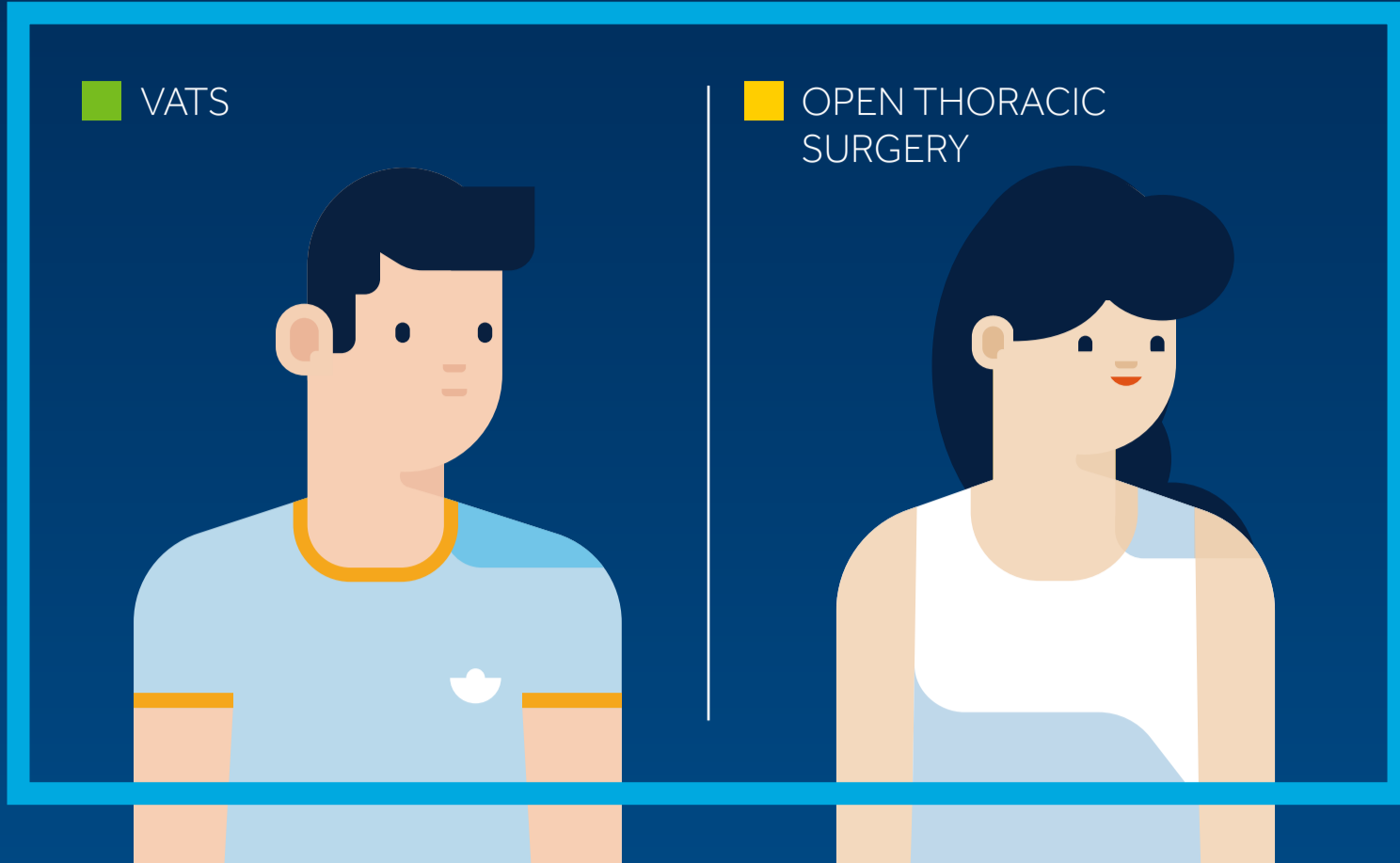


# THE PATH TO BETTER OUTCOMES.

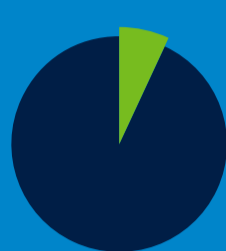
Let's look at two patient experiences. One has minimally invasive video-assisted thoracoscopic surgery (VATS). The other has open surgery.



VATS

OPEN THORACIC SURGERY

## PAIN AFTER SURGERY



**7%** of VATS patients require pain medication six months later<sup>1</sup>



**36%** of open surgery patients require pain medication six months later<sup>1</sup>

## CHEST TUBE DURATION

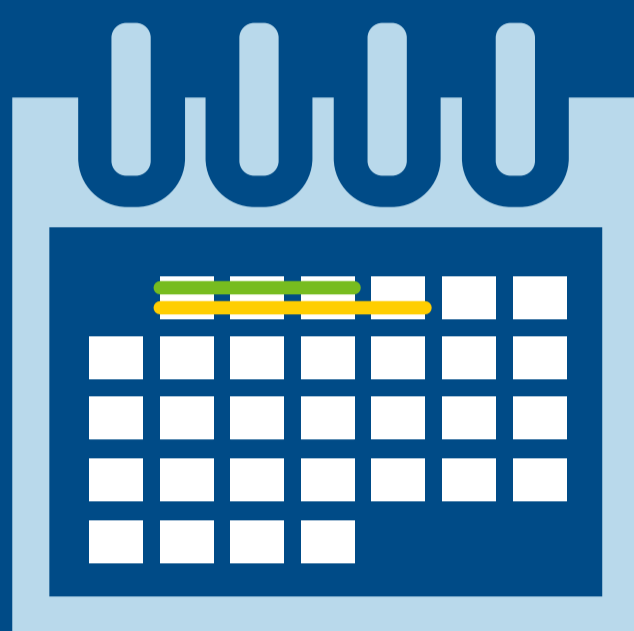
Your surgeon will leave a tube in your chest to drain any fluid in your lungs after surgery.

**3 DAYS**

with a chest tube on average for VATS<sup>1</sup>

**4 DAYS**

with a chest tube on average for open surgery<sup>1</sup>



## LENGTH OF HOSPITAL STAY

**5.3 DAYS** IN THE HOSPITAL ON AVERAGE<sup>1,2,4,6-12</sup>



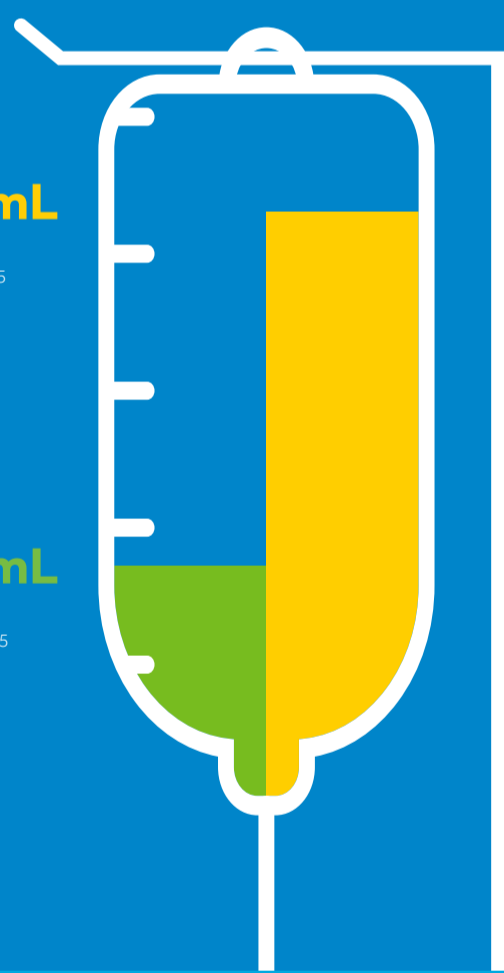
**7.0 DAYS** IN THE HOSPITAL ON AVERAGE<sup>1,2,4,6-12</sup>



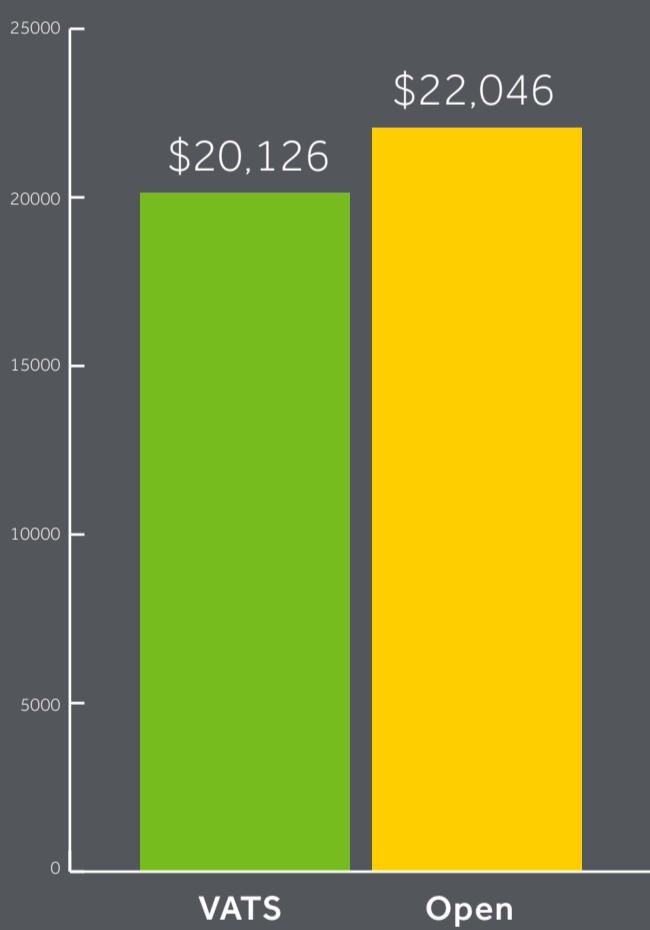
## BLOOD LOSS

**431.8 mL** on average for open<sup>1,3-5</sup>

**172.8 mL** on average for VATS<sup>1,3-5</sup>



## AVERAGE HOSPITAL COST<sup>7,11,13,14</sup>



What does this mean for a patient who's had VATS instead of open surgery?

**~2 DAYS EARLIER RELEASE FROM THE HOSPITAL<sup>1,2,4,6-12</sup>**

**9% REDUCTION IN HOSPITAL COSTS<sup>7,11,13,14</sup>**

**60% LESS BLOOD LOSS DURING SURGERY<sup>1,3-5</sup>**

**FEWER COMPLICATIONS AFTER SURGERY<sup>2,8,10,12,15,16</sup>**

## Which experience would you want?

For more information about the benefits of minimally invasive surgery, visit [aboutmis.com](http://aboutmis.com).

- Handy JR Jr, Asaph JW, Douville EC, Ott GY, Grunkemeier GL, Wu Y. Does video-assisted thoracoscopic lobectomy for lung cancer provide improved functional outcomes compared with open lobectomy? *Eur J Cardiothorac Surg*. 2010;37(2):451-455.
- Villamizar NR, Darrabie MD, Burfeind WR, et al. Thoracoscopic lobectomy is associated with lower morbidity compared with thoracotomy. *J Thorac Cardiovasc Surg*. 2009;138(2):419-425.
- Bu L, Li Y, Yang F, Zhao H, Jiang GC, Li JF, Liu J, Wang J. Completely video-assisted thoracoscopic lobectomy versus open lobectomy for non-small cell lung cancer greater than 5 cm: a retrospective study. *Chin Med J (Engl)*. 2012;125(3):434-439.
- Laursen LØ, Petersen RH, Hansen HJ, Jensen TK, Ravn J, Konge L. Video-assisted thoracoscopic surgery lobectomy for lung cancer is associated with a lower 30-day morbidity compared with lobectomy by thoracotomy. *Eur J Cardiothorac Surg*. 2015. pii: ezv205. [Epub ahead of print]
- Li Y, Wang J. Comparison of clinical outcomes for patients with clinical N0 and pathologic N2 non-small cell lung cancer after thoracoscopic lobectomy and open lobectomy: a retrospective analysis of 76 patients. *J Surg Oncol*. 2012;106(4):431-435.
- Flores RM, Park BJ, Dycoco J, et al. Lobectomy by video-assisted thoracic surgery (VATS) versus thoracotomy for lung cancer. *J Thorac Cardiovasc Surg*. 2009;138(1):11-18.
- Farjah F, Backhus LM, Varghese TK, et al. Ninety-day costs of video-assisted thoracic surgery versus open lobectomy for lung cancer. *Ann Thorac Surg*. 2014;98(1):191-196.
- Paul S, Sedrakyan A, Chiu YL, et al. Outcomes after lobectomy using thoracoscopy vs thoracotomy: a comparative effectiveness analysis utilizing the Nationwide Inpatient Sample database. *Eur J Cardiothorac Surg*. 2013;43(4):813-817.
- Ramos R, Masuet C, Gossot D. Lobectomy for early-stage lung carcinoma: a cost analysis of full thoracoscopy versus posterolateral thoracotomy. *Surg Endosc*. 2012;26(2):431-437.
- Park HS, Detterbeck FC, Boffa DJ, Kim AW. Impact of hospital volume of thoracoscopic lobectomy on primary lung cancer outcomes. *Ann Thorac Surg*. 2012;93(2):372-379.
- Swanson SJ, Meyers BF, Gunnarsson CL, et al. Video-assisted thoracoscopic lobectomy is less costly and morbid than open lobectomy: a retrospective multiinstitutional database analysis. *Ann Thorac Surg*. 2012;93(4):1027-1032.
- Paul S, Isaacs AJ, Treasure T, Altorki NK, Sedrakyan A. Long term survival with thoracoscopic versus open lobectomy: propensity matched comparative analysis using SEER-Medicare database. *BMJ*. 2014;349:g5575.
- Howington JA, Gunnarsson CL, Maddaus MA, et al. In-hospital clinical and economic consequences of pulmonary wedge resections for cancer using video-assisted thoracoscopic techniques vs traditional open resections: a retrospective database analysis. *Chest*. 2012;141(2):429-435.
- Burfeind WR Jr, Jaik NP, Villamizar N, Toloza EM, Harpole DH Jr, D'Amico TA. A cost-minimization analysis of lobectomy: thoracoscopic versus posterolateral thoracotomy. *Eur J Cardiothorac Surg*. 2010;37(4):827-832.
- Falcoz PE, Puyraveau M, Thomas PA, Decaluwe H, Hürtgen M, Petersen RH, Hansen H, Brunelli A; ESTS Database Committee and ESTS Minimally Invasive Interest Group. Video-assisted thoracoscopic surgery versus open lobectomy for primary non-small-cell lung cancer: a propensity-matched analysis of outcome from the European Society of Thoracic Surgeon database. *Eur J Cardiothorac Surg*. 2015. pii: ezv154. [Epub ahead of print]
- Ilonen IK, Räsänen JV, Knuutila A, Salo JA, Sihvo EI. Anatomic thoracoscopic lung resection for non-small cell lung cancer in stage I is associated with less morbidity and shorter hospitalization than thoracotomy. *Acta Oncol*. 2011;50(7):1126-1132.