

## Supplementary Online Content

Gourin CG, Stewart CM, Frick KD, et al. Association of hospital volume with laryngectomy outcomes in patients with larynx cancer. *JAMA Otolaryngol Head Neck Surg*. Published online November 21, 2018.  
doi:10.1001/jamaoto.2018.2986

**eTable 1.** ICD-9-CM Diagnosis and Procedure Codes for Included Cases

**eTable 2.** ICD-9-CM Diagnosis Codes for Medical and Surgical Complications

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1.** ICD-9-CM Diagnosis and Procedure Codes for Included Cases

<b>Variable</b>	<b>ICD-9 Code</b>
<b>Diagnosis Codes</b>	
Laryngeal neoplasm (malignant)	161.0, 161.1, 161.2, 161.3, 161.8, 161.9, 146.4, 146.5
Hypopharyngeal neoplasm (malignant)	148.0, 148.1, 148.2, 148.3, 148.8, 148.9
<b>Procedure Codes</b>	
Partial laryngectomy	30.1, 30.29
Total laryngectomy	30.3, 30.4
Neck dissection	40.40, 40.41, 40.42, 40.3
Pedicled or free flap reconstruction	86.7, 86.70, 86.71, 86.72, 86.73, 86.74, 86.75, 86.8, 86.89

**eTable 2.** ICD-9-CM Diagnosis Codes for Medical and Surgical Complications

<b>Variable</b>	<b>ICD-9 Code</b>
<b><i>Surgical complications</i></b>	
<b>Shock</b>	<b>998.0</b>
<b>Hemorrhage, hematoma, or seroma</b>	<b>998.1, 998.11, 998.12, 998.13</b>
<b>Accidental perforation or laceration of blood vessel, nerve, or organ</b>	<b>998.2</b>
<b>Wound dehiscence</b>	<b>998.3, 998.30, 998.31, 998.32, 998.33</b>
<b>Foreign body</b>	<b>998.4</b>
<b>Postoperative infection</b>	<b>998.5, 998.51, 998.59</b>
<b>Postoperative fistula</b>	<b>998.6</b>
<b>Non-healing surgical wound</b>	<b>998.83</b>
<b>Other unspecified procedural complications</b>	<b>998.8, 998.81, 998.89, 998.9</b>
<b><i>Medical complications</i></b>	
<b>Acute cardiac event</b>	<b>410.0-410.9, 411.1, 411.8, 415.0, 420.0, 420.9, 421.0, 421.1, 421.9, 422.0, 422.9, 427.0-427.5, 428.0-428.9</b>
<b>Acute pulmonary edema/failure</b>	<b>518.4, 518.5, 518.81, 518.82, 518.84</b>
<b>Acute cerebrovascular event</b>	<b>997.00, 997.01, 997.02, 997.09, 434.91, 430, 431, 432.0, 432.1, 432.9, 434.11</b>
<b>Acute renal failure</b>	<b>584.5-584.9</b>
<b>Acute hepatic failure</b>	<b>570</b>
<b>Pneumonia</b>	<b>480,480.0, 480.1, 480.2, 480.3, 480.8, 480.9, 481, 482, 482.0, 482.1, 482.3, 482.30, 482.31, 482.32, 482.39, 482.40, 482.41, 482.42, 482.49, 482.8, 482.81, 482,82, 482.83, 482.84, 482.89, 482.9, 483, 483.1, 483.8, 484, 484.1, 484.3, 484.5, 484.6, 484.7, 484.8, 485, 487.0, V12.61, 507.0, 514, 518.4, 518.5, 516, 516.8, 997.31</b>
<b>Sepsis</b>	<b>995.9, 038.0-038.4, 999.3</b>
<b>Urinary tract infection</b>	<b>599.0, 996.64, 996.31, V13.02</b>
<b>Deep venous thrombosis/pulmonary embolism</b>	<b>415.1, 451.11, 451.19, 451.2, 451.81, 453.8</b>
<b>Gastrointestinal bleed</b>	<b>530.82, 531.0, 531.00, 531.01, 531.1, 531.10, 531.11, 531.2, 531.20, 531.21, 531.4, 531.40, 531.41, 531.6, 531.60, 531.61, 531.7, 531.70, 531.71, 531.9, 531.90, 531.91 532.0, 532.00, 532.01, 532.1, 532.10, 532.11, 532.2, 532.20, 532.21, 532.4, 532.40, 532.41, 532.6, 532.60, 532.61, 533.0, 533.00, 533.01, 533.1, 533.10, 533.11, 533.2, 533.20, 533.21, 533.4, 533.40, 533.41, 533.6, 533.60, 533.61,</b>

	<b>534.0, 534.00, 534.01, 534.1, 534.10, 534.11, 534.2, 534.20, 534.21, 534.4, 534.40, 534.41, 534.6, 534.60, 534.61, 535.01, 535.11, 535.21, 535.31, 535.41, 535.51, 535.61, 578.9</b>
--	---