**AN EXPERIMENTAL STUDY IN NUDE MICE ON THE ELECTROMAGNETIC DIAGNOSIS OF TUMORS**

**Andrea Tubaro, Antonella Stoppacciaro**, Cosimo De Nunzio, Carlo Leonetti*, Gabriella Zupi* and Lucio Miano

Departments of Urology and Pathology°, Sant’Andrea Hospital, “La Sapienza” University, Rome, Italy

*Laboratory for Preclinical Experimental Chemotherapy, National Cancer Institute “Regina Elena”, Rome, Italy

**OBJECTIVES**

- Electromagnetic detection of prostate cancer with the TRIMprob method involves a new promising technology. Preliminary data on the diagnostic accuracy of the TRIMprob at 465 MHz intensity suggested a higher sensitivity and lower specificity compared to PSA, total/PSA ratio with better positive and negative predictive values (1-3).
- No experimental data are available.

**AIM of our study was to:**

- To measure signal intensity at 465, 930 and 1395 MHz in an experimental prostate and breast tumours
- To define the lowest tumour size identified by the TRIMprob
- To explore the possible correlation between tumour size and signal intensity
- To investigate the effect of the site of tumour implantation on signal intensity

**RESULTS I: Baseline scanning: male vs female**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Sex</th>
<th>N</th>
<th>Mean± Standard Deviation</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>465</td>
<td>Male</td>
<td>15</td>
<td>151.6 ± 12.8</td>
<td>3.31</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>15</td>
<td>157.0 ± 15.1</td>
<td>3.90</td>
</tr>
</tbody>
</table>

Independent-Sample T test, p ≤ n.s.

**RESULTS II: Intramuscular tumour implant signal intensity at 3 weeks**

**RESULTS III: Subcutaneous tumour implant: Signal intensity at 3 weeks**

**RESULTS IV: Tumor weight**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Sample 1</th>
<th>Sample 2</th>
<th>Sample 3</th>
<th>Sample 4</th>
<th>Sample 5</th>
<th>Sample 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>465 MHz</td>
<td>914</td>
<td>211</td>
<td>906</td>
<td>276</td>
<td></td>
<td></td>
</tr>
<tr>
<td>930 MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1395 MHz</td>
<td>320-3332</td>
<td>62-799</td>
<td>387-1568</td>
<td>67-784</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Independent-Sample T test, p ≤ n.s.

**RESULTS V: All mice, correlation of signal intensity at 465 MHz and tumour weight**

**REFERENCES**