Update of Findings about Radiation-induced Chronic Lymphocytic Leukemia

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Table 1  Findings about radiation-induced CLL

<table>
<thead>
<tr>
<th>Exposed cohort and reference</th>
<th>Size of collective</th>
<th>Obs./Exp.</th>
<th>RR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiroshima/Nagasaki, NIC group Ichimaru et al. 1977</td>
<td>26,508</td>
<td>28/19</td>
<td>1.5</td>
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<tr>
<td>5 Nuclear Facilities USA Schubauer-Berigan et al. 2007</td>
<td>94,500 occupied persons</td>
<td>43 CLL deaths ERR=20 per Sv</td>
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<tr>
<td>Liquidators Chernobyl Gluzman 2006 Abramenko et al. 2007 Kesminiene et al. 2008 Romanenko et al. 2008 Gluzman this conference</td>
<td>„CLL most frequent form of leukemia in clean-up workers“ ERR=4.7 per Gy (Median dose 13 mGy)* ERR=4.1 per Gy (Mean dose 76 mGy)*</td>
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<tr>
<td>Uranium miners Czech Republic Rericha et al. 2006</td>
<td>Size of collective 23,043</td>
<td>42/21.2</td>
<td>2.0</td>
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<tr>
<td>Uranium miners Germany Möhner et al. 2010</td>
<td>Case-control study, cases 377</td>
<td>RR=2.0 per Gy*</td>
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</tbody>
</table>

*) Bone marrow dose

“Tracheobronchial lymph nodes tend to be the site of greatest concentration for inhaled uranium and thorium” (Archer et al. 1973)

Shown by autopsy in men:
Goldin et al.: Thorotrast patients. Health Physics 22 (1972)471

Several experimental studies e.g.
Experiments in rats, inhalation of natural uranium ore dust, after 400 days accumulation of uranium in bronchial lymph nodes was up to 100-fold higher than in the lung tissue.


