Dose assessment for interventional radiologists
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Background

- Some interventional radiology procedures require a large number of images and extended fluoroscopy times
- Several important influencing factors on dose to the radiologist
- Large variation between individual procedures and between different hospitals

Dose measurements for individual procedures

<table>
<thead>
<tr>
<th>Fluoroscopy time (min)</th>
<th>Dose (µGy)</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>15</td>
<td>150</td>
</tr>
</tbody>
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Doses for individual procedures vs fluoroscopy time
Doses for individual procedures vs DAP

Aggregated doses vs DAP

Effective dose

Phantom measurements

The procedure can begin
Finger doses

Measurement of finger doses to radiologist

Aggregated finger doses vs DAP
Summary of results and conclusions

- Very good correlation between DAP and aggregated badge doses, H(10) for dosimeter worn outside the apron
- About 0.7µSv per Gycm²
- Not very good correlations for individual procedures
- Effective dose about 2% of H(10) when protective apron and thyroid shield is used
- Finger dose correlates well with H(10) and DAP
- Dosimeter worn outside the apron is a good screening device for finger doses (and doses to the lens of the eye)
- Relatively high finger doses remain undetected when the badge is worn under the apron.

Thank you!