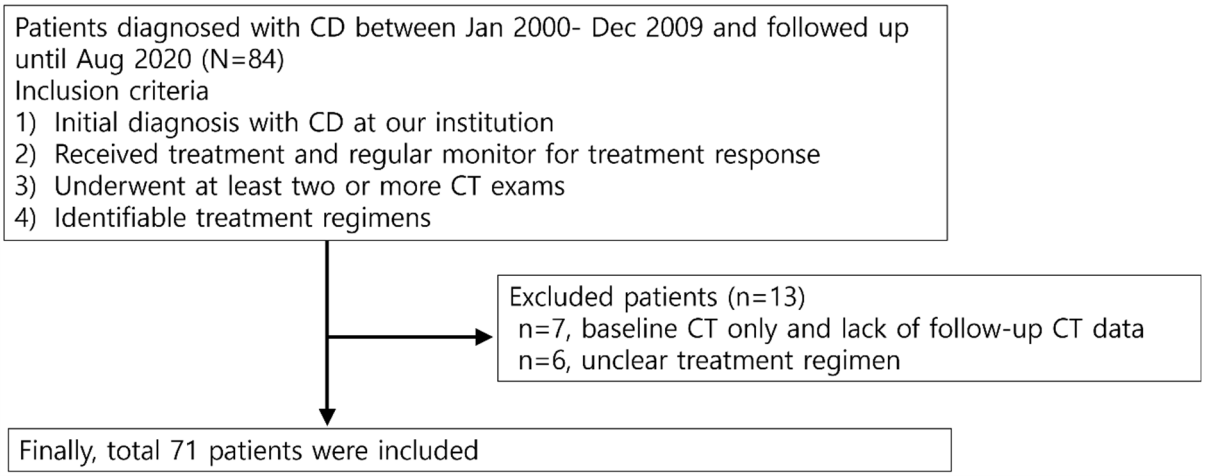
Supplementary Table S1. Clinical characteristics of study population (n=71).

| **Variables** | **N(%)** |
|---|---|
| Sex (%)<br>F<br>M | <br>23 (32.4)<br>48 (67.6) |
| Age | 29.8 ± 11.3 |
| Follow-up period (mo, median [IQR]) | 144.0 [97.0, 180.5] |
| Prior surgery (%) | 6 ( 8.6) |
| Prior perianal surgery (%) | 17 (24.3) |
| Smoking (%) | 25 (35.8) |
| Baseline sarcopenia (%) | 38 (55.1) |
| Baseline CT activity (%)<br>Normal<br>Mild<br>Moderate<br>Severe | <br>5 ( 7.0)<br>2 ( 2.8)<br>16 (22.5)<br>48 (67.6) |
| Baseline SES-CD score (%)<br>Normal<br>Mild/Moderate<br>Severe | <br>11 (16.2)<br>32 (47.1)<br>25 (36.8) |
| Change of IMS to biologics (%) | 53 (82.8) |
| Change of biologics (%) | 24 (40.7) |
| Dose optimization (%) | 26 (43.3) |
| Remission | 24 (34.3) |
| Surgery | 15 (21.1) |
| Time to surgery (mo) | 64.5 ± 68.6 |
| Complication (%)<br>None<br>Stenosing<br>Penetrating<br>Combined stenosing and penetrating | <br>50 (70.4)<br>16 (22.5)<br>1 (1.4)<br>4 (5.6) |

Supplementary Table S2. Association between VFA/SFA ratio with CT activity scores and SES-CD scores.

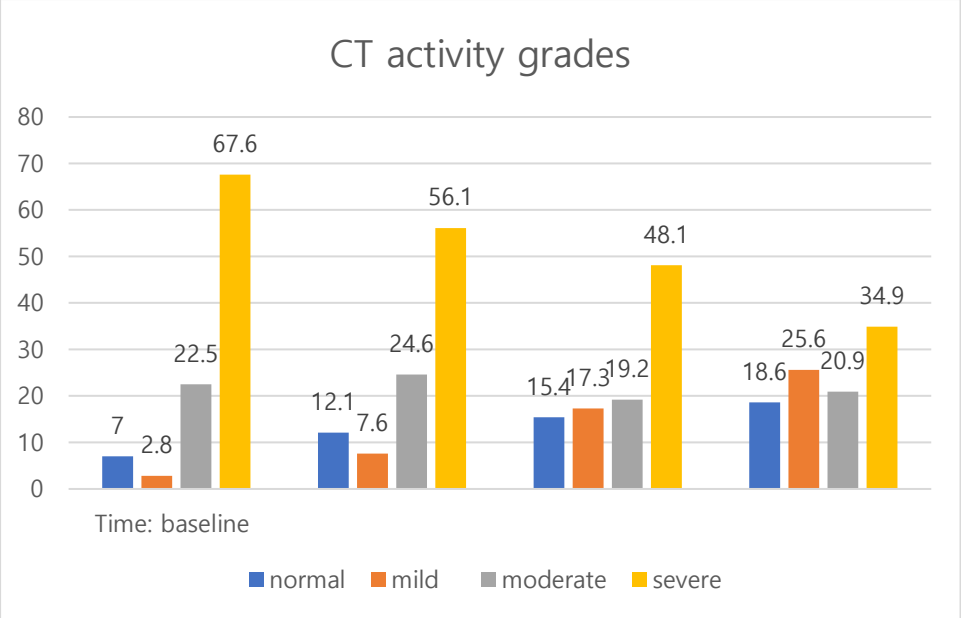
| Characteristics | Beta (95% CI) | p-value |
|---|---|---|
| time | 0.03 (0.01~0.06) | 0.004 |
| Sex | | |
| F | - | |
| M | 0.28(0.09~0.47) | 0.005 |
| SES-CD | | |
| Normal | - | |
| Mild/moderate | 0.03 (-0.1~ 0.16) | 0.68 |
| Severe | 0.01 (-0.13~ 0.15) | 0.86 |
| Time * SES-CD | | |
| Time* mild/moderate | -0.03 (-0.06~ 0.00) | 0.032 |
| Time* severe | 0.00 (-0.04~ 0.05) | 0.89 |

| Characteristics | Beta (95% CI) | p-value |
|---|---|---|
| time | 0.05 (0.01~0.08) | 0.02 |
| Sex | | |
| F | - | |
| M | 0.33(0.13~0.54) | 0.002 |
| CT activity | | |
| Normal | - | |
| Mild | 0.09(-0.24~0.42) | 0.59 |
| Moderate | 0.08(-0.16~0.31) | 0.51 |
| Severe | 0.15 (-0.07~0.37) | 0.19 |
| Time * CT activity | | |
| 2-5y f/u | 0.0 (-0.06~ 0.06) | 0.88 |
| 5-8y f/u | -0.04 (-0.08~0.01) | 0.15 |
| >8y f/u | -0.04 (-0.08~0.00) | 0.062 |

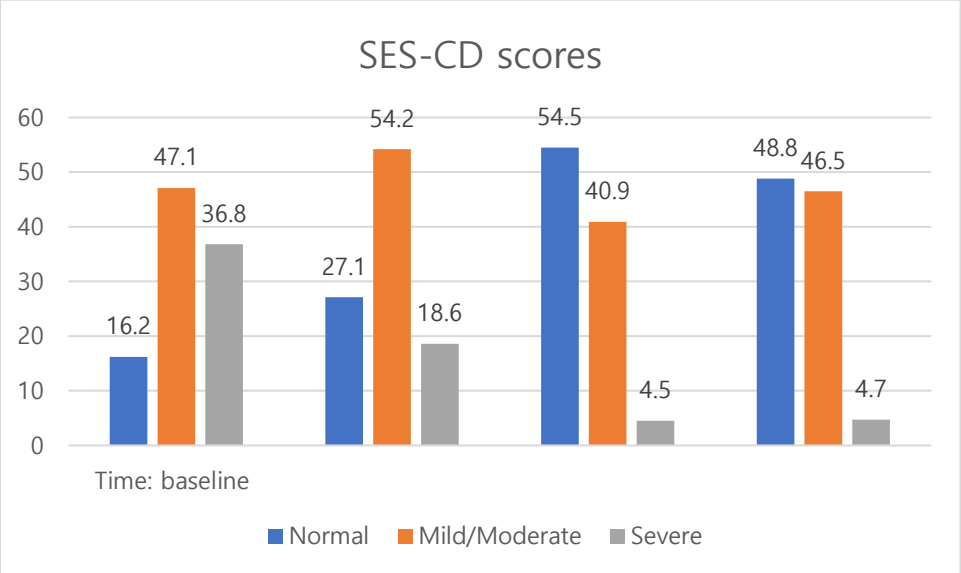



Supplementary Figure S1. Flow chart of patient selection.

1) CT activity grades




2) SES-CD scores




Supplementary Figure S2. Changes in disease activity.