**Supplementary Table 1:** The score to assess the overall endoscopic activity based on the EREFS grading system.24 The overall score ranges from 0 to 8 points (0 indicates no endoscopic activity, 8 points indicates most severe endoscopic activity).

|  |  |  |
| --- | --- | --- |
| **Endoscopic features** | **Points** | **Remarks** |
| White exudates* Absent
* Mild
* Severe
 | 012 | Covering <10% of esophageal surfaceCovering >10% of esophageal surface  |
| Rings* Absent
* Mild
* Moderate
* Severe
 | 0123 | Subtle circumferential ridgespassage of 8-9.5mm outer diameter endoscope possiblepassage of endoscope no longer possible |
| Edema* Absent
* present
 | 01 | Loss of vascular markings |
| Furrows* absent
* present
 | 01 |  |
| Strictures* absent
* present
 | 01 |  |

**Supplementary Table 2:** Histologic score for the epithelium and the subepithelial layer. Abbreviations: hpf, high power field. The epithelial (range 0-9 points) and subepithelial score (range 0-8 points) can be combined to assess the overall histologic activity due to EoE (range 0-17 points) in both layers.

|  |  |
| --- | --- |
| **Histologic feature** | **points** |
|  **Epithelium (range 0-9 points)** |  |
|  Peak eosinophil count/hpf* remission (0-14)
* mild activity (15-50)
* moderate activity (51-100)
* severe activity (>100)

 Basal layer hyperplasia in % of epithelial thickness:* <14%
* 15-33%
* 34-66%
* ≥67%

 Eosinophil abscesses (aggregate of ≥10 eosinophils)* No
* Yes

 Eosinophilic degranulation* No
* Mild
* Severe
 | 0123012301012 |
|  **Subepithelial layer (range 0-8 points)** |  |
|  Peak eosinophil count/hpf* remission (0-14)
* mild activity (15-50)
* moderate activity (51-100)
* severe activity (>100)

 Eosinophilic degranulation* No
* Mild

 Subepithelial fibrosis* None
* Mild
* Severe

 Presence of lymphoid follicles in stroma* None
* Some
* Several
 | 012301012012 |
|  **Epithelial and subepithelial score combined (range 0-17 points)** |  |

**Supplementary Table 3:** The relationship between EoE-related symptoms and endoscopic findings as well as histologic alterations in the epithelial and the subepithelial layers. Abbreviations: NA, not applicable.

|  |  |  |
| --- | --- | --- |
| **Relationship between symptoms AND …** | **Spearman’s rho** | **p-value** |
| **Endoscopy*** Exudates
* Rings
* Edema
* Furrows
* Strictures
 | 0.1430.1610.3140.2180.137 | 0.0480.024<0.0010.0020.056 |
| **Endoscopy score** | 0.275 | <0.001 |
| **Epithelium*** Peak eosinophil count
* Microabscesses
* Basal layer hyperplasia
* Degranulation
 | 0.2420.1230.2190.160 | <0.0010.0840.0020.017 |
| **Epithelial histology score** | 0.239 | <0.001 |
| **Subepithelial layer*** Peak eosinophil count
* Degranulation
* Lymphoid follicles
* Fibrosis
 | 0.1660.0990.1260.179 | 0.0340.1660.0780.012 |
| **Subepithelial histology score** | 0.179 | 0.011 |
| **Combined score for epithelium and subepithelial layer** | 0.241 | <0.001 |

**Supplementary Table 4:** Distribution of subepithelial peak eosinophil counts stratified according to peak eosinophil counts in the epithelial layer.

|  |  |  |
| --- | --- | --- |
|  | **Epithelial peak eosinophil count** | **Subepithelial eosinophil counts** |
| **Degree of epithelial inflammation** | **Median, IQR** | **Range** | **Median, IQR** | **Range** |
| Remission(0-15/hpf, n=52) | 5, 0-8 | 0-14 | 10, 2-25 | 0-100 |
| Mild activity(16-60/hpf, n=69) | 30, 22-40 | 15-50 | 20, 10-38 | 0-304 |
| Moderate activity(61-150/hpf, n=42) | 75, 65-85 | 55-100 | 41, 14-71 | 0-103 |
| Severe activity(>150/hpf, n=37) | 130, 120-152 | 105-251 | 40, 11-80 | 0-252 |