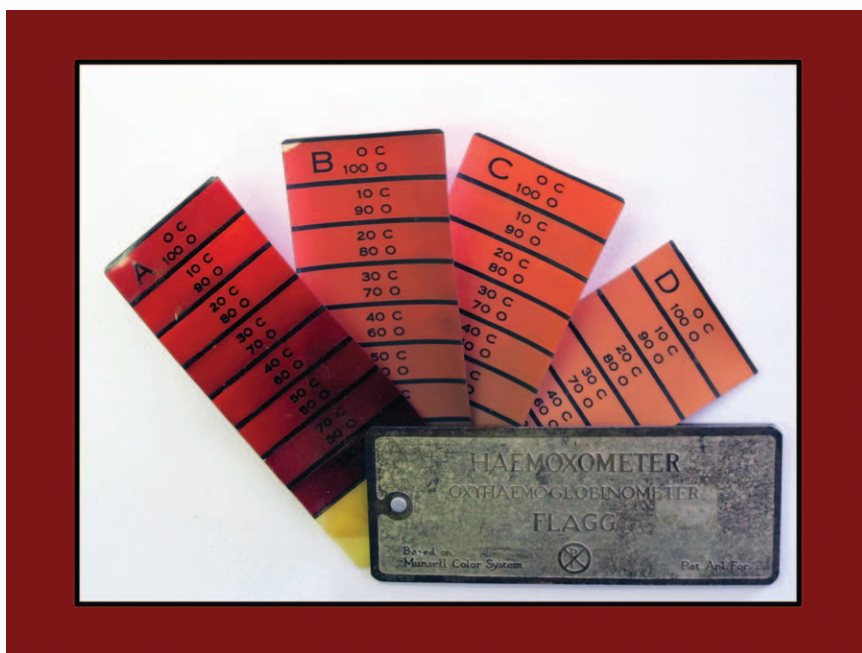


15. Lieberman D, Littleford J, Horan T, Unruh H: Placement of left double-lumen endobronchial tubes with or without a stylet. *Can J Anaesth* 1996; 43:238–42
16. Lehr R: Sixteen S-squared over D-squared: A relation for crude sample size estimates. *Stat Med* 1992; 11:1099–102
17. Campos JH, Kernstine KH: A comparison of a left-sided Broncho-Cath with the torque control blocker univent and the wire-guided blocker. *Anesth Analg* 2003; 96:283–9
18. Benumof JL: The position of a double-lumen tube should be routinely determined by fiberoptic bronchoscopy. *J Cardiothorac Vasc Anesth* 1993; 7:513–4
19. Brodsky JB, Lemmens HJ: Left double-lumen tubes: Clinical experience with 1,170 patients. *J Cardiothorac Vasc Anesth* 2003; 17:289–98
20. Campos JH: An update on bronchial blockers during lung separation techniques in adults. *Anesth Analg* 2003; 97:1266–74
21. Campos JH, Hallam EA, Van Natta T, Kernstine KH: Devices for lung isolation used by anesthesiologists with limited thoracic experience: Comparison of double-lumen endotracheal tube, Univent torque control blocker, and Arndt wire-guided endobronchial blocker. *ANESTHESIOLOGY* 2006; 104:261–6; discussion 5A
22. Campos JH: Which device should be considered the best for lung isolation: Double-lumen endotracheal tube *versus* bronchial blockers. *Curr Opin Anaesthesiol* 2007; 20:27–31
23. Bauer C, Winter C, Hentz JG, Ducrocq X, Steib A, Dupeyron JP: Bronchial blocker compared to double-lumen tube for one-lung ventilation during thoracoscopy. *Acta Anaesthesiol Scand* 2001; 45:250–4
24. Cohen E: Pro: The new bronchial blockers are preferable to double-lumen tubes for lung isolation. *J Cardiothorac Vasc Anesth* 2008; 22:920–4
25. Roscoe A, Kanellakos GW, McRae K, Slinger P: Pressures exerted by endobronchial devices. *Anesth Analg* 2007; 104:655–8

## ANESTHESIOLOGY REFLECTIONS FROM THE WOOD LIBRARY-MUSEUM

### P. J. Flagg's Haemoxometer



Using the Munsell color system, New York anesthesiologist Paluel J. Flagg designed a fanning index of color cards in the early 1920s for visually estimating just how oxygenated ("O") or cyanosed ("C") a patient was. According to his color cards (*from left to right above*) blood under different degrees of oxygen saturation was represented on Card A: blood "seen directly"; Card B: "average mucous membrane, or edge of ear of plethoric patient"; Card C: "pale mucous membrane or edge of ear of average patient"; and Card D: "pale edge of ear, or average finger nail." Note that Dr. Flagg did not consider many issues, including ambient lighting in the operating room or color blindness in the anesthesiologist. (Copyright © the American Society of Anesthesiologists, Inc.)

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