• Conventional Laparoscopic cholecystectomy (CLC) was first performed by Erich Mühe in 1985.

• Paradigm shift in the surgical arena (1).

• Become the standart surgical procedure for diseases of gallbladder.

• Generally four ports are needed

• A lot of data are available in the literature for CLC

• Seeking new techniques

• Less pain

• Less scaring

• Shorter operative time

• Shorter hospital length of stay

• High level of satisfaction
• The Conventional Laparoscopic Technique enjoy all these advantages

• Single- Access Surgery was described in 1992 (2)

• Single Incision Laparoscopic Cholecystectomy (SILC) in 1997 (3)

• Reduced postoperative pain (3,4)

• Reduced trauma to the abdominal wall (3,4)

• Reduced scar (3,4)
• **Technical problems of SILC**

  - Collision of instruments (5)
  - Time to learn
  - Patience for surgeon
  - Patience for the surgical team

SILC (6 minutes video sample)

- 33 age male
- BMI: 21.9
- USG: Cholelithiasis
• Relatively less data in the literature

• **Aim**: Comparing outcomes of the SILC with LC in the terms of quality-of-life measures and cosmesis

• Prospective randomized study

• **January 2011 and March 2013 in Turkey**
• All operations were performed by the same team.

• 52 patients in two groups

• 26 patients were underwent SILC (f/m: 16/10)

• 26 patients were underwent CLC (f/m: 13/13)
6 months after surgery

EuroQol EQ-5D questionnaire

EQ-5D
Describing your health TODAY
Under each heading, please tick the ONE box that best describes your health TODAY

1 - Mobility (walking about)
I have no problems walking about ☐
I have some problems walking about ☐
I have a lot of problems walking about ☐

2 - Looking after myself
I have no problems washing or dressing myself ☐
I have some problems washing or dressing myself ☐
I have a lot of problems washing or dressing myself ☐

3 - Doing usual activities (for example, going to school, hobbies, sports, playing, doing things with family or friends)
I have no problems doing my usual activities ☐
I have some problems doing my usual activities ☐
I have a lot of problems doing my usual activities ☐

4 - Having pain or discomfort
I have no pain or discomfort ☐
I have some pain or discomfort ☐
I have a lot of pain or discomfort ☐

5 - Feeling worried, sad or unhappy
I am not worried, sad or unhappy ☐
I am a bit worried, sad or unhappy ☐
I am very worried, sad or unhappy ☐
How good is your health TODAY?

- We would like to know how good or bad your health is TODAY.
- This line is numbered from 0 to 100.
- 100 means the best health you can imagine.
  0 means the worst health you can imagine.
- Please mark an X on the line that shows how good or bad your health is TODAY.
Body Image Questionnaire

1) Are you less satisfied with your body since the operation?
   1- Yes, extremely
   2- Quite a bit
   3- A little bit
   4- No, not at all

2) Do you think the operation has damaged your body?
   1- Yes, extremely
   2- Quite a bit
   3- A little bit
   4- No, not at all

3) Do you feel less attractive as a result of your operation?
   1- Yes, extremely
   2- Quite a bit
   3- A little bit
   4- No, not at all

4) Do you feel less feminine/masculine as a result of your operation?
   1- Yes, extremely
   2- Quite a bit
   3- A little bit
   4- No, not at all

5) Is it difficult to look at yourself naked?
   1- Yes, extremely
   2- Quite a bit
   3- A little bit
   4- No, not at all

6) On a scale from 1 to 7, how satisfied are you with your (incisional) scar?
   1- Very unsatisfied
   7- Very satisfied

7) On a scale from 1 to 7, how would you describe your (incisional) scar?
   1- Revolting
   7- Very beautiful

8) Could you score your own scar on a scale from 1 to 10?
   1- Nasty
   10-Excellent

9) How confident were you before your operation?
   1- Not very confident
   10- Very confident

10) How confident were you after your operation?
    1- Not very confident
    10- Very confident
Statistical Analysis

• Shapiro–Wilks® test for age variable

• Number (n), percentage (%)

• Pearson Chi Square® test for gender distribution
Statistical Analysis

- Percentage and (n) values for Body Image Questionaire (BIQ) 1 to 5 answers

- Mann-Whitney U test® for EQ-5D and BIQ 6 to 10


- p<0.05
Results

- 55.8 % female
- 44.2 % male
- Mean age: 46.6

Table 1. The comparison of the specified variables in the groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>SILC</th>
<th>Test statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
<td>Median</td>
</tr>
<tr>
<td>Age</td>
<td>Min; Max</td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td>20.0; 79.0</td>
<td>47.5±14.7</td>
</tr>
<tr>
<td>EQ_5D index</td>
<td>Min; Max</td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td>0.755; 1.000</td>
<td>1.000 (0.090)</td>
</tr>
<tr>
<td>EQ-5D_self determination of the current health status</td>
<td>Min; Max</td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td>40.0; 100.0</td>
<td>85.0 (21.0)</td>
</tr>
</tbody>
</table>
### Results

**Table 2: Distribution of the individuals’ responses to the EQ-5D test**

<table>
<thead>
<tr>
<th>Variables</th>
<th>SILC n (%)</th>
<th>Group</th>
<th>CLC n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EQ-5D_1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>21 (48.8)</td>
<td></td>
<td>22 (51.2)</td>
</tr>
<tr>
<td>2</td>
<td>5 (55.6)</td>
<td></td>
<td>4 (44.4)</td>
</tr>
<tr>
<td><strong>EQ-5D_2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>23 (51.1)</td>
<td></td>
<td>22 (48.9)</td>
</tr>
<tr>
<td>2</td>
<td>3 (42.9)</td>
<td></td>
<td>4 (57.1)</td>
</tr>
<tr>
<td><strong>EQ-5D_3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>23 (51.1)</td>
<td></td>
<td>22 (48.9)</td>
</tr>
<tr>
<td>2</td>
<td>3 (42.9)</td>
<td></td>
<td>4 (57.1)</td>
</tr>
<tr>
<td><strong>EQ-5D_4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>18 (52.9)</td>
<td></td>
<td>16 (47.1)</td>
</tr>
<tr>
<td>2</td>
<td>8 (44.4)</td>
<td></td>
<td>10 (55.6)</td>
</tr>
<tr>
<td><strong>EQ-5D_5</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>21 (48.8)</td>
<td></td>
<td>22 (51.2)</td>
</tr>
<tr>
<td>2</td>
<td>5 (55.6)</td>
<td></td>
<td>4 (44.4)</td>
</tr>
</tbody>
</table>
# Results

*Table 3: Distribution of the individuals’ answers to the BIQ’s 1-5th questions in the groups*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>SILS n (%)</th>
<th>n (%)</th>
<th>C LC n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIQ_1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>1 (100.0)</td>
<td>0 (0.0)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>7 (77.8)</td>
<td>2 (22.2)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>18 (42.9)</td>
<td>24 (57.1)</td>
<td></td>
</tr>
<tr>
<td>BIQ_2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>1 (100.0)</td>
<td>0 (0.0)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>10 (62.5)</td>
<td>6 (37.5)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>15 (42.9)</td>
<td>20 (57.1)</td>
<td></td>
</tr>
<tr>
<td>BIQ_3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>8 (47.1)</td>
<td>9 (52.9)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>18 (51.4)</td>
<td>17 (48.6)</td>
<td></td>
</tr>
<tr>
<td>BIQ_4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>5 (41.7)</td>
<td>7 (58.3)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>21 (52.5)</td>
<td>19 (47.5)</td>
<td></td>
</tr>
<tr>
<td>BIQ_5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>6 (66.7)</td>
<td>3 (33.3)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>20 (46.5)</td>
<td>23 (53.5)</td>
<td></td>
</tr>
</tbody>
</table>
## Results

*Table 4: Answers of the Body Image Questionnaire's 6-10 questions in the groups*

<table>
<thead>
<tr>
<th>Variables</th>
<th>SILC Median (min; max)</th>
<th>CLC Median (min; max)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIQ_6</td>
<td>6.0 (3.0; 7.0)</td>
<td>6.0 (5.0; 7.0)</td>
<td>0.193</td>
</tr>
<tr>
<td>BIQ_7</td>
<td>6.5 (4.0; 7.0)</td>
<td>6.0 (4.0; 7.0)</td>
<td>0.007</td>
</tr>
<tr>
<td>BIQ_8</td>
<td>8.5 (7.0; 10.0)</td>
<td>8.0 (5.0; 10.0)</td>
<td>0.024</td>
</tr>
<tr>
<td>BIQ_9</td>
<td>8.0 (6.0; 10.0)</td>
<td>8.0 (6.0; 9.0)</td>
<td>0.524</td>
</tr>
<tr>
<td>BIQ_10</td>
<td>9.0 (5.0; 10.0)</td>
<td>9.0 (7.0; 10.0)</td>
<td>0.938</td>
</tr>
</tbody>
</table>
Conclusion

- Cosmesis scale was the only statistically significant variable

- Patients have better satisfaction of their scar appearance

- SILC may be a preferable technique

- Further studies are needed for the final assessment