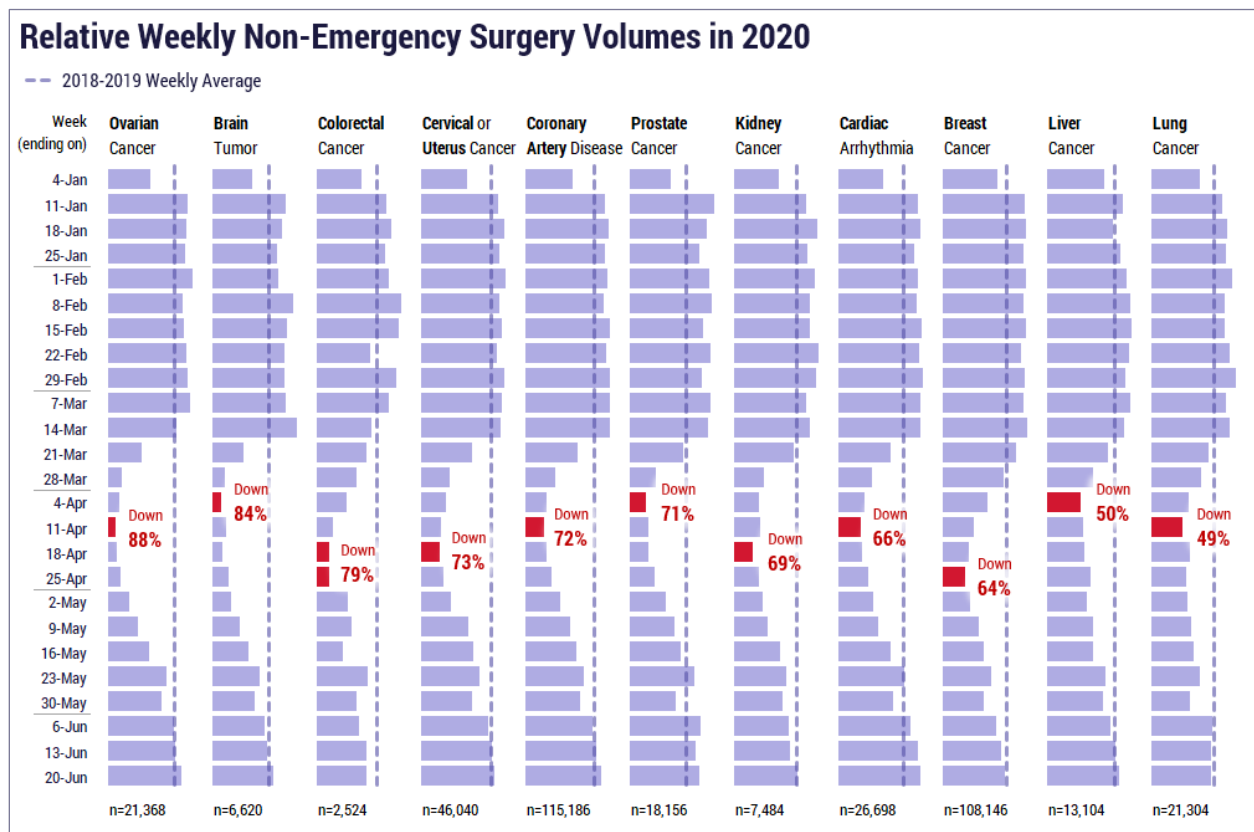


# Non-Emergency Procedure Volumes in the Wake of COVID-19

Brad Fox, MD; Justin Lo, PhD, MT(ASCP)

In March 2020, the American College of Surgeons<sup>1</sup> and the U.S. Surgeon General<sup>2</sup> recommended stopping all non-emergency surgical procedures. Recent news articles<sup>3,4</sup> raised concern that pandemic-related reductions in non-emergency procedures may result in delayed diagnosis and treatment. We examined procedures to diagnose and treat solid organ tumors and heart disease (Table 1). When compared to 2018-2019 averages, our analysis found a dramatic—but temporary—decrease in procedures for cardiac arrhythmia and coronary artery disease, as well as procedures for all of the major organ cancers we examined. At their lowest point, these procedure volumes were 49-88% below their historical weekly averages.



For several of the procedure groups procedure volumes in the months prior to the emergency declaration were 10-30% higher than the average of the prior 2 years, continuing an existing year-over-year trend (data not shown). The reason for this increase is unclear but may reflect natural business growth.

The volumes of most of these procedures have returned to their historical baseline, and in some cases are already above baseline. As geographic regions of the country consider further suspension of elective procedures, drops in surgical volume should be anticipated. This analysis provides evidence that there could be a delay in diagnosis and treatment initiation of some cancers and

cardiac disorders. Future studies will be needed to determine if these delays will ultimately affect long-term patient outcomes.

*This summary includes counts of all encounters with charges for select surgical procedures listed in Table 1 as of July 13, 2020.*

*Data are pooled from 51 healthcare organizations representing 428 hospitals that span 22 states.*

**TABLE 1**

<b>Procedure Group</b>	<b>CPT® codes included in procedure grouping</b>
<b>Brain Tumor</b>	61107, 61140, 61210, 61215, 61304, 61305, 61510, 61512, 61518, 61519, 61520, 61521, 61526, 61548, 61601, 61605, 61606, 61607, 61608, 61616, 61750, 61751, 61781, 61782, 61783, 61796, 61797, 61798, 61799, 62165, 62230, 63267, 63276, 63277, 63278, 63280, 63281, 63282, 63285, 63286, 63287, 63620
<b>Breast Cancer</b>	19081, 19082, 19083, 19084, 19085, 19086, 19100, 19101, 19120, 19125, 19126, 19260, 19271, 19272, 19301, 19302, 19303, 19304, 19305, 19306, 19307
<b>Cervical/Uterine Cancer</b>	51597, 56605, 56630, 57100, 57106, 57107, 57109, 57111, 57135, 57156, 57460, 57500, 57531, 58100, 58150, 58180, 58200, 58210, 58240, 58262, 58548, 58552, 58571, 58573, 58575, 58940, 58951, 58952, 58953, 58954, 58956, 58957, 58958
<b>Cardiac Arrhythmia</b>	33206, 33207, 33208, 33210, 33211, 33213, 33215, 33216, 33217, 33218, 33220, 33221, 33224, 33225, 33226, 33227, 33241, 33249, 33256, 33257, 33259, 33270, 33271, 33272, 33274, 33282, 33285
<b>Colorectal Cancer</b>	44140, 44141, 44143, 44144, 44145, 44146, 44150, 44155, 44158, 44160, 44204, 44205, 44206, 44207, 44208, 44210, 44211, 44212, 44213, 44227, 44238, 45110, 45111, 45112, 45113, 45119, 45123, 45171, 45172, 45190, 45395, 45397
<b>End-Stage Kidney Disease/Transplant</b>	50360, 50365
<b>End-Stage Heart Disease/Transplant</b>	33935, 33945, 33970, 33973, 33975, 33976, 33979, 33981, 33982, 33983, 33990, 33991
<b>End-Stage Liver Disease/Transplant</b>	47135
<b>Kidney Cancer</b>	50200, 50205, 50220, 50230, 50234, 50236, 50240, 50545, 50546
<b>Liver Cancer</b>	47000, 47001, 47100, 47120, 47122, 47125, 47130, 47370
<b>Lung Cancer</b>	31628, 31629, 31640, 32096, 32097, 32098, 32100, 32405, 32440, 32480, 32482, 32484, 32486, 32503, 32504, 32505, 32506, 32606, 32607, 32608, 32609, 32661, 32662, 32663, 32666, 32667, 32668, 32669, 32670, 32671
<b>Ovarian Cancer</b>	58661, 58662, 58720, 58825, 58925, 58940, 58943, 58950, 58951, 58952, 58956, 58960
<b>Prostate Cancer</b>	55700, 55801, 55821, 55831, 55840, 55842, 55845, 55866

Procedure Group	CPT® codes included in procedure grouping
Severe Coronary Artery Disease	33510, 33511, 33512, 33513, 33514, 33517, 33518, 33519, 33521, 33522, 33530, 33533, 33534, 33535, 33536, 92920, 92921, 92924, 92925, 92928, 92929, 92933, 92934, 92937, 92938, 92941, 92943, 92944, 93451, 93452, 93453, 93454, 93455, 93456, 93457, 93458, 93459, 93460, 93461
Testicular Cancer	54500, 54505, 54520, 54530, 54535

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