What do doctors say about Ionizing Radiation?

Dale Dewar, MD, FCRFP
CRPA-ACRP Conference June, 2017
Per capita thyroid doses

US Environmental Protection Agency, 1993
Dale Dewar
MD, FCFP

Declaration of Conflict of Interest:
Otherwise, no commercial interests.
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<table>
<thead>
<tr>
<th>Source of Radiation</th>
<th>Radiation dose in mSv</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport passenger scan</td>
<td>0.0001</td>
</tr>
<tr>
<td>Hand or foot x-ray (single view)</td>
<td>0.005</td>
</tr>
<tr>
<td>Watching TV (4 hrs/day)</td>
<td>0.01/yr</td>
</tr>
<tr>
<td>Bitewing dental x-ray</td>
<td>0.03</td>
</tr>
<tr>
<td>Air travel: Toronto to Vancouver return</td>
<td>0.05</td>
</tr>
<tr>
<td>Chest x-ray (one view)</td>
<td>0.1</td>
</tr>
<tr>
<td>Dental Panoramic</td>
<td>0.14</td>
</tr>
<tr>
<td>Nuclear medicine thyroid scan</td>
<td>0.15</td>
</tr>
<tr>
<td>Pelvic x-ray</td>
<td>0.7</td>
</tr>
<tr>
<td>Mammogram (four views)</td>
<td>0.7</td>
</tr>
<tr>
<td>Thoracic spine x-ray</td>
<td>1.0</td>
</tr>
<tr>
<td>Lumbar spine x-ray</td>
<td>1.5</td>
</tr>
<tr>
<td>Nuclear medicine lung scan</td>
<td>2.0</td>
</tr>
<tr>
<td>Background radiation: Av Canada</td>
<td>2.5</td>
</tr>
<tr>
<td>Nuclear medicine bone scan</td>
<td>4.2</td>
</tr>
<tr>
<td>Nuclear cardiac diagnostic test</td>
<td>10</td>
</tr>
<tr>
<td>Abdominal Ct scan</td>
<td>10</td>
</tr>
<tr>
<td>PET studies – average</td>
<td>14</td>
</tr>
<tr>
<td>Smoking</td>
<td>53/yr</td>
</tr>
</tbody>
</table>
What do physician members of IPPNW and their colleagues have to say about ionizing radiation?
Start from the Same Place:
1895: Wilhelm Roentgen
1896, Henri Becquerel
1898 – Marie Curie
Enter the Regulators:
Our Mission: We strive to ensure the safe use of radiation by providing scientific knowledge, education, expertise and policy guidance for radiation protection.

Our Vision: To be the expert voice of Canadian radiation safety professionals, both nationally and internationally.

We strive to ensure the safe use of radiation by providing scientific knowledge, education, expertise and policy guidance for radiation protection.
Problems with RERF:

1. Based on the fact that the death rate had returned to normal among survivors, the commission assumed a normal population.
Problems with RERF:

2.

The studies were initiated late, after deaths from infections, early leukemias.
Problems with RERF:

3. Children under ten and elderly are under-represented.
Problems with RERF:

4.

The commission represented the enemy. It was faced with enormous suspicion.
Problems with RERF:

5.

There was shame attached to being a victim.
Problems with RERF:

6. It was insensitive to the study population.
Problems with RERF:

7. Racism was evident in the way the staff were treated.
Problems with RERF:

8.

Data collected by Japanese physicians who had had first-hand experience was dismissed.
Problems with RERF:

9.

Doses were assigned based on memories of where the victims were at the time of the blast only.
Problems with RERF:

10. Amnesty had been granted to doctors who conducted human experimentation.
Problems with RERF:

11.

The Commission was composed of health physicists, nuclear physicists, radiobiologists and biostatisticians.
Problems with RERF:

12. The RERF did not and does not examine non-cancer deaths.
Problems with RERF:

13.

Health effects following the bombs are those of a single external high-energy blast of radiation.
Conclusion
QUESTION

AUTHORITY
Questions?

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