Supplementary questionnaire section 1. Demographics

1. Sex: Male ___ Female ___


3. What is your highest academic achievement?
   Elementary school ___
   Middle school ___
   High school ___
   College ___
   Postgraduate school ___

4. What is your annual household income?
   Below 20,000 USD ___
   20,000–40,000 USD ___
   40,000–60,000 USD ___
   60,000–80,000 USD ___
   Over 80,000 USD ___

5. Are you a medical doctor or a nurse?
   Yes, I am a medical doctor ___ → Which department do you work in? _____________
   Yes, I am a nurse ___
   No, I am not a medical personnel ___
Supplementary questionnaire section 2. Information sheet

The pancreas is located behind the stomach, and is involved in secreting various hormones and digestive enzymes. Distal pancreatectomy is done when a tumor grows in the pancreas tail as illustrated.

There are three possible pancreatectomy methods: open, laparoscopic, and robot-assisted surgery.

<table>
<thead>
<tr>
<th></th>
<th>Open surgery</th>
<th>Laparoscopic surgery</th>
<th>Robot-assisted surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Brief outline</strong></td>
<td>This method has been carried out for several decades, and its safety and efficacy is well-established.</td>
<td>This method was introduced in the early 1990s. As its safety and efficacy is becoming acceptable, and its applications are gradually expanding. The cost rises due to equipment/instrument costs.</td>
<td>The method utilizes robotic technology. It is basically the same with laparoscopic surgery, but the surgeon manipulates instruments from remote control console and robots move the instruments which allow more delicate manipulations. However, the cost is very high owing to the high equipment cost.</td>
</tr>
<tr>
<td><strong>Scar</strong></td>
<td>The upper midline is incised in order to obtain adequate exposure of the pancreas tail.</td>
<td>Four 5–12 mm long incisions are made. A scope and instruments are introduced through them. One of these incisions is extended to the extract excised specimen.</td>
<td>It is basically the same with laparoscopic surgery.</td>
</tr>
<tr>
<td><strong>Complication</strong></td>
<td>About 15%</td>
<td>About 15%</td>
<td>Expected to be about 15%</td>
</tr>
<tr>
<td><strong>Establishment of safety and efficacy</strong></td>
<td>This method is a well-established method in both benign and malignant tumor cases. It is the standard method to date.</td>
<td>Its safety and efficacy are well established in benign tumors, but they are not yet established in the cases of malignant disease (cancer).</td>
<td>It is expected to be similar to laparoscopic surgery. However its safety and efficacy have not yet been established in neither of benign and malignant diseases.</td>
</tr>
<tr>
<td><strong>Radicality (wide excision)</strong></td>
<td>A wider excision that includes surrounding tissues is possible.</td>
<td>The range of excision is more limited than that in open surgery.</td>
<td>Several small scars provide better cosmesis</td>
</tr>
<tr>
<td><strong>Cosmesis</strong></td>
<td>Scar is the largest</td>
<td>Relatively more painful</td>
<td>Relatively less painful</td>
</tr>
<tr>
<td><strong>Pain</strong></td>
<td>Relatively more painful</td>
<td>Relatively less painful</td>
<td>Relatively faster</td>
</tr>
<tr>
<td><strong>Recovery</strong></td>
<td>Relatively slower</td>
<td>Relatively faster</td>
<td>Relatively faster</td>
</tr>
<tr>
<td><strong>Cost of surgery and admission</strong></td>
<td>About 2,300 USD (drugs and work up expenses not included)</td>
<td>About 4,200 USD (drugs and work up expenses not included)</td>
<td>About 11,300 USD (drugs and work up expenses not included)</td>
</tr>
</tbody>
</table>
Supplementary questionnaire section 3.

Part I. Benign disease

Benign tumors, unlike cancer, rarely show invasions and have a low risk of recurrence. Therefore, the importance of radicality for curative resection is relatively lower than in the case of malignant disease.

1. For benign tumor resection, assign numbers (1–3) indicating the preferred order of the following methods of operation.
   - Open surgery
   - Laparoscopic surgery
   - Robot-assisted surgery

1-1. What was the most important factor in considering your order of preference?
   ① Risk of recurrence (radicality)
   ② Complication (safety)
   ③ Scar (cosmesis)
   ④ Pain
   ⑤ Quick return to normal life
   ⑥ Cost
   ⑦ Miscellaneous

2. If you were to choose between only laparoscopic surgery and robot-assisted surgery, which method would you choose?
   ① Laparoscopic surgery
   ② Robot-assisted surgery

2-1. What was the most important factor in that choice?
   ① Establishment of safety and efficacy
   ② Cost (Laparoscopic surgery: 4,200 USD; Robot-assisted surgery: 11,300 USD)
   ③ Expectations about new technologies
   ④ Uncertainty about new technologies
   ⑤ Miscellaneous

3-1. Compared to open surgery, what do you think is the most reasonable cost of laparoscopic surgery? (Currently, the cost is 1.8 times of open surgery)
   ① Same as open surgery (2,300 USD)
   ② Current cost is reasonable (4,200 USD)
   ③ Twice that of open surgery (4,600 USD)
   ④ Over twice that of open surgery (over 4,600 USD)

3-2. Assuming that robot-assisted surgery becomes an established method, what is its most reasonable cost compared to that of open surgery?
   ① Same as open surgery (2,300 USD)
   ② Twice that of open surgery (4,600 USD)
   ③ Three times that of open surgery (6,900 USD)
   ④ Four times that of open surgery (9,200 USD)
   ⑤ Current cost is reasonable (11,300 USD)
   ⑥ Over 5 times that of open surgery (over 11,500 USD)
Part II. Malignant disease

Malignant tumors (cancer) tend to invade the surrounding tissue, and the risk of recurrence is higher than that associated with benign tumors. Therefore, radicality for curative resection is relatively important.

1. For resection of malignant tumor, assign numbers (1–3) indicating the preferred order of the following methods of operation.
   - Open surgery
   - Laparoscopic surgery
   - Robot-assisted surgery

   1-1. What was the most important factor in considering your order of preference?
   ① Risk of recurrence (radicality)
   ② Complication (safety)
   ③ Scar (cosmesis)
   ④ Pain
   ⑤ Quick return to normal life
   ⑥ Cost
   ⑦ Miscellaneous

2. If you were to choose between only laparoscopic surgery and robot-assisted surgery, which method would you choose?
   ① Laparoscopic surgery
   ② Robot-assisted surgery
   ③ Refuse surgery

   2-1. What was the most important factor in that choice?
   ① Establishment of safety and efficacy
   ② Cost (Laparoscopic surgery: 4,200 USD; Robot-assisted surgery: 11,300 USD)
   ③ Expectations about new technologies
   ④ Uncertainty about new technologies
   ⑤ Miscellaneous

3. Compared to laparoscopic surgery, what do you think is the most reasonable cost of robot-assisted surgery in malignant cases?
   (Currently, the cost is 3 times of open surgery)
   ① Should be cheaper (less than 4,200 USD)
   ② Should be the same (4,200 USD)
   ③ 1.5 times that of laparoscopic surgery (6,300 USD)
   ④ Twice that of laparoscopic surgery (8,400 USD)
   ⑤ Three times of laparoscopic surgery (12,600 USD)
   ⑥ Over 3 times that of open surgery (over 12,600 USD)