

Appendix 1: Quality of life questionnaire

**GERD-Health Related Quality of Life Questionnaire (GERD-HRQL)**

Institution: \_\_\_\_\_ Patient ID: \_\_\_\_\_ Date \_\_\_/\_\_\_/\_\_\_

On PPIs     Off PPIs    If off, for how long? \_\_\_\_\_ days / months

Scale:

- 0 = No symptom
- 1 = Symptoms noticeable but not bothersome
- 2 = Symptoms noticeable and bothersome but not every day
- 3 = Symptoms bothersome every day
- 4 = Symptoms affect daily activity
- 5 = Symptoms are incapacitating to do daily activities

Please check the box to the right of each question which best describes your experience over the past **2 weeks**

- |     |   |                            |                            |                            |                            |                            |                            |
|-----|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 1.  | How bad is the heartburn?   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 2.  | Heartburn when lying down?  | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 3.  | Heartburn when standing up?   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 4.  | Heartburn after meals?  | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 5.  | Does heartburn change your diet?  | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 6.  | Does heartburn wake you from sleep?   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 7.  | Do you have difficulty swallowing?  | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 8.  | Do you have pain with swallowing?   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 9.  | If you take medication, does this affect your daily life?   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 10. | How bad is the regurgitation?   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 11. | Regurgitation when lying down?  | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 12. | Regurgitation when standing up?   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 13. | Regurgitation after meals?  | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 14. | Does regurgitation change your diet?  | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 15. | Does regurgitation wake you from sleep?   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1 | <input type="checkbox"/> 2 | <input type="checkbox"/> 3 | <input type="checkbox"/> 4 | <input type="checkbox"/> 5 |
| 16. | How satisfied are you with your present condition?  |                            |                            |                            |                            |                            |                            |
|     | <input type="checkbox"/> Satisfied <input type="checkbox"/> Neutral <input type="checkbox"/> Dissatisfied |                            |                            |                            |                            |                            |                            |

Administered by \_\_\_\_\_

Monitored by \_\_\_\_\_

Date (mm/dd/yy) \_\_\_\_\_

Date (mm/dd/yy) \_\_\_\_\_

## GERD-HRQL Questionnaire –Instructions

The GERD-HRQL questionnaire was developed and validated to measure changes of typical GERD symptoms such as heartburn and regurgitation in response to surgical or medical treatment.<sup>1</sup>

When comparing GERD-HRQL scores post-TIF to scores pre-TIF, it is important to take medication use into consideration. It is recommended to request patients take this questionnaire twice at screening (once off PPIs and the other time on PPIs) for fair comparison at follow-ups post-TIF

**Total Score:** Calculated by summing the individual scores to questions 1-15.

- Greatest possible score (worst symptoms) = 75
- Lowest possible score (no symptoms) = 0

**Heartburn Score:** Calculated by summing the individual scores to questions 1-6 .

- Worst heartburn symptoms = 30
- No heartburn symptoms = 0
- Scores of  $\leq 12$  with each individual question not exceeding 2 indicate heartburn elimination.<sup>2</sup>

**Regurgitation Score:** Calculated by summing the individual scores to questions 10-15.

- Worst regurgitation symptoms = 30
- No regurgitation symptoms = 0
- Scores of  $\leq 12$  with each individual question not exceeding 2 indicate regurgitation elimination.<sup>2</sup>

### References Cited

<sup>1</sup> Velanovich V. The development of the GERD-HRQL symptom severity instrument. *Dis Esophagus* 2007;20:130-4.

<sup>2</sup> Hunter JG, Trus TL, Branum GD, Waring JP, Wood WC. A physiologic approach to laparoscopic fundoplication for gastroesophageal reflux disease. *Ann Surg* 1996;223:673-85.