2007) [46]	Outside search limit timeline
Paul (2011) [47]	<1 year data
Walsh (2015) [48]	No cumulative data
Watson (2013) [49]	<1 year data
Yakoumakis (2013) [50]	No cumulative data
Kobayashi (2014) [51]	No cumulative data

Table S2. Contribution of total radiation exposure from various imaging modalities.

Author (year)	Contributions of various procedures
Ait-Ali (2010) [22]	<p>X-rays represented >95% of examination and contributed 5% of cumulative dose</p> <p>CT represented 1% of examination and contributed 11% of cumulative dose</p> <p>Diagnostic catheterisations represented 3.5% of examinations and contributed 41% of cumulative dose</p> <p>Interventional catheterisations represented 2.5% of examination and contributed 43% of cumulative dose</p>
Jones (2017) [23]	Interventional cardiac procedures only
Ubeda (2019) [24]	Cardiac procedures only
McDonnell (2014) [25]	<p>28 X-ray examinations on average per patient contributed 3% of cumulative effective dose (1.9 mSv)</p> <p>Eight catheterisations on average per patient contributed 91% of cumulative effective dose (47.5 mSv)</p>
Glatz (2014) [26]	<p>Cardiac catheterizations represented a small fraction of overall examination count, but a large share of the cumulative radiation exposure came from these procedures</p>
Downing (2015) [27]	<p>Two catheterizations on average per patient contributed 78% of annual effective dose (6.3 mSv/yr)</p> <p>Two IR and fluoroscopy examinations on average per patient contributed 1% of annual effective dose</p> <p>53 X-ray examinations on average per patient contributed 8% of annual effective dose (0.6 mSv/yr)</p>
Johnson (2014) [28]	<p>Catheterizations represented <5% of examinations and contributed 60% of cumulative dose</p> <p>CT represented <5% of examinations and contributed 20% of cumulative dose</p> <p>Fluoroscopy represented <5% of examinations and contributed <10% of cumulative dose</p> <p>Nuclear Med represented 1% of examinations and contributed <5% of cumulative dose</p>

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