**Adult Computed Tomography (CT) RISK for Consent**

**Risk of allergic reaction with nonionic contrast dye:**
1 in 150 (100-200)
- naus/vom, hives, flushing, pain, urticaria, vasovagal, bronchospasm, tachycardia

1 in 2500 (2500-7000)
- anaphylaxis, sev bronchospasm, laryngeal edema, seizure, hypotension, pulm edema

1 in 100,000 death
(best estimate based on multiple references – see ref sheet)

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**Kidney damage:**
1 in 100 (0-2)
kidney failure (dialysis) or creatinine elevation > 3mg/dL; (2/3 fatal)
Caveat: This risk is likely much lower for young, healthy people; possibly higher for others

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**Radiation** - (Estimated number of patients exposed to a CT that would result in 1 Radiation-Induced Cancer, based on CT type and age at exposure)

<table>
<thead>
<tr>
<th>Anatomic Area/CT Type</th>
<th>Age, 20 y/o</th>
<th>Age, 40 y/o</th>
<th>Age, 60 y/o</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Head</td>
<td>4360</td>
<td>7350</td>
<td>8100</td>
</tr>
<tr>
<td>Neck</td>
<td>2390</td>
<td>4020</td>
<td>4430</td>
</tr>
<tr>
<td>Chest</td>
<td>390</td>
<td>1040</td>
<td>720</td>
</tr>
<tr>
<td>Chest, with contrast</td>
<td>380</td>
<td>1020</td>
<td>720</td>
</tr>
<tr>
<td>Chest, suspected PE</td>
<td>330</td>
<td>880</td>
<td>620</td>
</tr>
<tr>
<td>Coronary CT angiogram</td>
<td>150</td>
<td>390</td>
<td>270</td>
</tr>
<tr>
<td>Abd/pelvis</td>
<td>500</td>
<td>660</td>
<td>930</td>
</tr>
<tr>
<td>Abd/pelvis with contrast</td>
<td>470</td>
<td>620</td>
<td>870</td>
</tr>
<tr>
<td>Suspected aneurysm/dissection</td>
<td>320</td>
<td>420</td>
<td>590</td>
</tr>
</tbody>
</table>

*Circle the number most relevant (Smith-Bindman, *Arch Intern Med* 2009;169:2078)

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**False Positives** (a finding that could lead to unnecessary further care):

1 in 4
(best estimate based on multiple references – see ref sheet)
Computed Tomography (CT) RISK for Consent

Pediatrics

Risk of allergic reaction with nonionic contrast dye

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naus/vom, hives, flushing, pain, urticaria, vasovagal, bronchospasm, tachycardia

1 in 2500 (2500-7000)
anaphylaxis, sev bronchospasm, laryngeal edema, seizure, hypotension, pulm edema

(best estimate based on multiple references – see ref sheet)

Lifetime risk, death from cancer, secondary to CT exposure
(estimates based on ideal, not observed, radiation exposure during CT)

-Head CT
Age 0: 1 in 1400
Age 5: 1 in 2500
Age 15: 1 in 7000

-Abdomen/pelvis CT
Age 0: 1 in 700
Age 5: 1 in 1100
Age 15: 1 in 1400