

Supplementary Material

(-)-Oleocanthal Prevents Breast Cancer Locoregional Recurrence After Primary Tumor Surgical Excision and Neoadjuvant Therapies in Orthotopic Nude Mouse Models

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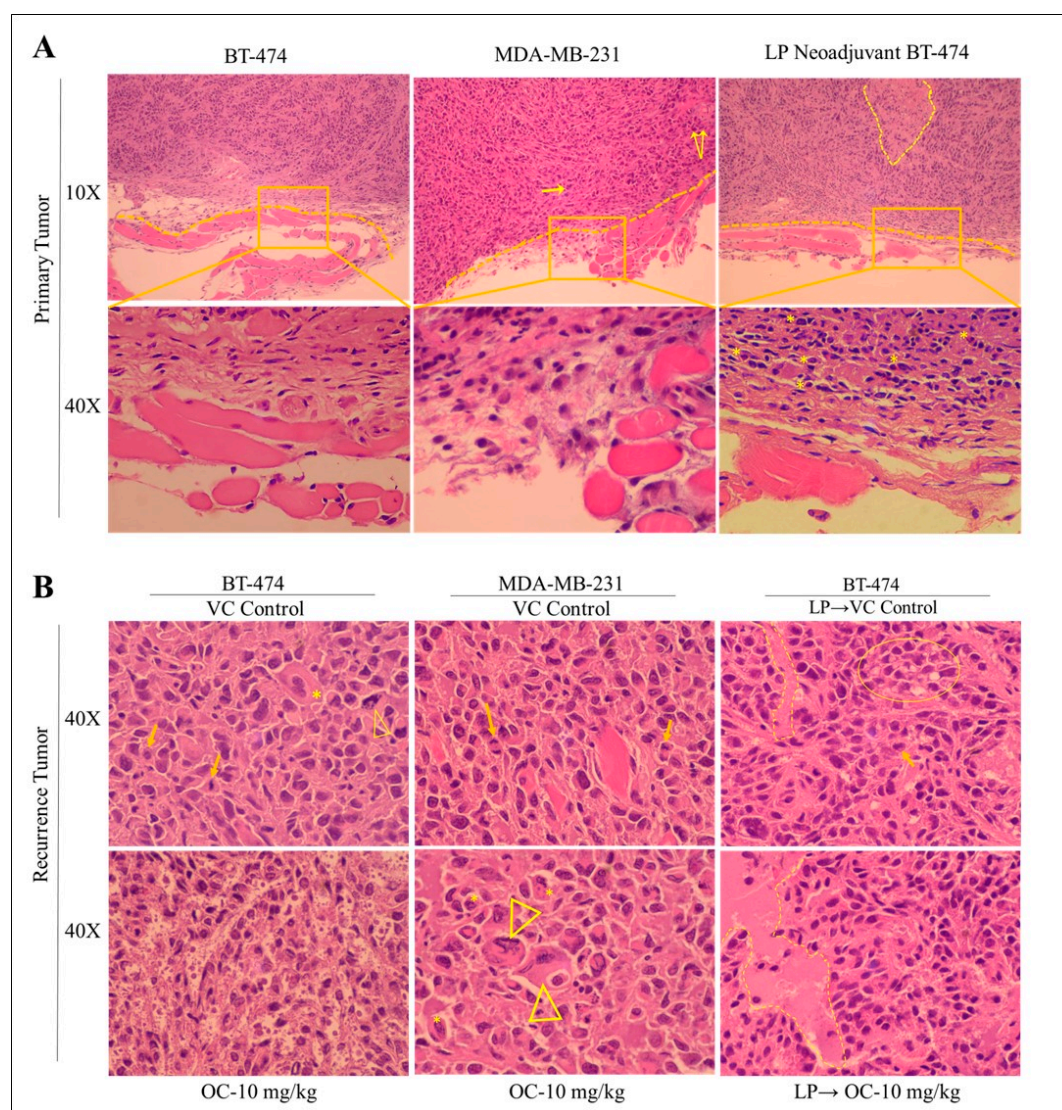


Figure S1. H&E Stained section images of primary and recurrent tumor samples in different study groups. A. Left panel: H&E Stained BT-474 primary tumor. Middle panel: H&E Stained MDA-MB-231 primary tumor. Right panel: H&E Stained BT-474 primary tumor treated with LP neoadjuvant therapy. B. Left panel: H&E Stained BT-474 recurrence tumor. Upper row: Vehicle control-treated tumor. Lower row: OC-10 mg/kg-treated tumor. Middle panel: H&E Stained MDA-MB-231 recurrent tumor. Upper row: Vehicle control-treated tumor. Lower row: OC-10 mg/kg-treated tumor. Right panel: H&E Stained BT-474 recurrent tumor treated with LP neoadjuvant therapy. Upper row: LP→Vehicle control-treated tumor. Lower row: LP→OC-10 mg/kg-treated tumor. Arrows indicate mitotic figures. * indicate a binucleated cell. Dotted line indicate fibrotic tracks. Circle indicate vacuolization.

All excised primary tumors show a loose connective tissue capsule around the margin. Some include regions of host muscle adjacent to the capsule of the excised tumor. BT-474 cells tumor differs from that of MDA-MB-231 cells tumor in exhibiting greater fibrosis. BT-474 tumor fibrosis appeared unaffected by lapatinib. Occasional mitotic figures (arrows) are seen in low magnification micrograph of the MDA-MB-231 tumor. The low magnification photomicrograph of lapatinib-treated BT-474 tumor illustrates an encircled region of coagulative necrosis. Intratumor eosinophils with multilobular nuclei are indicated by the * in the higher magnification micrograph.

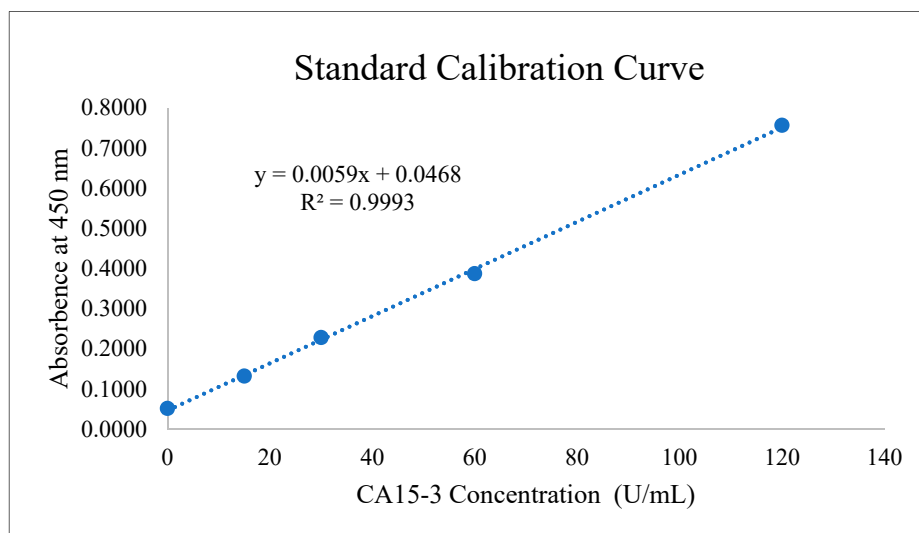


Figure S2. Standard calibration curve used for quantification of animal sera CA 15-3 levels.

Table S1. Different organs weights of BT-474 and MDA-MB-231 recurrence mouse models.

Organ/Group	BT-474			MDA-MB-231		
	VC	OC	<i>p</i> -Value	VC	OC	<i>p</i> -Value
Brain (g)	0.37 ± 0.02	0.43 ± 0.06	ns	0.46 ± 0.11	0.50 ± 0.06	ns
Heart (g)	0.12 ± 0.02	0.13 ± 0.03	ns	0.17 ± 0.05	0.19 ± 0.06	ns
Lung (g)	0.15 ± 0.00	0.23 ± 0.06	ns	0.29 ± 0.11	0.32 ± 0.04	ns
Liver (g)	1.09 ± 0.23	1.24 ± 0.22	ns	1.30 ± 0.25	1.53 ± 0.18	ns
Kidney (g)	0.27 ± 0.01	0.36 ± 0.03	ns	0.39 ± 0.04	0.40 ± 0.05	ns
Spleen (g)	0.17 ± 0.00	0.29 ± 0.21	ns	0.24 ± 0.09	0.25 ± 0.06	ns

Data are means ± SD. ns = indicating statically not significant.

Table S2. Organ weights of different mice groups in BT-474 LP neoadjuvant therapy recurrence model.

Organ/Group	BT-474		
	LP→VC	LP→OC	<i>p</i> -Value
Brain (g)	0.44 ± 0.06	0.46 ± 0.04	ns
Heart (g)	0.15 ± 0.07	0.18 ± 0.04	ns
Lung (g)	0.30 ± 0.08	0.22 ± 0.06	ns
Liver (g)	1.08 ± 0.22	1.20 ± 0.04	ns
Kidney (g)	0.33 ± 0.08	0.36 ± 0.04	ns
Spleen (g)	0.08 ± 0.01	0.15 ± 0.06	ns

Data are means ± SD. ns = indicating statically not significant.

