**RECENT STUDIES OF INSULATION FAILURE IN LAPAROSCOPIC INSTRUMENTS**

<table>
<thead>
<tr>
<th>Study</th>
<th>Instruments Tested*</th>
<th>Insulation Failures</th>
<th>Incidence of Failures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study I</td>
<td>1,438</td>
<td>267</td>
<td>18.6%</td>
</tr>
<tr>
<td>Study II</td>
<td>98</td>
<td>28</td>
<td>28.6%</td>
</tr>
<tr>
<td>Study III</td>
<td>299</td>
<td>105</td>
<td>35.1%</td>
</tr>
<tr>
<td>Study IV</td>
<td>165</td>
<td>31</td>
<td>18.8%</td>
</tr>
<tr>
<td>Total/Avg.</td>
<td>2,000</td>
<td>431</td>
<td>21.6%</td>
</tr>
</tbody>
</table>

**Study I**

**Investigator/Author**
Dirk Meijer, MD, MSc, PhD
Rosemary Frei, MSc

**Title**
Safety Study of Laparoscopic Instruments Rings Alarm Bells

**Publication**
General Surgery News

**Publication Date**
August 2005

**Study II**

**Investigator/Author**
Anusch Yazdani, MD, et al.

**Title**
Laparoscopic instrument insulation failure: The hidden hazard

**Publication**

**Publication Date**
March/April 2007

**Study III**

**Investigator/Author**
M. Espada, MD, et al.

**Title**
Insulation Failures in Robotic and Laparoscopic Instrumentation: A Prospective Evaluation

**Publication**

**Publication Date**
November/December 2008

**Study IV**

**Investigator/Author**
Paul N. Montero, MD, et al.

**Title**
Insulation failure in laparoscopic instruments

**Publication**

**Publication Date**
Published online: 2 July 2009

*Data are for reusable laparoscopic instruments from hospitals including those who routinely use hospital-based detection programs and those who do not. Study IV authors concluded that “the incidence of insulation failures in laparoscopic instruments is not altered by the presence of current hospital-based detection programs.”

**OF THE 2000 TOTAL LAPAROSCOPIC INSTRUMENTS TESTED, 431 INSTRUMENTS OR 21.6% HAD INSULATION FAILURES.**

**THAT’S ROUGHLY 1 IN 5 INSTRUMENTS!**