

Table 1. Pre-clinical applications of ultrasound molecular imaging

Application	Animal model	Molecular target	Imaging mode	Adherent microbubble isolation	Dose (Microbubbles per animal)	Reference
Angiogenesis	Mouse, tumor	VEGFR2	B-mode	Pre-burst minus post-burst	3.8×10^7	[20]
Angiogenesis	Mouse, tumor	VEGFR2, $\alpha_v\beta_3$	B-mode	Pre-burst minus post-burst	5×10^7	[21]
Angiogenesis	Mouse, tumor	VEGFR2	CPS	Fast dwell-time based method	5×10^7	[12]
Angiogenesis	Mouse, tumor	E-selectin	B-mode	Pre-burst minus post-burst	1×10^6	[22]
Cancer	Mouse, mammary glands	VEGFR2	CPS	Pre-burst minus post-burst	5×10^7	[1]
Cancer	Mouse, pancreas	VEGFR2	Contrast mode	Pre-burst minus post-burst	5×10^7	[2]
Inflammation	Rat, heart	ICAM-1	Contrast mode	Pre-burst minus post-burst	2.5×10^6	[10]
Inflammation	Rat, heart	Selectins	CPS	Pre-burst minus post-burst	5×10^6	[23]
Inflammation	Mouse, heart	P-selectin	CPS	Pre-burst minus post-burst	1×10^6	[3]
Atherosclerosis	Mouse, thoracic aorta	VCAM-1	CPS	Pre-burst minus post-burst	1×10^6	[4]
Atherosclerosis	Mouse, thoracic aorta	P-selectin, VCAM-1	CPS	Pre-burst minus post-burst	1×10^6	[5]

Table 2. Overview of microbubble doses used in this study

Microbubbles per mouse	Mouse body weight (g)	Microbubbles per mouse body weight (g)	Phosphatidylcholine (ng) per mouse body weight (g)
5×10^4	28.3 ± 1.4	$(1.7 \pm 0.1) \times 10^3$	$(5.3 \pm 0.1) \times 10^{-2}$
2×10^5	28.6 ± 1.9	$(7.0 \pm 0.4) \times 10^3$	$(2.1 \pm 0.1) \times 10^{-1}$
1×10^7	29.7 ± 1.8	$(3.4 \pm 0.2) \times 10^5$	$(1.0 \pm 0.1) \times 10^1$