

Supplementary Table 1. Evidence Table of Primary Randomized Controlled Trials

Study	Design	Patients (prior anti-TNF exposure or failure/n)	Interventions (n)	Comparators (n)	Primary outcomes
ACT 1 Rutgeerts (2005) ¹	RCT Multinational	Moderate-to-severe UC (0/364)	IFX 5 mg/kg (121) or 10 mg/kg (121) at weeks 0, 2, and 6, then q 8 weeks through 46 weeks	Placebo (121)	<ul style="list-style-type: none"> • Week 8 clinical response: IFX 5 mg/kg or 10 mg/kg vs. placebo (69.4% or 61.5% vs. 37.2%; $P < 0.001$ for both comparisons) • Week 30 clinical response: IFX 5 mg/kg or 10 mg/kg vs. placebo (52.1% or 50.8% vs. 29.8%; $P \leq 0.002$ for both comparisons) • Week 54 clinical response: IFX 5 mg/kg or 10 mg/kg vs. placebo (45.5% or 44.3% vs. 19.8%; $P < 0.001$ for both comparisons)
ACT 2 Rutgeerts (2005) ¹	RCT Multinational	Moderate-to-severe UC (0/364)	IFX 5 mg/kg (121) or 10 mg/kg (120) at weeks 0, 2, 6, then q 8 weeks through 22 weeks	Placebo (123)	<ul style="list-style-type: none"> • Week 8 clinical response: IFX 5 mg/kg or 10 mg/kg vs. placebo (64.5% or 69.2% vs. 29.3%; $P < 0.001$ for both comparisons) • Week 30 clinical response: IFX 5 mg/kg or 10 mg/kg vs. placebo (47.1% or 60.0% vs. 26.0%; $P < 0.001$ for both comparisons)
Jiang (2015) ²	RCT China	Moderate-to-severe UC (0/123)	IFX 5 mg/kg (41) or 3.5 mg/kg (41) at weeks 0, 2, 6, then q 8 weeks through 22 weeks	Placebo (41)	<ul style="list-style-type: none"> • Week 8 clinical response: IFX 5 mg/kg or 3.5 mg/kg vs. placebo (78.1% or 73.1% vs. 36.6%; $P < 0.01$ for both comparisons) • Week 30 clinical response: IFX 3.5 mg/kg or 5 mg/kg vs. placebo (63.4% or 65.8% vs. 26.8%; $P < 0.01$ for both comparisons)
NCT01551290 (2014) ³	RCT China	Moderate-to-severe UC (0/99)	IFX 5 mg/kg at weeks 0, 2, 6, then q 8 weeks through 22 weeks (50)	Placebo (49)	<ul style="list-style-type: none"> • Week 8 clinical response: IFX 5 mg/kg vs. placebo (64.0% vs. 32.7%; $P = 0.0021$)
ULTRA 1 Reinisch (2011) ⁴	RCT Multinational	Moderate-to-severe UC (0/390)	ADA 160/80/40 mg (130) or 80/40/40 mg (130) at weeks 0, 2, 4, and 6	Placebo (130)	<ul style="list-style-type: none"> • Week 8 clinical remission: ADA 80/40/40 mg or 160/80/40 mg vs. placebo (10.0% or 18.5% vs. 9.2%; $P = 0.031$ and $P = 0.833$, respectively)
ULTRA 2 Sandborn (2012) ⁵	RCT Multinational	Moderate-to-severe UC (199/494)	ADA 160/80/40 mg at weeks 0, 2, 4, 6, then q 2 weeks (248) through 52 weeks	Placebo (246)	<ul style="list-style-type: none"> • Week 8 clinical remission: ADA 160/80/40 mg vs. placebo (16.5% vs. 9.3%; $P = 0.019$) • Week 52 clinical remission: ADA 160/80/40 mg vs. placebo (17.3% vs. 8.5%; $P = 0.004$) • Anti-TNF naive: ADA vs. placebo (22.0% vs. 12.4%; $P = 0.029^3$) • Prior anti-TNF exposure: ADA vs. placebo (10.2% vs. 3.0%; $P = 0.039^3$)

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Supplementary Table 1. Continued

Study	Design	Patients (prior anti-TNF exposure or failure/n)	Interventions (n)	Comparators (n)	Primary outcomes
Suzuki (2014) ⁸	RCT Japan	Moderate-to-severe UC (0/273)	ADA 160/80/40 mg (87) or 80/40/40 mg (90) at weeks 0, 2, 4, 6, then q 2 weeks through 32 weeks	Placebo (96)	<ul style="list-style-type: none"> • Week 8 clinical response: ADA 160/80/40 mg or 80/40/40 mg vs. placebo (50% or 43% vs. 35%; $P=0.044$ for 160/80 vs. placebo) • Week 52 clinical response: ADA 40 mg q 2 weeks vs. placebo (31% vs. 18%; $P=0.021$)
PURSUIT-SC Sandborn (2014) ⁹	RCT Multinational	Moderate-to-severe UC (0/1,064)	GLM 200/100 mg (331) or 400/200 mg (331) at weeks 0 and 2	Placebo (331)	<ul style="list-style-type: none"> • Week 6 clinical response: GLM 200/100 mg or 400/200 mg vs. placebo (51.0% or 54.9% vs. 30.3%; $P<0.0001$ for both comparisons)
PURSUIT-M Sandborn (2014) ⁸	RCT Multinational	Moderate-to-severe UC (0/464)	GLM 50 (154) or 100 mg (154) q 4 weeks through 52 weeks	Placebo (156)	<ul style="list-style-type: none"> • Week 54 clinical response: GLM 50 mg or 100 mg vs. placebo (47.0% or 49.7% vs. 31.2%; $P=0.010$ and $P<0.001$, respectively)
PURSUIT-J Hibi (2017) ⁹	RCT Japan	Moderate-to-severe UC (0/63)	GLM 100 mg (32) q 4 weeks through 52 weeks	Placebo (31)	<ul style="list-style-type: none"> • Week 54 clinical response: GLM vs. placebo (56.3% vs. 19.4%; $\Delta 36.9$; 95% CI, 14.8-59.0)
GEMINI 1 Feagan (2013) ¹⁰	RCT Multinational	Moderate-to-severe UC (431/895)	Induction: VDZ 300 mg at weeks 0 and 2 (225) Maintenance: VDZ q 8 weeks (122) or q 4 weeks (125) through 52 weeks	Induction: placebo (149) Maintenance: placebo (126)	<ul style="list-style-type: none"> • Week 6 clinical response: VDZ vs. placebo (47.1% vs. 25.5%; $P<0.001$) • Prior anti-TNF failure: VDZ vs. placebo (39.0% vs. 20.6%; $P=0.01^a$) • Week 52 clinical remission: VDZ q 8 weeks or q 4 weeks vs. placebo (41.8% or 44.8% vs. 15.9%; $P\leq 0.0001$ for both comparisons) • Prior anti-TNF failure: VDZ q 8 weeks vs. placebo (37.2% or 35.0% vs. 5.3%; $P<0.001$ for both comparisons³)
Motoya (2019) ¹¹	RCT Japan	Moderate-to-severe UC (107/292)	Induction: VDZ 300 mg at weeks 0 and 2 (164) Maintenance: VDZ 300 mg (41) at week 14, then q 8 weeks through 54 weeks	Induction: placebo (82) Maintenance: placebo (42)	<ul style="list-style-type: none"> • Week 10 clinical response: VDZ vs. placebo (39.6% vs. 32.9%; $P=0.27$) • Prior anti-TNF exposure: VDZ vs. placebo (27.1% vs. 29.3%; $\Delta -2.2$; 95% CI, -19.0 to 14.6³) • Week 60 clinical remission: VDZ vs. placebo (56.1% vs. 31.0%; $P=0.0210$) • Prior anti-TNF exposure: VDZ vs. placebo (58.8% vs. 21.4%; $\Delta 37.4$; 95% CI, 5.6-69.2³)
VARSITY Sands (2019) ¹²	RCT Multinational	Moderate-to-severe UC (151/769)	VDZ 300 mg at weeks 0, 2, 6, then q 8 weeks (383) through 46 weeks	ADA 160/80/40 mg at weeks 0, 2, 4, then q 2 weeks (386) through 50 weeks	<ul style="list-style-type: none"> • Week 52 clinical remission: ADA vs. VDZ (22.5% vs. 31.3%; $P=0.006$) • Prior anti-TNF exposure: VDZ vs. ADA (20.3% vs. 16.0%; $\Delta 4.2$; 95% CI, -7.8 to 16.2³)
VISIBLE 1 Sandborn (2020) ¹³	RCT Multinational	Moderate-to-severe UC (84/216)	VDZ 300 mg IV at weeks 0 and 2, then 108 mg SC (106) q 2 weeks or 300 mg IV (54) q 8 weeks	VDZ 300 mg IV at weeks 0 and 2, then placebo (56)	<ul style="list-style-type: none"> • Week 52 clinical remission: VDZ SC or IV vs. placebo (46.2% or 42.6% vs. 14.3%; $P<0.001$ for both comparisons)

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Supplementary Table 1. Continued

Study	Design	Patients (prior anti-TNF exposure or failure)(n)	Interventions (n)	Comparators (n)	Primary outcomes
UNIFI Sands (2019) ¹⁴	RCT Multinational	Moderate-to-severe UC (491/961)	Induction: UST 6 mg/kg (322) or 130 mg (320) IV at week 0 Maintenance: UST 90 mg SC either q 12 weeks (172) or q 8 weeks (176) through 44 weeks	Induction: placebo (319) Maintenance: placebo (175)	<ul style="list-style-type: none"> • Week 8 clinical remission: UST 130 mg or 6 mg/kg vs. placebo (15.6% or 15.5% vs. 5.3%; $P < 0.001$ for both comparisons) • Prior biologics failure: UST 130 mg or 6 mg/kg vs. placebo (11.6% or 12.7% vs. 1.2%) • Week 44 clinical remission: UST 90 mg q 8 weeks or q 12 weeks vs. placebo (43.8% or 38.4% vs. 24.0%; $P < 0.001$ and $P = 0.002$, respectively^a) • Prior biologics failure: UST 90 mg q 8 weeks or q 12 weeks vs. placebo (39.6% or 22.9% vs. 17.0%^b)
OCTAVE 1 Sandborn (2017) ¹⁵	RCT Multinational	Moderate-to-severe UC (319/614)	TFC 10 mg b.i.d. (476)	Placebo (122)	<ul style="list-style-type: none"> • Week 8 clinical remission: TFC vs. placebo (18.5% vs. 8.2%; $P = 0.0007$) • Prior anti-TNF failure: TFC vs. placebo (11.1% vs. 1.6%^a)
OCTAVE 2 Sandborn (2017) ¹⁵	RCT Multinational	Moderate-to-severe UC (299/547)	TFC 10 mg b.i.d. (429)	Placebo (112)	<ul style="list-style-type: none"> • Week 8 clinical remission: TFC vs. placebo (16.6% vs. 3.6%; $P < 0.001$) • Prior anti-TNF failure: TFC vs. placebo (11.7% vs. 0%^a)
OCTAVE Sustain Sandborn (2017) ¹⁵	RCT Multinational	Moderate-to-severe UC (283/593)	TFC 5 mg b.i.d. (198) or 10 mg b.i.d. (197) through 52 weeks	Placebo (198)	<ul style="list-style-type: none"> • Week 52 clinical remission: TFC 5 mg b.i.d. or 10 mg b.i.d. vs. placebo (34.3% or 40.6% vs. 11.1%; $P < 0.001$ for both comparisons)
Steenholdt (2014) ¹⁶	RCT Denmark	CD patients with secondary IFX failure (69)	Interventions based on serum IFX and IFX antibody levels using the proposed algorithm (33)	IFX dose intensification q 4 weeks (36)	<ul style="list-style-type: none"> • Costs: algorithm group vs. IFX dose intensification group (€6,038 vs. €9,178; $P < 0.001$) • Response rates: algorithm group vs. IFX dose intensification group (57.6% vs. 52.8%; $P = 0.81$)
UC SUCCESS Panaccione (2014) ¹⁷	RCT Multinational	Moderate-to-severe UC (0/239)	IFX 5 mg/kg at weeks 0, 2, 6, 14 + AZA 2.5 mg/kg daily (78)	IFX 5 mg/kg alone (77) or AZT 2.5 mg/kg daily alone (76)	<ul style="list-style-type: none"> • Week 16 corticosteroid-free remission: IFX/AZA vs. IFX alone or AZA alone (39.7% vs. 22.1% or 23.7%; $P = 0.017$ and $P = 0.032$, respectively)
PALETCD Ye (2019) ¹⁸	RCT Multinational	Moderate-to-severe CD (0/220)	CT-P13 (111)	Originator IFX (109)	<ul style="list-style-type: none"> • Week 6 clinical response (CDAI reduction -70): CT-P13 vs. originator IFX (69.4% vs. 74.3%; $\Delta -4.9\%$; 95% CI, -16.9 to 7.3)
NOR-SWITCH Jørgensen (2017) ¹⁹	RCT Norway	Stable state with originator IFX for at least 6 months (105/481)	Switch to CT-P13 (240; UC=47) through 52 weeks	Continue originator IFX (241; UC=46)	<ul style="list-style-type: none"> • Week 52 disease worsening: CT-P13 vs. originator IFX (29.6% vs. 26.2%; $\Delta -4.4\%$; 95% CI, -12.7 to 3.9) • UC: CT-P13 vs. originator IFX (11.9% vs. 9.1%; $\Delta -2.6\%$; 95% CI, -15.2 to 10.0)
Jämerot (2005) ²⁰	RCT Sweden and Denmark	Acute severe UC (0/45)	IFX 5 mg/kg single dose (24)	Placebo (21)	<ul style="list-style-type: none"> • Colectomy or death within 3-month: IFX vs. placebo (29.2% vs. 66.7%; $P = 0.017$)
Laharie (2012) ²¹	RCT Multinational	Acute severe UC (0/115)	CS 2 mg/kg/day IV for 1 week, then PO through 98 days (58) IFX 5 mg/kg on days 0, 14, and 42 (57)	NA	<ul style="list-style-type: none"> • Colectomy or death within 3-month: CS vs. IFX (60.3% vs. 54.4%; $P = 0.52$)

^aPrior anti-TNF exposure or failure.

^bPrior biologics failure.

TNF, tumor necrosis factor; RCT, randomized controlled study; UC, ulcerative colitis; IFX, infliximab; ADA, adalimumab; GLM, golimumab; CI, confidence interval; VDZ, vedolizumab; SC, subcutaneous; IV, intravenous; UST, ustekinumab; TFC, tofacitinib; CD, Crohn's disease; AZA, azathioprine; AZT, azathioprine; CDAI, Crohn's Disease Activity Index; CS, cyclosporine; PO, per oral; NA, not available; q, every day; b.i.d., twice a day.