# Transcanal endoscopic ear surgery INSTRUMENT USER-FEEDBACK STUDY

STUDY ID #\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Demographic information

1. Please indicate your training status (circle one):

Resident Fellow Staff

1. Number of years in surgical practice or PGY training level: \_\_\_\_\_\_\_\_\_\_
2. Your age: \_\_\_\_\_\_\_\_\_\_
3. Are you right or left handed (circle one): Left Right
4. What is your surgical glove size: \_\_\_\_\_\_\_\_\_\_
5. Total number of endoscopic cases performed as primary or assistant surgeon:

0-10 10-50 50-100 > 100

# Instrument Assessment

1. Please rate the following aspects of the instrument design:

1= Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Instrument Form** | **1** | **2** | **3** | **4** | **5** |
| The instrument is an appropriate weight |  |  |  |  |  |
| The instrument handle is an appropriate size |  |  |  |  |  |
| The instrument wrist is an appropriate size |  |  |  |  |  |

***Comments regarding handle design:*** *(If you disagree with any of the statements please explain. If you have any additional insights on the shape, look or feel of the instrument, please elaborate)*

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1. Please rate the following aspects of the instrument operation in terms of its intuitiveness. Consider how these features would translate to performing surgery on a live patient in an operating room:

1= Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Instrument Operation – Mental Effort** | **1** | **2** | **3** | **4** | **5** |
| Understanding how the instrument works is intuitive |  |  |  |  |  |
| The effort necessary to perform tasks using the instrument is minimal |  |  |  |  |  |
| Bending the wrist of the instrument requires minimal effort |  |  |  |  |  |
| The bend/curvature of the tip is useful to reach target structures |  |  |  |  |  |
|  |  |  |  |  |  |
| Dissecting tissue without bending the wrist was not difficult |  |  |  |  |  |
| Dissecting tissue while bending the wrist was not difficult |  |  |  |  |  |
| The forces applied by the instrument on the tissue was appropriate |  |  |  |  |  |

***Comments regarding handle design:*** *(If you disagree with any of the statements please explain)*

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1. Please rate the following aspects of the instrument in terms of its range-of-motion, precision and stability. Consider how these features would translate to performing surgery on a live patient in an operating room:

1= Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Instrument Operation - Performance** | **1** | **2** | **3** | **4** | **5** |
| The instrument performed as expected |  |  |  |  |  |
| The instrument tip moved accurately |  |  |  |  |  |
| The instrument was responsive |  |  |  |  |  |
| The instrument tip moved smoothly |  |  |  |  |  |
| The instrument can reach all the spaces in the field-of-view necessary to perform the task |  |  |  |  |  |
| The instrument did not block the field-of-view of the endoscope |  |  |  |  |  |

***Comments regarding instrument shaft:*** *(If you disagree with any of the statements please explain)*

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1. Please rate the following aspects of the instrument in terms of usability:

1= Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Instrument Operation - Comfort** | **1** | **2** | **3** | **4** | **5** |
| The instrument is comfortable in my hand |  |  |  |  |  |
| The force required to operate the instrument was appropriate |  |  |  |  |  |
| Operating the instrument will NOT likely cause hand fatigue |  |  |  |  |  |

***Comments regarding instrument shaft:*** *(If you disagree with any of the statements please explain)*

Ask questions that would address the difficulties in the needs analysis

Safe to use within the ear? e.g. underneath ossicles?

Are there features that would make it safer to use?