

SUPPLEMENTAL DATA FILE

**INTEGRATION OF CRO AND CDMO SERVICES WITH A SINGLE VENDOR: NET
FINANCIAL GAINS FOR CLINICAL TRIALS**

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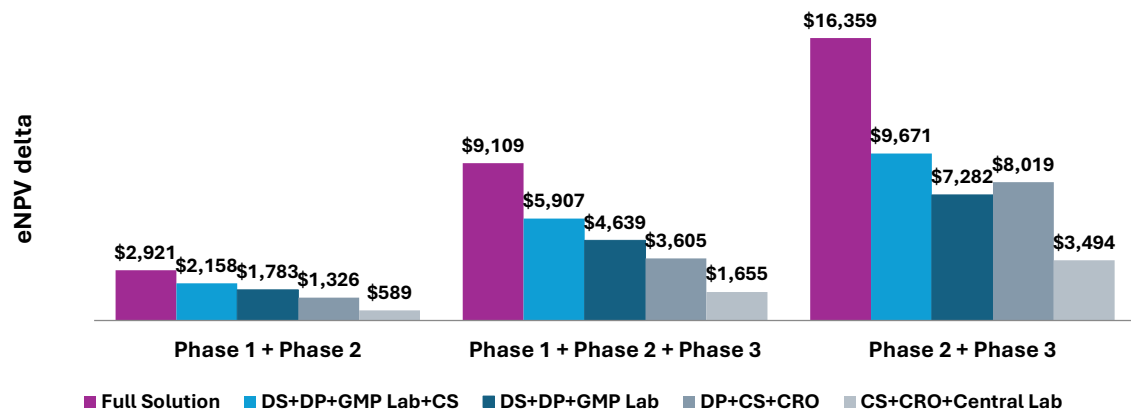
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Table S1. Reduction in Trial Cycle Times with Integrated CDMO-CRO Services for mAb Oncology Indications by Grouped Services

	Reduction in Phase Duration (mos.)				
	Full Model	DS+DP+GMP Lab+CS	DS+DP+GMP Lab	DP+CS+CRO	CS+CRO+Central Lab
Phase 1	12.7	11.5	9.7	3.5	2.7
Phase 2	6.8	3.0	2.1	6.0	3.5
Phase 3	14.5	9.0	6.7	6.0	3.5

DS = drug substance; DP = drug product; GMP = Good Manufacturing Practices; CS = clinical supplies

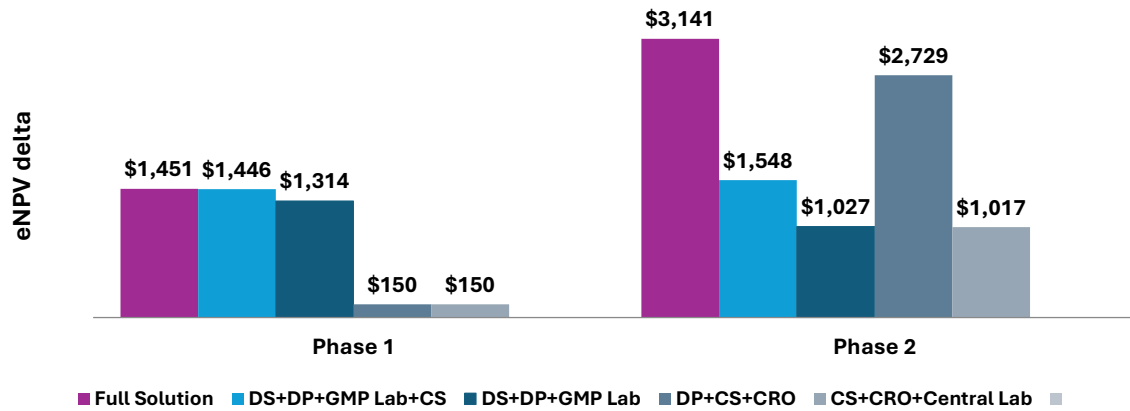
Figure S1. Gains in eNPV (thousands 2023 USD) per Investigational mAb Oncology Indication with Integrated CDMO-CRO Solutions by Grouped Services (multiple phases)



Costs and benefits discounted to the start of the earliest phase

eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phases using a single vendor versus using a multi-vendor industry solution.

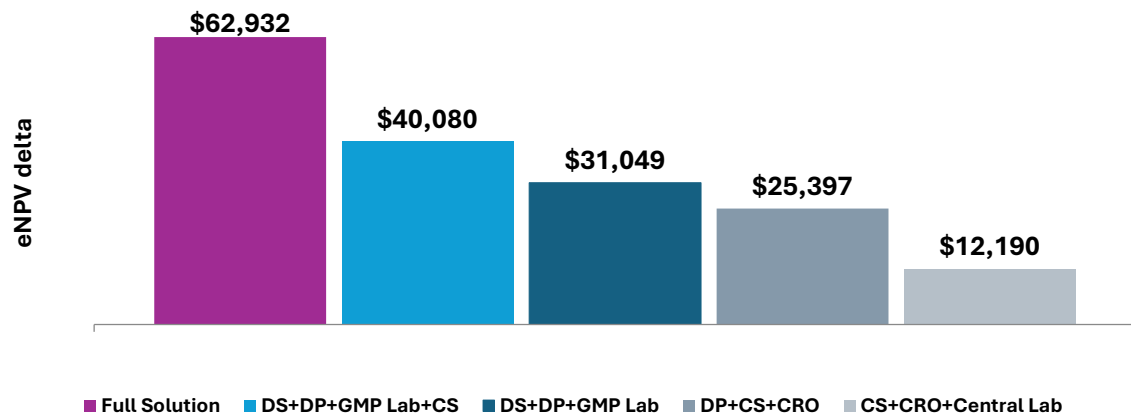
Figure S2. Gains in eNPV (thousands 2023 USD) per Investigational mAb Oncology Indication with Integrated CDMO-CRO Solutions by Grouped Services (single phases)



Costs and benefits discounted to the start of the earliest phase

eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phases using a single vendor versus using a multi-vendor industry solution.

Figure S3. Gains in eNPV (thousands 2023 USD) per Investigational mAb Oncology Indication with Integrated CDMO-CRO Solutions by Grouped Services (phase 3)



Costs and benefits discounted to the start of the earliest phase

eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phases using a single vendor versus using a multi-vendor industry solution.

Table S2. Incremental eNPV (thousands 2023 USD) for Integrated Services (full range of capabilities) for mAb Oncology Indications by Mean Phase Cost

	Percent of Base Case		
	Base (100)%	-20%	+20%
Phase 1	\$1,451	\$1,577	\$1,325
Phase 2	\$3,141	\$3,285	\$2,998
Phase 3	\$62,932	\$66,013	\$59,851

Costs and benefits discounted to the start of the earliest phase
eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phase using a single vendor vs a multi-vendor industry solution.

Figure S4. eNPV delta (thousands 2023 USD) for Integrated Services with Full Capabilities for Multiple Clinical Phases (Phase 1 + Phase 2 + Phase 3) for mAb oncology indications

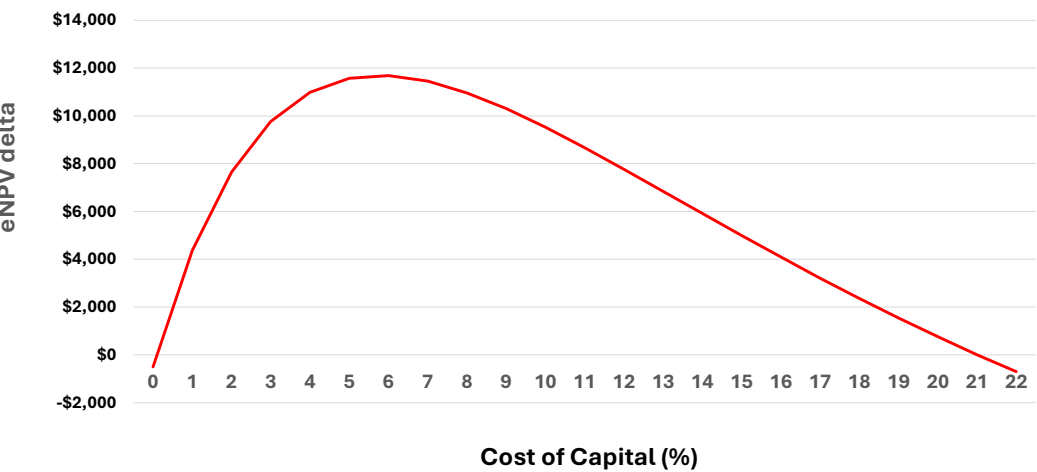


Table S3. Incremental eNPV (thousands 2023 USD) for Integrated Services (full range of capabilities) for mAb Oncology Indications for Individual and Multiple Phases by the Cost of Capital

	Cost of Capital		
	7.0%	10.5% (base)	14.0%
Phase 1	\$2,850	\$1,451	-\$127
Phase 2	\$4,254	\$3,141	\$1,651
Phase 3	\$62,755	\$62,932	\$57,198
Phase 1 + Phase 2	\$4,868	\$2,921	\$636
Phase 1 + Phase 2 + Phase 3	\$11,450	\$9,109	\$5,919
Phase 2 + Phase 3	\$18,128	\$16,359	\$13,085

Costs and benefits discounted to the start of the earliest phase

eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phase using a single vendor vs a multi-vendor industry solution.

Table S4. Incremental eNPV (thousands 2023 USD) for Integrated Services (full range of capabilities) for mAb Oncology Indications for Individual and Multiple Phases by Molecule Peak Annual Net Sales

	Molecule Peak Annual Net Sales		
	\$2,878 (-25%)	\$3,837 (base)	\$4,796 (+25%)
Phase 1	-\$93	\$1,451	\$2,995
Phase 2	\$1,212	\$3,141	\$5,070
Phase 3	\$42,878	\$62,932	\$82,987
Phase 1 + Phase 2	\$475	\$2,921	\$5,368
Phase 1 + Phase 2 + Phase 3	\$4,690	\$9,109	\$13,527
Phase 2 + Phase 3	\$10,218	\$16,359	\$22,500

Costs and benefits discounted to the start of the earliest phase

eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phase using a single vendor vs a multi-vendor industry solution.

Table S5. Incremental eNPV (thousands 2023 USD) for Integrated Services (full range of capabilities) for mAb Oncology Indications for Individual and Multiple Phases by Years to Peak Sales

	Years to Peak Sales		
	7	8 (base)	9
Phase 1	\$1,571	\$1,451	\$1,340
Phase 2	\$3,291	\$3,141	\$4,973
Phase 3	\$64,489	\$62,932	\$61,493
Phase 1 + Phase 2	\$3,111	\$2,921	\$2,746
Phase 1 + Phase 2 + Phase 3	\$9,452	\$9,109	\$8,792
Phase 2 + Phase 3	\$16,835	\$16,359	\$15,918

Costs and benefits discounted to the start of the earliest phase

eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phase using a single vendor vs a multi-vendor industry solution.

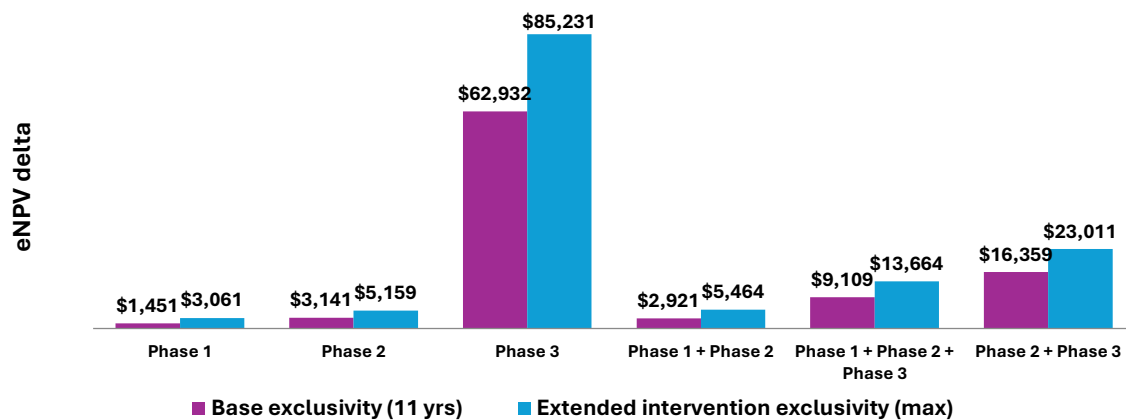
Table S6. Incremental eNPV (thousands 2023 USD) for Integrated Services (full range of capabilities) for mAb Oncology Indications for Individual and Multiple Phases by Years of Market Exclusivity

	Years of Market Exclusivity				
	11 (base)	12	13	14	15
Phase 1	\$1,451	\$1,604	\$1,741	\$1,862	\$1,970
Phase 2	\$3,141	\$3,333	\$3,503	\$3,655	\$3,790
Phase 3	\$62,932	\$64,921	\$66,697	\$68,277	\$69,677
Phase 1 + Phase 2	\$2,921	\$3,164	\$3,381	\$3,573	\$3,744
Phase 1 + Phase 2 + Phase 3	\$9,109	\$9,547	\$9,938	\$10,286	\$10,595
Phase 2 + Phase 3	\$16,359	\$16,968	\$17,512	\$17,996	\$18,424

Costs and benefits discounted to the start of the earliest phase

eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phase using a single vendor vs a multi-vendor industry solution.

Figure S5. Gains in eNPV (thousands 2023 USD) per Investigational mAb Oncology Indication with Integrated CDMO-CRO Solutions and Extended Length of Market Exclusivity



Costs and benefits discounted to the start of the earliest phase

eNPV delta = difference in eNPV for sponsors between conducting all trials for an oncology indication in the given phases using a single vendor versus using a multi-vendor industry solution.