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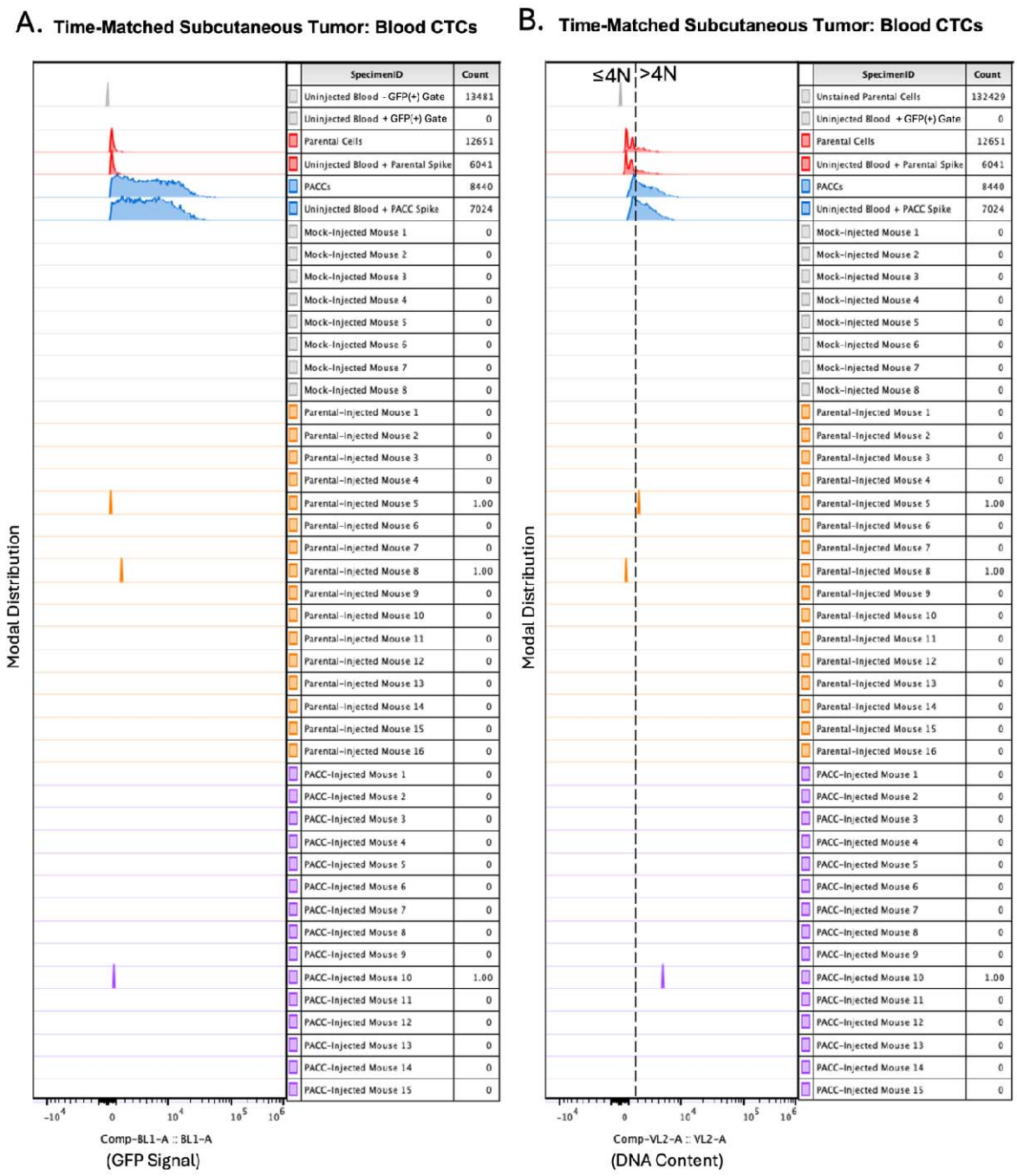

Supplemental Figure S1:

Time-matched, subcutaneous injection of PC3-GFP-Luc parental population vs. PACC-enriched population: A) Raw cytometric data reporting GFP+ signal across all blood samples. B) Raw cytometric data reporting DNA content of GFP+ cells across all blood samples.

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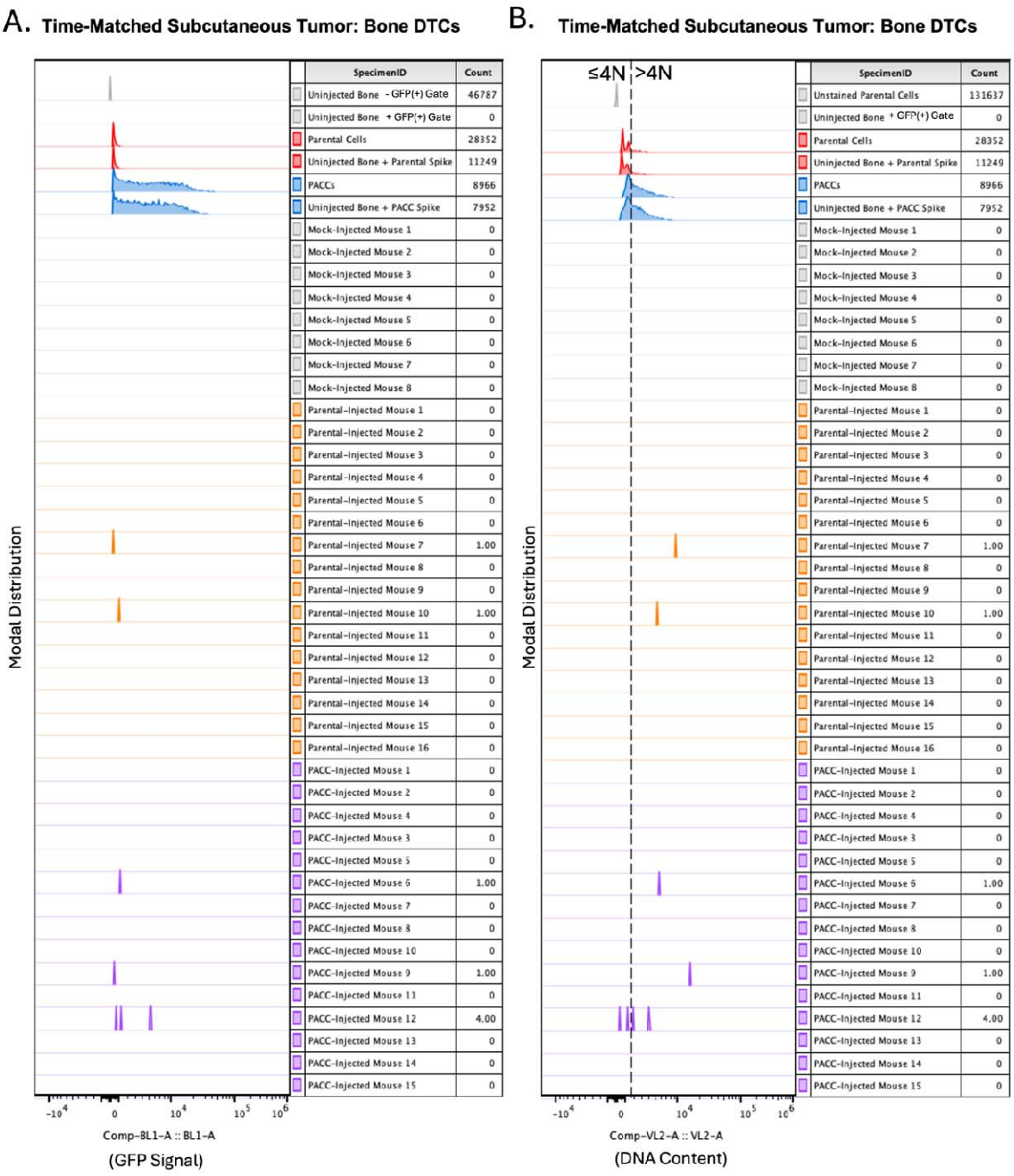

Supplemental Figure S2:

Time-matched, subcutaneous injection of PC3-GFP-Luc parental population vs. PACC-enriched population: A) Raw cytometric data reporting GFP+ signal across all bone marrow samples. B) Raw cytometric data reporting DNA content of GFP+ cells across all bone marrow samples.

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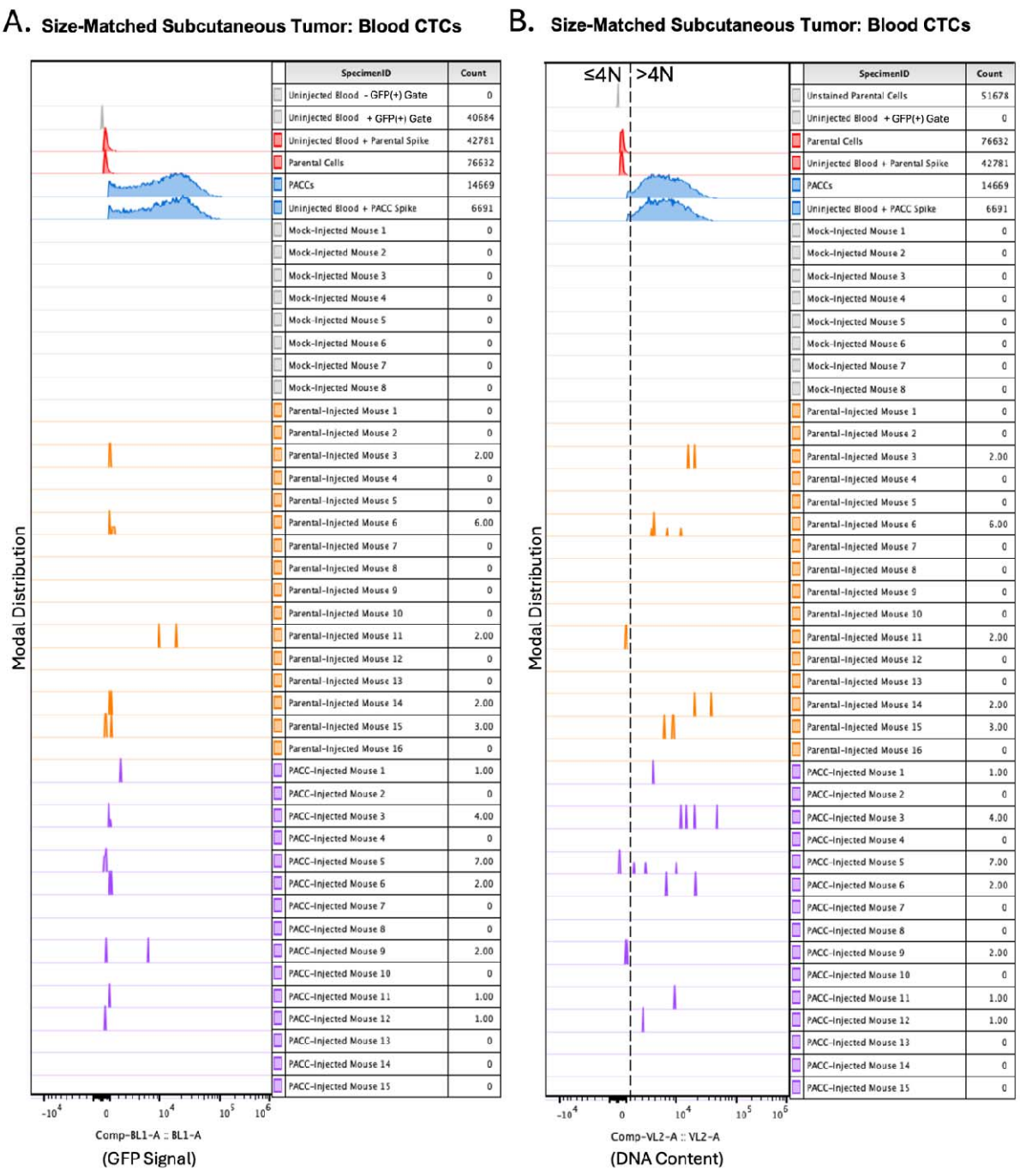

Supplemental Figure S3:

Size-matched, subcutaneous injection of PC3-GFP-Luc parental population vs. PACC-enriched population: A) Raw cytometric data reporting GFP+ signal across all blood samples. B) Raw cytometric data reporting DNA content of GFP+ cells across all blood samples.

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Supplemental Figure S4:

Size-matched, subcutaneous injection of PC3-GFP-Luc parental population vs. PACC-enriched population: A) Raw cytometric data reporting GFP+ signal across all bone marrow samples. B) Raw cytometric data reporting DNA content of GFP+ cells across all bone marrow samples.

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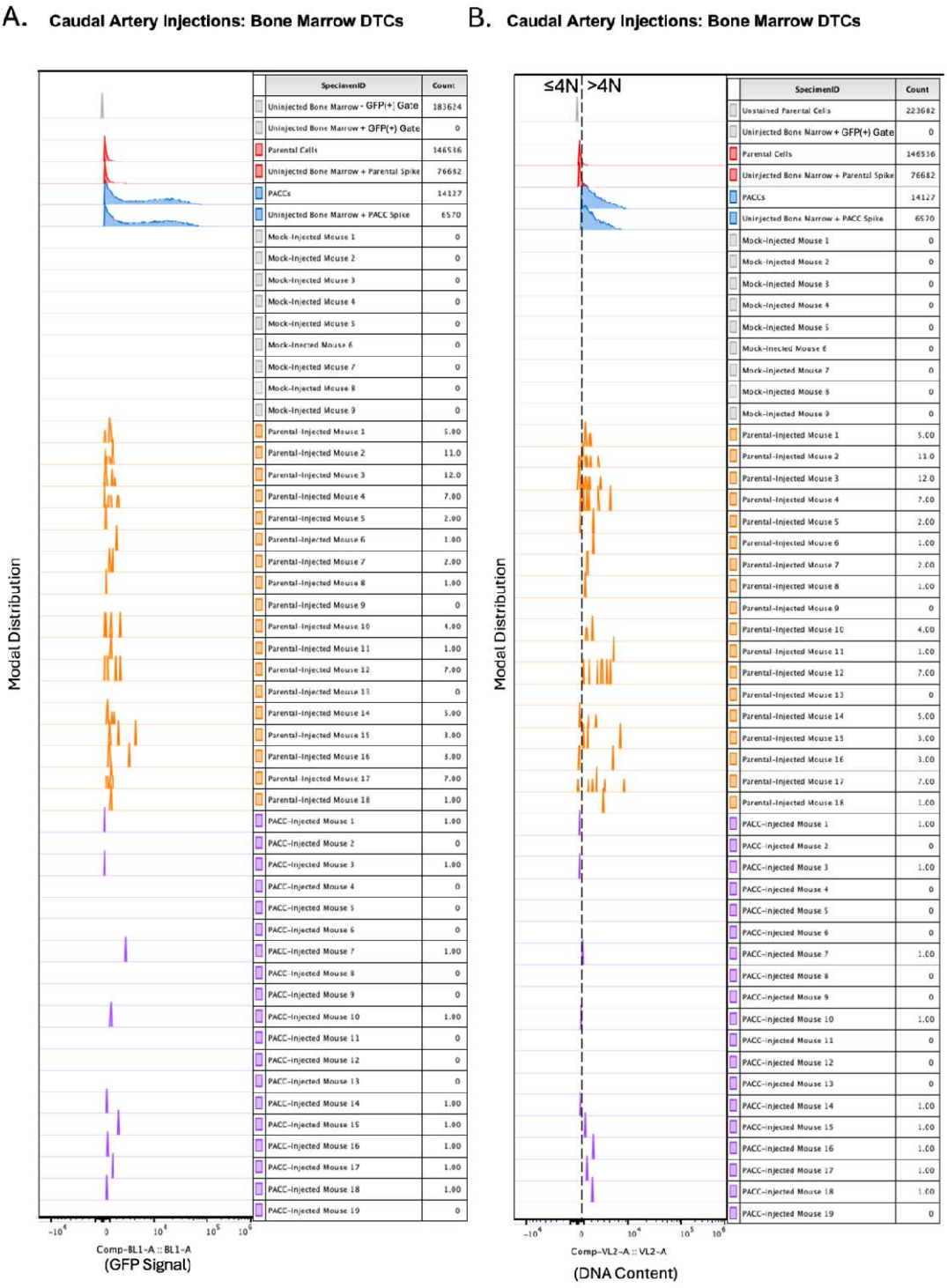

Supplemental Figure S5:

Caudal Artery injection of PC3-GFP-Luc parental population vs. PACC-enriched population: A) Raw cytometric data reporting GFP+ signal across all bone marrow samples. B) Raw cytometric data reporting DNA content of GFP+ cells across all bone marrow samples.

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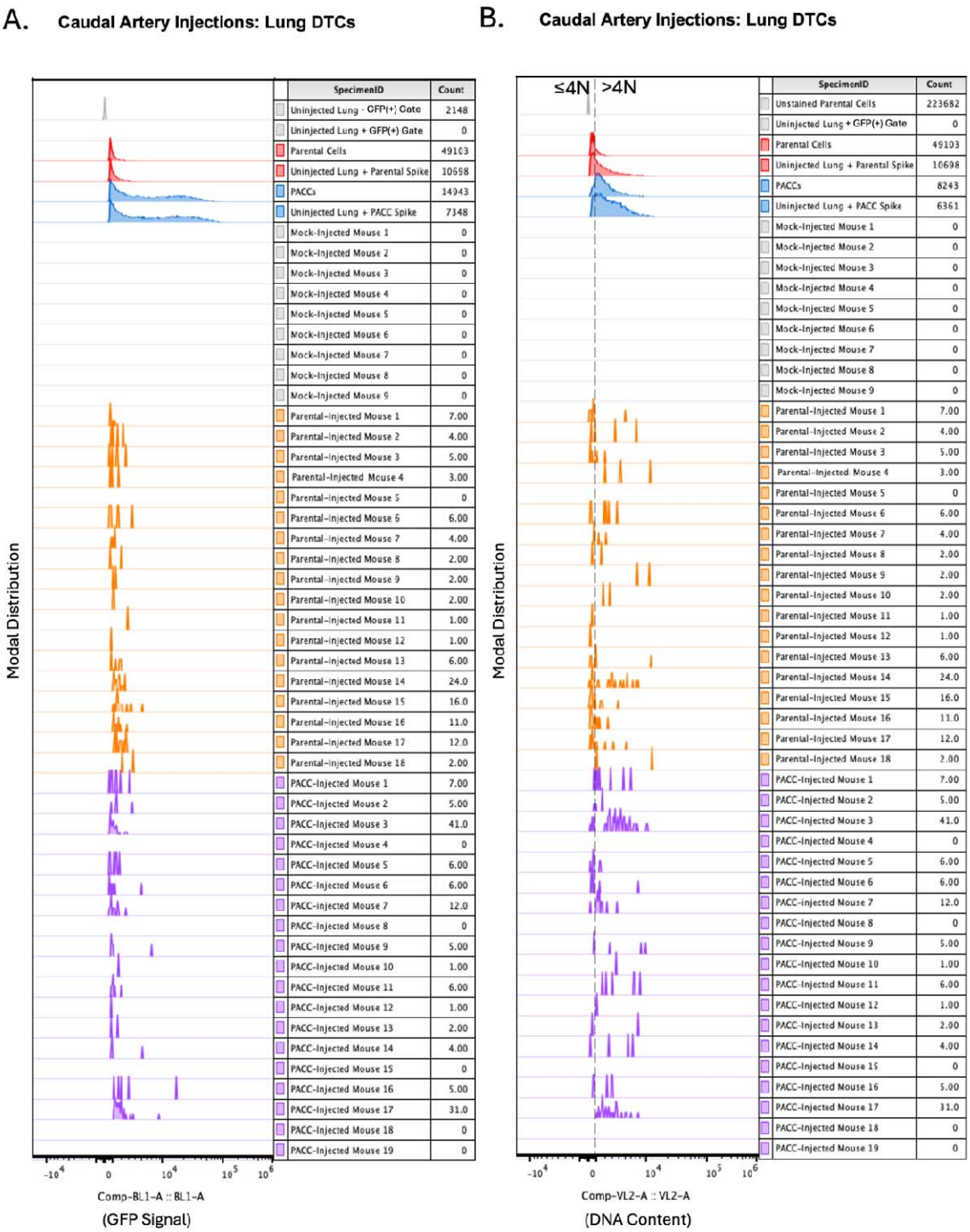

SpecimenID	Count
Uninjected Lung - GFP(+) Gate	2148
Uninjected Lung + GFP(+) Gate	0
Parental Cells	49103
Uninjected Lung + Parental Spike	10698
PACCs	14943
Uninjected Lung + PACC Spike	7348
Mock-Injected Mouse 1	0
Mock-Injected Mouse 2	0
Mock-Injected Mouse 3	0
Mock-Injected Mouse 4	0
Mock-Injected Mouse 5	0
Mock-Injected Mouse 6	0
Mock-Injected Mouse 7	0
Mock-Injected Mouse 8	0
Mock-Injected Mouse 9	0
Parental-Injected Mouse 1	7.00
Parental-Injected Mouse 2	4.00
Parental-Injected Mouse 3	5.00
Parental-Injected Mouse 4	3.00
Parental-Injected Mouse 5	0
Parental-Injected Mouse 6	6.00
Parental-Injected Mouse 7	4.00
Parental-Injected Mouse 8	2.00
Parental-Injected Mouse 9	2.00
Parental-Injected Mouse 10	2.00
Parental-Injected Mouse 11	1.00
Parental-Injected Mouse 12	1.00
Parental-Injected Mouse 13	6.00
Parental-Injected Mouse 14	24.0
Parental-Injected Mouse 15	16.0
Parental-Injected Mouse 16	11.0
Parental-Injected Mouse 17	12.0
Parental-Injected Mouse 18	2.00
PACC-Injected Mouse 1	7.00
PACC-Injected Mouse 2	5.00
PACC-Injected Mouse 3	41.0
PACC-Injected Mouse 4	0
PACC-Injected Mouse 5	6.00
PACC-Injected Mouse 6	6.00
PACC-Injected Mouse 7	12.0
PACC-Injected Mouse 8	0
PACC-Injected Mouse 9	5.00
PACC-Injected Mouse 10	1.00
PACC-Injected Mouse 11	6.00
PACC-Injected Mouse 12	1.00
PACC-Injected Mouse 13	2.00
PACC-Injected Mouse 14	4.00
PACC-Injected Mouse 15	0
PACC-Injected Mouse 16	5.00
PACC-Injected Mouse 17	31.0
PACC-Injected Mouse 18	0
PACC-Injected Mouse 19	0

SpecimenID	Count
Unstained Parental Cells	223682
Uninjected Lung + GFP(+) Gate	0
Parental Cells	49103
Uninjected Lung + Parental Spike	10698
PACCs	8243
Uninjected Lung + PACC Spike	6361
Mock-Injected Mouse 1	0
Mock-Injected Mouse 2	0
Mock-Injected Mouse 3	0
Mock-Injected Mouse 4	0
Mock-Injected Mouse 5	0
Mock-Injected Mouse 6	0
Mock-Injected Mouse 7	0
Mock-Injected Mouse 8	0
Mock-Injected Mouse 9	0
Parental-Injected Mouse 1	7.00
Parental-Injected Mouse 2	4.00
Parental-Injected Mouse 3	5.00
Parental-Injected Mouse 4	3.00
Parental-Injected Mouse 5	0
Parental-Injected Mouse 6	6.00
Parental-Injected Mouse 7	4.00
Parental-Injected Mouse 8	2.00
Parental-Injected Mouse 9	2.00
Parental-Injected Mouse 10	2.00
Parental-Injected Mouse 11	1.00
Parental-Injected Mouse 12	1.00
Parental-Injected Mouse 13	6.00
Parental-Injected Mouse 14	24.0
Parental-Injected Mouse 15	16.0
Parental-Injected Mouse 16	11.0
Parental-Injected Mouse 17	12.0
Parental-Injected Mouse 18	2.00
PACC-Injected Mouse 1	7.00
PACC-Injected Mouse 2	5.00
PACC-Injected Mouse 3	41.0
PACC-Injected Mouse 4	0
PACC-Injected Mouse 5	6.00
PACC-Injected Mouse 6	6.00
PACC-Injected Mouse 7	12.0
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PACC-Injected Mouse 13	2.00
PACC-Injected Mouse 14	4.00
PACC-Injected Mouse 15	0
PACC-Injected Mouse 16	5.00
PACC-Injected Mouse 17	31.0
PACC-Injected Mouse 18	0
PACC-Injected Mouse 19	0

Supplemental Figure S6:

Caudal Artery injection of PC3-GFP-Luc parental population vs. PACC-enriched population: A) Raw cytometric data reporting GFP+ signal across all lung tissue samples. B) Raw cytometric data reporting DNA content of GFP+ cells across all lung tissue samples.

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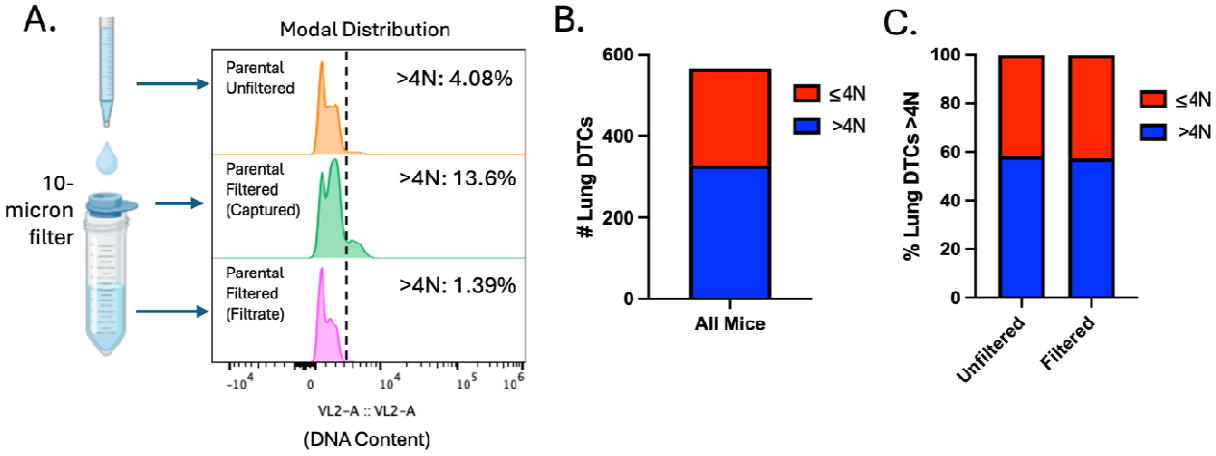
Supplemental Figure S7:



Tail Vein injection of PC3-GFP-Luc parental population vs. PACC-depleted parental population: A) Flow-cytometric ploidy analysis of injected cells per injection group. B) Proportion of lung DTCs with >4N DNA content across all experimental mice. C) Comparative proportions of lung DTCs with >4N DNA content between two injection groups.

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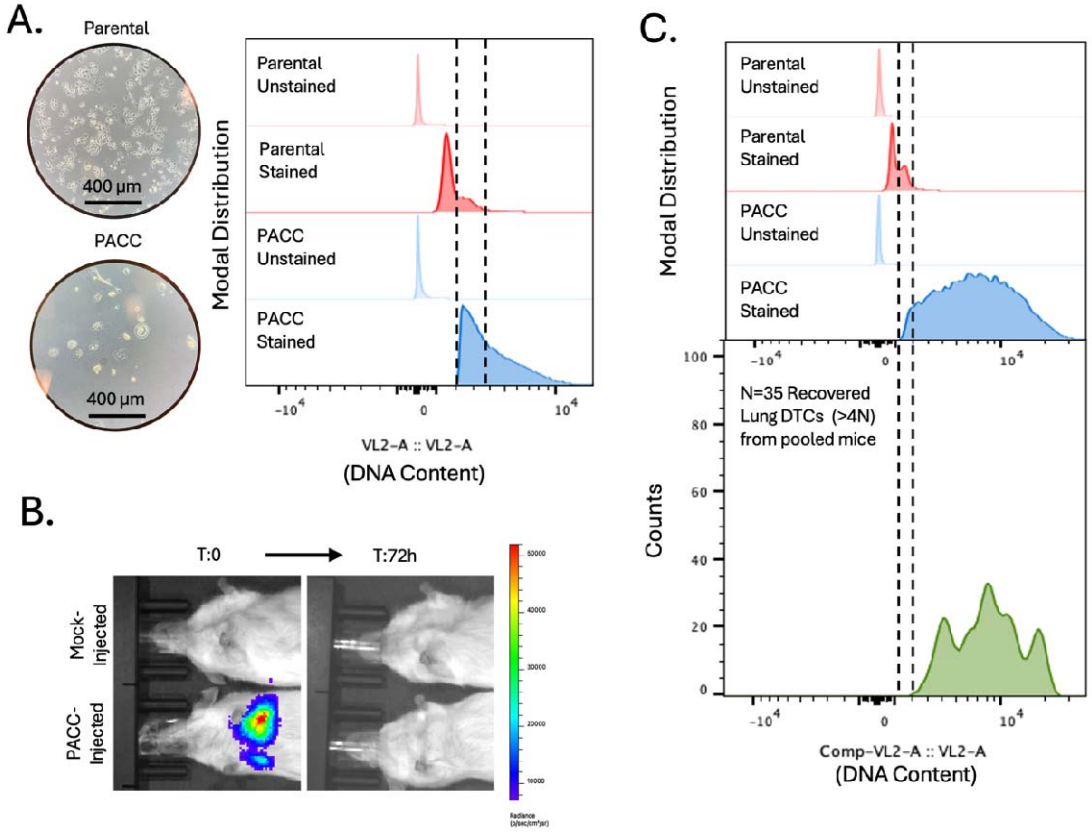

Supplemental Figure S8:

Tail Vein injection of PC3-GFP-Luc parental population vs. PACC-enriched population: A) Light microscopy photos and flow-cytometric ploidy analysis of injected cells per injection group. B) Representative BLI images capturing the cellular distribution and signal intensity immediately following tail vein injection and 3 days following tail vein injection. C) Raw cytometric data reporting the presence of >4N Lung DTCs in a pooled sample 21 days following PACC injection.

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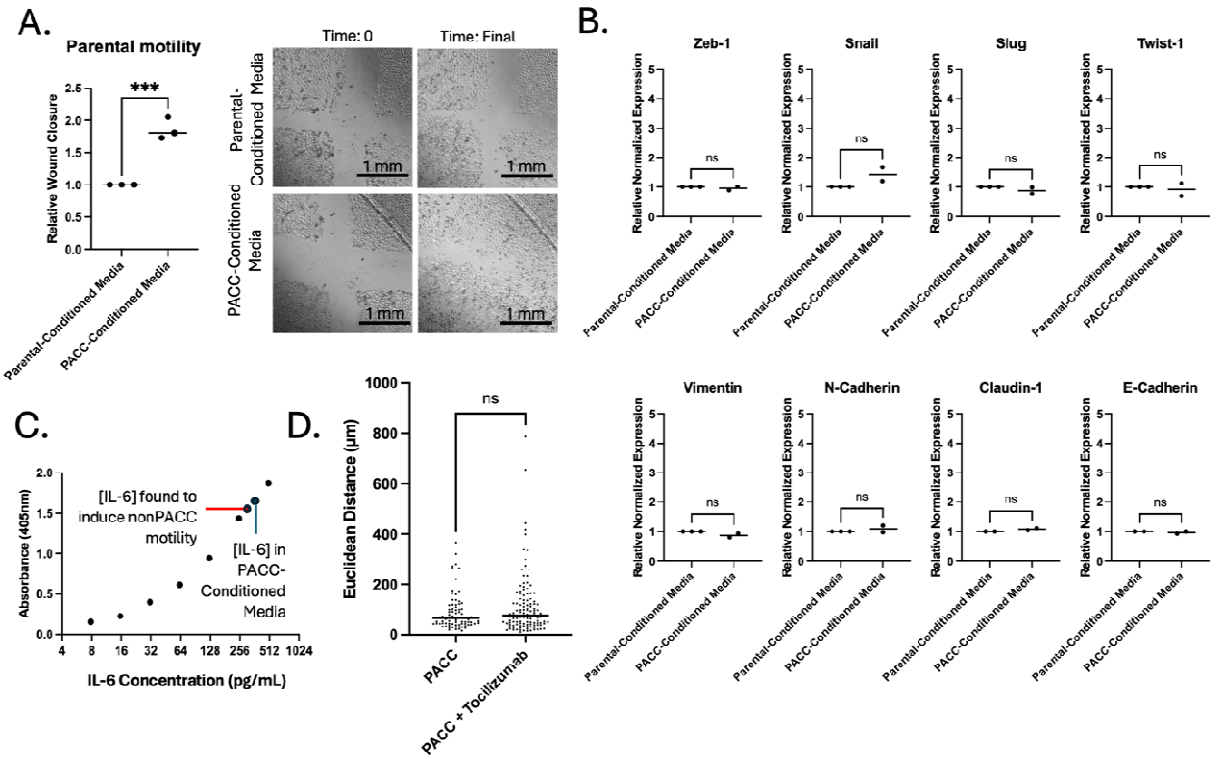

584 **Supplemental Figure S9:**
585 PACCs have a pro-metastatic secretory profile: A) Wound-healing assay to
586 measure the differential motility of a PC3-Luc population exposed to parental-
587 conditioned media vs. PACC-conditioned media, where each reported biological
588 replicate is an average of two technical replicates. B) RNA expression of a panel of
589 EMT markers by RTqPCR in a PC3-Luc parental population exposed to parental-
590 conditioned media vs. PACC-conditioned media, were each biological replicate reported
591 is an average of three technical replicates. C) Elisa assay to measure the concentration
592 of IL6 in PACC conditioned media. D) Single cell tracking to measure the effects of
593 addition of Tocilizumab on the motility of a PACCs.
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