**Supplementary** Table 1. The number of specimens enrolled in IHC assays

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Definition of Outcome | Total | Ileum | Colon |
| Matched pairs (53 pairs) | Histologic score（mGHAS） | Responders | 14 | 3 | 11 |
| Non-responders | 39 | 7 | 32 |
| Endoscopic score(CDEIS) | Responders | 25 | 4 | 21 |
| Non-responders | 28 | 6 | 22 |
| Total Specimens (147, including not-matched specimens) | Histologic disease activity | mild | 38 | 16 | 22 |
| moderate | 91 | 19 | 72 |
| severe | 18 | 4 | 14 |
| Endoscopic disease activity | inactive | 10 | 4 | 6 |
|  mild | 21 | 5 | 16 |
| moderate | 22 | 6 | 16 |
| severe | 94 | 24 | 70 |

mGHAS, modified Global Histologic Disease Activity Score; CDEIS, Crohn’s Disease Endoscopic Index of Severity.

**Supplementary** Table 2. **Summary of** the concomitant medication in CD patients

|  |  |  |
| --- | --- | --- |
| Definition of Outcome | Anti-TNF Monotherapy | Concomitant Medication |
| AZA (azathioprine)\* | 6-MP (mercaptopurine) | SASP (Sulfasalazine) |
| Endoscopic assessment | Responders | 1 | 22 | 2 | 0 |
| Non-responders | 2 | 23 | 2 | 1 |
| Histologic assessment | Responders | 1 | 13 | 0 | 0 |
| Non-responders | 2 | 32 | 4 | 1 |

 \*, a subgroup analysis on colonic ACE2 expression pre- and post-anti-TNF combined with AZA therapy was performed. Endoscopic response, *P* = 0.0096; Histologic response, *P* = 0.0039.