Supplementary Table 1 – Likelihood of achieving endoscopic outcomes at one year among biologic naïve participants\*

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| Outcome at One Year  | Unadjusted OR (95% CI) | p-value | Adjusted OR (95% CI)\*\* | p-value |
| One year segment EH among those with baseline segment SES-CD ≥ 3 |
| Overall EH (SES-CD < 3)  Adalimumab Ustekinumab Infliximab  | 4.63 (1.33-16.03)2.72 (0.65-11.42)3.54 (1.18-10.58) | 0.0160.1720.024 | 4.68 (1.34-16.30)2.94 (0.68-12.63)3.99 (1.27-12.51) | 0.0150.1470.018 |
| Ileum EH (SES-CD = 0) Adalimumab Ustekinumab  Infliximab  | 2.14 (0.66-6.95)2.38 (0.52-10.86)2.07 (0.80-5.38) | 0.2040.2630.135 | 1.88 (0.55-6.38)2.13 (0.43-10.46)1.96 (0.59-6.45) | 0.3130.3540.270 |
| Ascending colon EH (SES-CD = 0) Adalimumab Ustekinumab  Infliximab  | 3.56 (0.86-14.63)0.80 (0.16-3.94)1.41 (0.47-4.19) | 0.0790.7840.539 | 2.55 (0.56-11.62)0.63 (0.12-3.28)0.91 (0.23-3.51) | 0.2270.5820.885 |
| Transverse colon EH (SES-CD = 0) Adalimumab Ustekinumab  Infliximab  | 19.80 (3.26-120.17)2.25 (0.27-18.93)9.75 (2.04-46.52) | 0.0010.4550.004 | 23.09 (3.47-153.76)2.78 (0.30-25.64)11.83 (2.02-69.44) | 0.0010.3670.006 |
| Descending colon EH (SES-CD = 0) Adalimumab Ustekinumab  Infliximab  | 4.22 (1.20-14.90)1.41 (0.32-6.26)1.62 (0.57-4.58) | 0.0250.6540.366 | 4.43 (1.18-16.67)1.52 (0.31-7.50)1.58 (0.41-6.07) | 0.0280.6070.506 |
| Rectal EH (SES-CD = 0) Adalimumab Infliximab Vedolizumab | 2.49 (0.61-10.18)2.10 (0.66-6.68)N/A | 0.2050.211N/A | 2.76 (0.65-11.72)2.54 (0.68-9.51)N/A | 0.1680.166N/A |
| Colonic EH (SES-CD = 0) Adalimumab Infliximab Vedolizumab | 4.80 (1.29-17.87)2.64 (0.87-8.02)1.42 (0.41-4.94) | 0.0190.0870.583 | 4.96 (1.29-19.03)2.71 (0.89-8.27)1.48 (0.41-5.38) | 0.0200.0810.548 |
| One year segment EH among those with baseline segment very large ulcers > 2 cm  |
| Overall EH (SES-CD < 3) Adalimumab Ustekinumab Infliximab  | 2.50 (0.19-32.80)1.11 (0.06-20.49)2.08 (0.22-20.17) | 0.4850.9440.526 | 2.80 (0.20-39.19)1.06 (0.05-21.21)1.72 (0.16-18.69) | 0.4440.9700.657 |
| Absence of ileal ulcers  Adalimumab Ustekinumab  Infliximab  | 0.33 (0.02-6.65)N/AN/A | 0.472N/AN/A | 18.26 (0.03-12,310.57)N/AN/A | N/AN/AN/A |
| Absence of ulcers in the ascending colon  Adalimumab Ustekinumab  Infliximab  | 0.50 (0.03-7.45)0.25 (0.02-3.10)N/A | 0.6150.280N/A | 0.27 (0.00-22.12)N/AN/A | 0.558N/AN/A |
| Absence of ulcers in the transverse colon  Adalimumab Ustekinumab  Infliximab  | 2.67 (0.16-45.14)1.33 (0.06-31.12)N/A | 0.4970.858N/A | 1.40 (0.03-72.58)1.80 (0.04-72.89)N/A | 0.8660.756N/A |
| Absence of ulcers in the descending colon  Adalimumab Ustekinumab  Infliximab  | 2.33 (0.22-25.24)0.58 (0.04-7.66)N/A | 0.4860.682N/A | 13.96 (0.21-907.42)2.50 (0.07-83.61)N/A | 0.2160.609N/A |
| Absence of ulcers in the rectum  Adalimumab Infliximab Vedolizumab | 1.00 (0.03-29.81)0.67 (0.02-18.06)N/A | 1.0000.810N/A | 0.80 (0.01-74.28)2.34 (0.02-257.83)N/A | 0.9250.723N/A |
| Absence of ulcers in the colon  Adalimumab Infliximab Vedolizumab | 12.25 (1.33-113.06)11.08 (1.80-68.40)2.10 (0.25-17.59) | 0.0270.0100.494 | 18.53 (1.68-204.51)15.71 (2.26-109.12)3.96 (0.40-39.02) | 0.0170.0050.238 |
| One year segment EH among those with baseline segment large ulcers > 0.5 cm  |
| Overall EH (SES-CD < 3) Adalimumab Ustekinumab Infliximab  | 5.00 (0.94-26.49)3.21 (0.48-21.45)4.88 (1.09-21.78) | 0.0590.2280.038 | 4.85 (0.91-25.84)2.99 (0.44-20.45)4.59 (0.99-21.24) | 0.0640.2650.051 |
| Absence of ileal ulcers Adalimumab Ustekinumab  Infliximab  | 5.25 (0.90-30.62)3.00 (0.33-27.23)5.17 (1.06-25.15) | 0.0650.3290.042 | 3.75 (0.60-23.30)1.92 (0.18-20.24)3.10 (0.48-20.04) | 0.1560.5890.234 |
| Absence of ulcers in the ascending colon Adalimumab Ustekinumab  Infliximab  | 0.42 (0.03-5.71)0.25 (0.02-3.10)0.68 (0.15-3.03) | 0.5120.2800.615 | 0.05 (0.00-1.55)0.07 (0.00-1.64)0.11 (0.01-1.60) | 0.0870.0970.107 |
| Absence of ulcers in the transverse colon  Adalimumab Ustekinumab  Infliximab  | 3.00 (0.35-25.87)0.80 (0.06-11.30)2.59 (0.46-14.53) | 0.3180.8690.280 | 3.01 (0.33-27.77)1.18 (0.07-18.67)2.95 (0.41-21.04) | 0.3320.9060.280 |
| Absence of ulcers in the descending colon  Adalimumab Ustekinumab  Infliximab  | 12.00 (1.18-122.27)4.50 (0.37-54.16)7.43 (0.86-64.05) | 0.0360.2360.068 | 10.03 (0.95-105.49)4.02 (0.32-50.76)4.69 (0.45-48.95) | 0.0550.2830.197 |
| Absence of ulcers in the rectum  Adalimumab Infliximab Vedolizumab | 3.00 (0.38-23.68)2.25 (0.50-10.14)N/A | 0.2970.291N/A | 3.09 (0.35-27.51)4.33 (0.67-28.13)N/A | 0.3130.124N/A |
| Absence of ulcers in the colon  Adalimumab Infliximab Vedolizumab | 3.90 (0.91-16.79)4.30 (1.30-14.24)2.16 (0.54-8.57) | 0.0680.0170.273 | 4.33 (0.96-19.55)4.73 (1.40-15.94)2.47 (0.59-10.27) | 0.0570.0120.213 |

\*The worst performing biologic was used as the comparator and thus not shown
\*\*Adjusted for disease duration and concomitant corticosteroid use

Supplementary Table 2 – Endoscopic outcomes at one year among participants with ileal involvement at baseline

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| Endoscopic healing at one year among participants with ileal involvement at baseline (n=184) |
| Treatment | Ileal involvement at baseline, n | Segment endoscopic healing at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 40 | 12/40 (30.0) | 0.225 | 0.177 |
| Infliximab | 79 | 29/79 (36.7) | 0.038 |
| Ustekinumab  | 22 | 5/22 (22.7) | 0.694 |
| Vedolizumab | 43 | 8/43 (18.6) | N/A |
| Absence of ileal ulcers at one year among participants with very large ileal ulcers at baseline (n=24) |
| Treatment | Very large ileal ulcer at baseline, n | Absence of ileal ulcers at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 6 | 1/6 (16.7) | 0.261 | 0.144 |
| Infliximab | 5 | 3/5 (60.0) | 0.018 |
| Ustekinumab | 6 | 0/6 | N/A |
| Vedolizumab | 7 | 0/7 | N/A |
| Absence of ileal ulcers at one year among participants with large ileal ulcers at baseline (n=119) |
| Treatment | Large ileal ulcer at baseline, n | Absence of ileal ulcers at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 30 | 9/30 (30.0) | 0.058 | 0.169 |
| Infliximab | 49 | 20/49 (40.8) | 0.006 |
| Ustekinumab | 17 | 3/17 (17.7) | 0.397 |
| Vedolizumab | 23 | 2/23 (8.7) | N/A |

\*Among participants with involvement of the segment at baseline
\*\*Vedolizumab as comparator

Supplementary Table 3 – Endoscopic outcomes at one year among biologic naïve participants with ileal involvement at baseline

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| Endoscopic healing at one year among biologic naïve participants with ileal involvement at baseline (n=145) |
| Treatment | Ileal involvement at baseline, n | Segment endoscopic healing at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 24 | 9/24 (37.5) | 0.200 | 0.449 |
| Infliximab | 79 | 29/79 (36.7) | 0.130 |
| Ustekinumab | 10 | 4/10 (40.0) | 0.255 |
| Vedolizumab | 32 | 7/32 (21.9) | N/A |
| Absence of ileal ulcers at one year among biologic naïve participants with very large ileal ulcers at baseline (n=14) |
| Treatment | Very large ileal ulcer at baseline, n | Absence of ileal ulcers at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 3 | 1/3 (33.3) | 0.212 | 0.405 |
| Infliximab | 5 | 3/5 (60.0) | 0.058 |
| Ustekinumab | 2 | 0/2 | N/A |
| Vedolizumab | 4 | 0/4 | N/A |
| Absence of ileal ulcers at one year among biologic naïve participants with large ileal ulcers at baseline (n=90) |
| Treatment | Large ileal ulcer at baseline, n | Absence of ileal ulcers at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 17 | 7/17 (42.3) | 0.052 | 0.290 |
| Infliximab | 49 | 20/49 (40.8) | 0.029 |
| Ustekinumab | 7 | 2/7 (28.6) | 0.315 |
| Vedolizumab | 17 | 2/17 (11.8) | N/A |

\*Among participants with involvement of the segment at baseline
\*\*Vedolizumab as comparator

Supplementary Table 4 – Endoscopic outcomes at one year among participants with colonic disease at baseline

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| Endoscopic healing at one year among participants with colonic disease at baseline (n=232) |
| Treatment | Colonic disease at baseline, n | Segment endoscopic healing in any colon segment at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 48 | 30/48 (62.5) | 0.004 | 0.002 |
| Infliximab | 105 | 55/105 (52.4) | 0.022 |
| Ustekinumab | 31 | 9/31 (29.0) | N/A |
| Vedolizumab | 48 | 15/48 (31.3) | 0.834 |
| Absence of colonic ulcers at one year among participants with very large colonic ulcers at baseline (n=74) |
| Treatment | Very large colonic ulcer at baseline, n | Absence of colonic ulcers at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 16 | 11/16 (68.8) | 0.002 | 0.005 |
| Infliximab | 25 | 19/25 (76.0) | <0.001 |
| Ustekinumab | 18 | 3/18 (16.7) | N/A |
| Vedolizumab | 15 | 4/15 (26.7) | 0.484 |
| Absence of colonic ulcers at one year among participants with large colonic ulcers at baseline (n=176) |
| Treatment | Large colonic ulcer at baseline, n | Absence of colonic ulcers at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 37 | 24/37 (64.9) | 0.005 | 0.011 |
| Infliximab | 78 | 55/78 (70.5) | <0.001 |
| Ustekinumab | 27 | 8/27 (29.6) | N/A |
| Vedolizumab | 34 | 14/34 (41.2) | 0.351 |

\*Among participants with involvement of the segment at baseline
\*\*Ustekinumab as comparator

Supplementary Table 5 – Endoscopic outcomes at one year among biologic naïve participants with colonic disease at baseline

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| Endoscopic healing at one year among biologic naïve participants with colonic disease at baseline (n=184) |
| Treatment | Colonic disease at baseline, n | Segment endoscopic healing in any colon segment at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 27 | 18/27 (66.7) | 0.004 | 0.038 |
| Infliximab | 105 | 55/105 (52.4) | 0.022 |
| Ustekinumab | 17 | 5/17 (29.4) | N/A |
| Vedolizumab | 35 | 13/35 (37.1) | 0.583 |
| Absence of colonic ulcers at one year among biologic naïve participants with very large colonic ulcers at baseline (n=51) |
| Treatment | Very large colonic ulcer at baseline, n | Absence of colonic ulcers at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 9 | 7/9 (77.8) | 0.018 | 0.067 |
| Infliximab | 25 | 19/25 (76.0) | 0.004 |
| Ustekinumab | 9 | 2/9 (22.2) | N/A |
| Vedolizumab | 8 | 3/8 (37.5) | 0.490 |
| Absence of colonic ulcers at one year among biologic naïve participants with large colonic ulcers at baseline (n=133) |
| Treatment | Large colonic ulcer at baseline, n | Absence of colonic ulcers at one year, n (%)\* | p-value (pairwise)\*\* | p-value |
| Adalimumab | 19 | 13/19 (68.4) | 0.062 | 0.160 |
| Infliximab | 78 | 55/78 (70.5) | 0.012 |
| Ustekinumab | 14 | 5/14 (35.7) | N/A |
| Vedolizumab | 22 | 12/22 (54.6) | 0.270 |

\*Among participants with involvement of the segment at baseline
\*\*Ustekinumab as the comparator