

**Supplemental Table 1 – Multivariate Cox regression model for first hospitalization during follow-up, CIRC cohort, Canada, 2018-2024.**

Characteristic	Unadjusted HR (95% CI)	Adjusted HR (95% CI)
Biosimilar	0.83 (0.55, 1.26)	0.86 (0.56, 1.32)
Female sex	1.30 (0.89, 1.90)	<b>1.59 (1.05, 2.41)</b>
Age at IBD diagnosis	<b>1.01 (1.00, 1.02)</b>	1.00 (0.98, 1.02)
IBD duration at biologic start	<b>0.97 (0.95, 0.99)</b>	0.99 (0.96, 1.01)
Current or past smoker	0.97 (0.65, 1.44)	1.17 (0.74, 1.84)
UC disease	<b>1.56 (1.06, 2.29)</b>	1.42 (0.92, 2.18)
One or more comorbidity <sup>a</sup>	0.97 (0.65, 1.44)	0.77 (0.51, 1.18)
Moderate or high disease activity <sup>b</sup>	1.40 (0.95, 2.07)	1.01 (0.67, 1.52)
Corticosteroid use <sup>c</sup>	<b>2.84 (1.89, 4.25)</b>	2.43 (1.57, 3.77)
Previous hospitalization <sup>d</sup>	1.56 (1.06, 2.29)	2.85 (1.68, 4.85)

Abbreviations: CI: confidence interval; CIRC: Canadian IBD Research Consortium; HR: hazard ratio; IBD: Inflammatory bowel disease; UC: ulcerative colitis.

<sup>a</sup> Congestive heart failure, diabetes, hypertension, coronary artery disease, malignancies, renal failure

<sup>b</sup> In CD, either a HBI (Harvey-Bradshaw Index) > 8 or a CDAI (Crohn's Disease Activity Index) > 220; in UC, a PMS (Partial Mayo Score) ≥ 5

<sup>c</sup> Current or past 12 months before enrollment

<sup>d</sup> Past six months before enrollment

**Supplemental Table 2: Multivariate Cox regression model for first ED visit during follow-up, CIRC cohort, Canada, 2018-2024.**

Characteristic	Unadjusted HR (95% CI)	Adjusted HR (95% CI)
Biosimilar	0.83 (0.56, 1.25)	0.86 (0.57, 1.30)
Female sex	1.12 (0.77, 1.61)	1.37 (0.91, 2.05)
Age at IBD diagnosis	<b>1.01 (1.00, 1.02)</b>	1.00 (0.98, 1.01)
IBD duration at biologic start	<b>0.95 (0.93, 0.97)</b>	<b>0.96 (0.94, 0.99)</b>
Current or past smoker	0.85 (0.58, 1.25)	1.20 (0.77, 1.88)
UC disease	1.04 (0.71, 1.53)	0.80 (0.53, 1.21)
One or more comorbidity <sup>a</sup>	1.08 (0.74, 1.58)	1.01 (0.67, 1.51)
Moderate or high disease activity <sup>b</sup>	<b>1.46 (1.01, 2.10)</b>	1.16 (0.79, 1.70)
Corticosteroid use <sup>c</sup>	<b>2.97 (2.01, 4.37)</b>	<b>2.29 (1.51, 3.47)</b>
Previous ED visit <sup>d</sup>	<b>4.10 (2.74, 6.15)</b>	<b>3.28 (2.08, 5.15)</b>

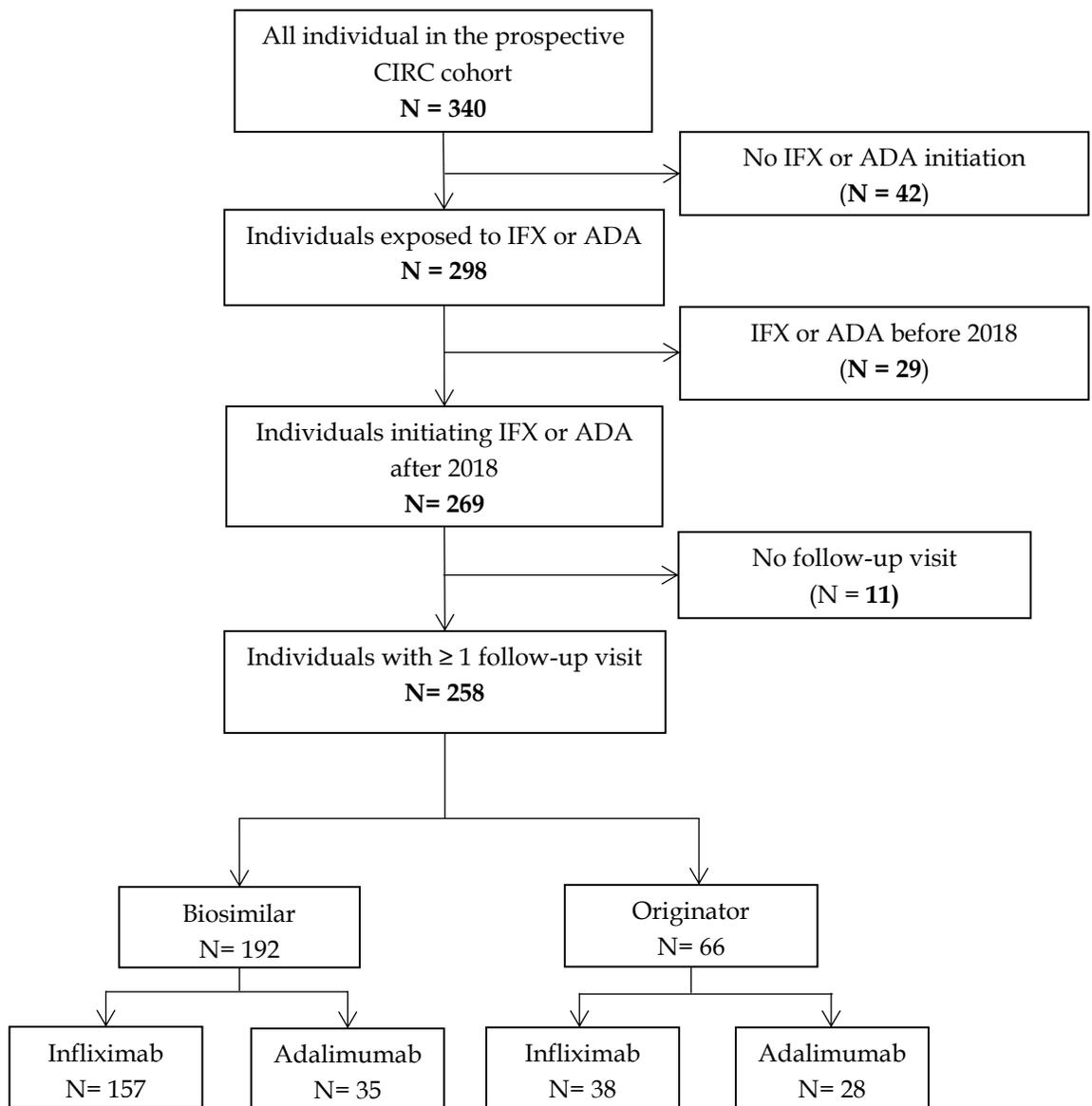
Abbreviations: CI: confidence interval; CIRC: Canadian IBD Research Consortium; ED: emergency department; HR: hazard ratio; IBD: Inflammatory bowel disease; UC: ulcerative colitis.

<sup>a</sup> Congestive heart failure, diabetes, hypertension, coronary artery disease, malignancies, renal failure

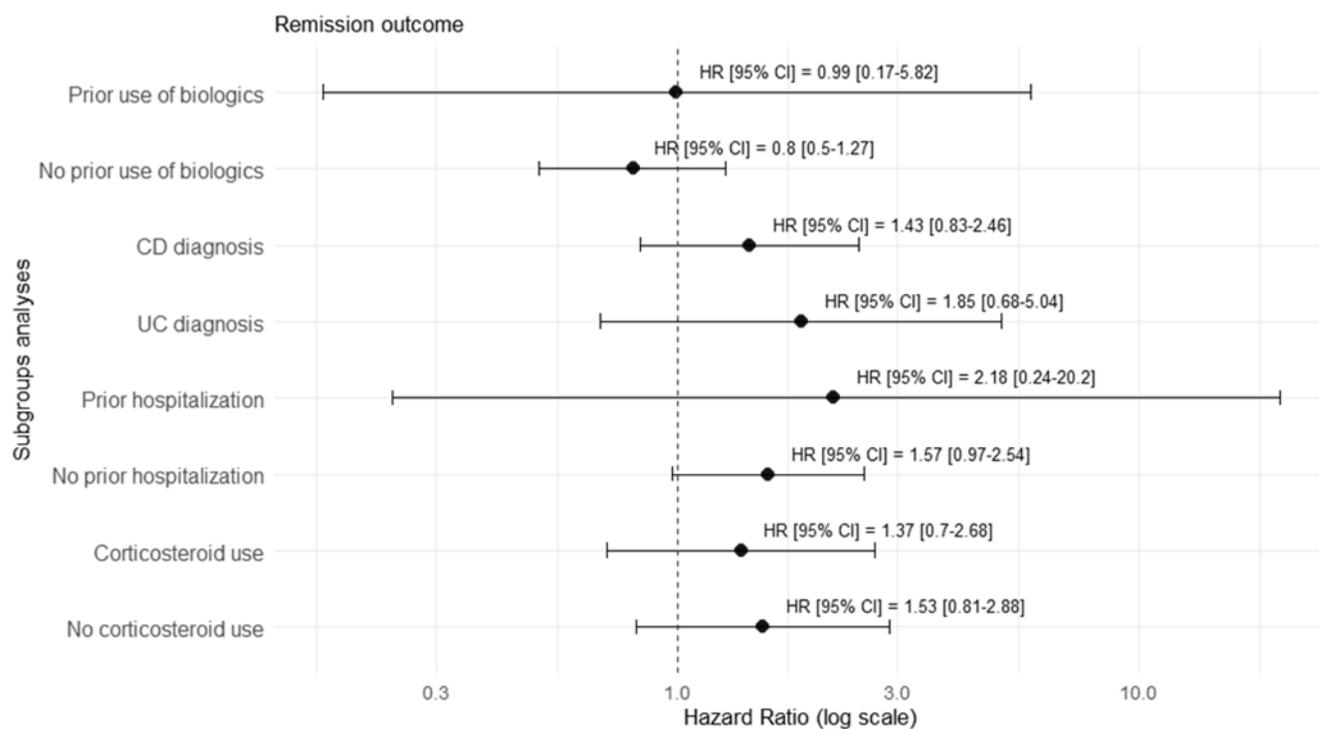
<sup>b</sup> In CD, either a HBI (Harvey-Bradshaw Index) > 8 or a CDAI (Crohn's Disease Activity Index) > 220; in UC, a PMS (Partial Mayo Score) ≥ 5

<sup>c</sup> Current or past 12 months before enrollment

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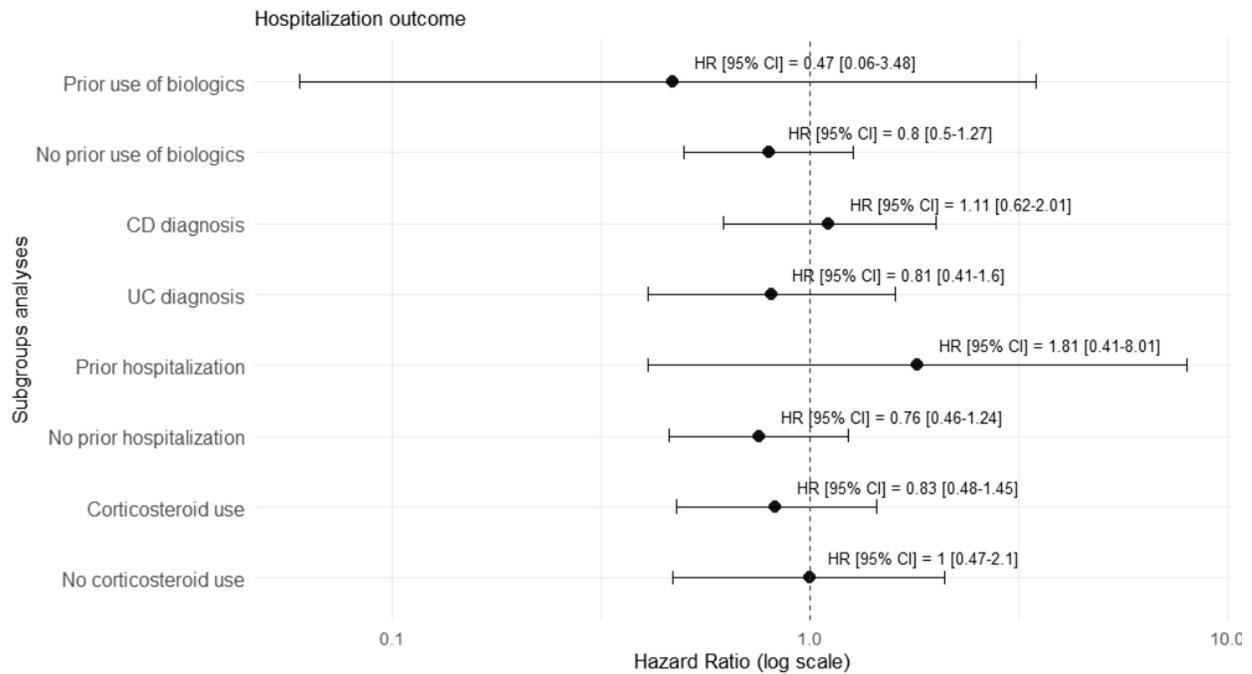
**Supplemental Figure 1 - Flow diagram of cohort derivation**



**Supplemental Figure 2 - Adjusted<sup>a</sup> hazard ratios (HRs, log scale) and 95% confidence interval (95% CI) from subgroup analyses comparing biosimilar versus originator use for first clinical remission. CIRC cohort, Canada, 2018-2024.**

Subgroups include: (i) prior biologic exposure (naïve vs switchers), (ii) IBD type (UC vs CD), (iii) prior hospitalization (yes vs no), and (iv) current or previous corticosteroid use (yes vs no). Across all subgroup analyses, no significant differences were observed in achieving remission between biosimilar and originator users.

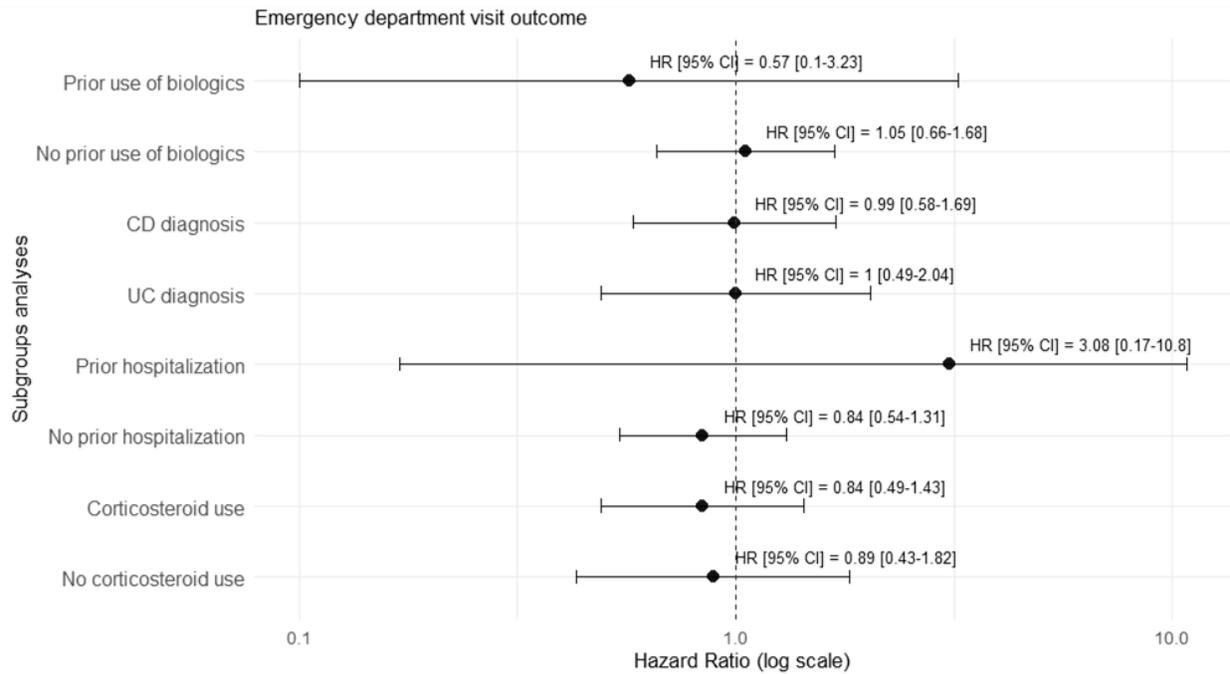
<sup>a</sup> All models were adjusted for the following variables, except when used for stratification: sex, age at IBD diagnosis, disease duration, IBD diagnosis, disease activity, comorbidities, current or previous corticosteroid use, current or previous immunomodulator use, and prior use of other biologics.



**Supplemental Figure 3 - Adjusted<sup>a</sup> hazard ratios (HRs, log scale) and 95% confidence interval (95% CI) from subgroup analyses comparing biosimilar versus originator use for first hospitalization. CIRC cohort, Canada, 2018-2024.**

Subgroups include: (i) prior biologic exposure (naïve vs switchers), (ii) IBD type (UC vs CD), (iii) prior hospitalization (yes vs no), and (iv) current or previous corticosteroid use (yes vs no). Across all subgroup analyses, no significant differences were observed in hospitalization rates between biosimilar and originator users.

<sup>a</sup> All models were adjusted for the following variables, except when used for stratification: sex, age at IBD diagnosis, disease duration, IBD type, disease activity, comorbidities, current or previous corticosteroid use, current or previous immunomodulator use, and prior hospitalization.



**Supplemental Figure 4 – Adjusted<sup>a</sup> hazard ratios (HRs, log scale) and 95% confidence interval (95% CI) from subgroup analyses comparing biosimilar versus originator use for first emergency department visit. CIRC cohort, Canada, 2018-2024.**

Subgroups include: (i) prior biologic exposure (naïve vs switchers), (ii) IBD type (UC vs CD), (iii) prior hospitalization (yes vs no), and (iv) current or previous corticosteroid use (yes vs no). Across all subgroup analyses, no significant differences were observed in ED rates between biosimilar and originator users.

<sup>a</sup> All models were adjusted for the following variables, except when used for stratification: sex, age at IBD diagnosis, disease duration, IBD type, disease activity, comorbidities, current or previous corticosteroid use, current or previous immunomodulator use, and prior ED visit.