

Materials List for:

Automated Measurement of Microcirculatory Blood Flow Velocity in Pulmonary Metastases of Rats

Gert Blueschke^{*1}, Gabi Hanna^{*2}, Andrew N. Fontanella², Gregory M. Palmer², Alina Boico², Hooney Min², Mark W. Dewhirst², David C. Irwin³, Yulin Zhao², Thies Schroeder⁴

¹Division of Plastic, Maxillofacial, and Oral Surgery, Duke University Medical Center

²Department of Radiation Oncology, Duke University Medical Center

³Department of Cardiology, University of Colorado Denver

⁴Department of Physical Chemistry, University of Mainz

* These authors contributed equally

Correspondence to: Thies Schroeder at thschroe@uni-mainz.de

URL: <https://www.jove.com/video/51630>

DOI: [doi:10.3791/51630](https://doi.org/10.3791/51630)

Materials

Name	Company	Catalog Number	Comments
Athymic nude rats	Charles River	Strain code 316	Female 10 week-old athymic nude rats
micro-CT/micro-Irradiator	Precision X-ray Inc.	Xrad 225Cx	Use MicroCT to detect metastases
Dil (1,1=,diocetadecyl-3,3,3=,3=tetramethyl-indocarbocyanine perchlorate)	Sigma Aldrich	468495-100MG	Mix 100 ul packed red blood cells with 100 ul of 0.5 mg/ml Dil in 200 proof ethanol, 2 ml of 5% dextrose solution in water, and fill up to a 10-ml final volume with saline
Rodent ventilator	Kent Scientific	TOPO Small Animal Ventilator	Device is important to maintain positive lung pressure after application of pneumothorax
Zeiss Axioskop fluorescence microscope upright	Zeiss	Axioskop	Microscope for intravital imaging
Andor CCD camera	Andor	iXonEM 885	CCD camera for live imaging of blood flow
Pulse oximeter	StarrLife	MouseOx	Pulse oximeter
Fluorescence microscope	Zeiss	Axioskop	Fluorescence microscope