Peer Review File

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Reviewer A

It was very interesting to read and evaluate the manuscript titled “Shift in lung cancer stage at diagnosis during the COVID-19 pandemic in New York City".
In this manuscript, Dr. Raja Flores and his colleagues presented their experience of how COVID-19 pandemic influenced lung cancer staging at time of diagnosis at descriptive analysis done from 01/2018 to 28/2021.
The authors concluded, that COVID-19 restrictions had a negative impact on lung cancer diagnosis, they also found that lung cancers stage shifted from stages I/II to stages III/IV at diagnoses and also found increase in lung cancer mortality during COVID-19 pandemic.
The descriptive analysis results that related between COVID-19 restrictions and Lung Cancer staging and mortality are actual today in all countries in my opinion and the the study should be published.
I have no additional comments.
REPLY: thank you for the positive comments. The Reviewer requested no changes.

Reviewer B

In this letter to the editor, the authors evaluate a shift in lung cancer stage, due to the COVID-19 pandemic. The Letter to the Editor is well written and concise. I only have some minor suggestions.
Comment 1:
- Please indicate the source for determining stage at diagnosis. I can imagine you used ICD codes for identification only and patient records for stage, however I cannot find this information the letter.
Reply 1: Patients’ records was used to obtain stage at diagnosis (see line 39)

Comment 2:
- I think another interesting factor could be location of the metastases in stage IV patients, e.g. more cerebral metastases in patients diagnosed shortly after lockdown. If this is not too much for a letter to the editor this information might be a valuable additional aspect.
Reply 2: this is a great suggestion; at this time we don’t have quality data for site of metastasis, as we have used a preliminary version of cancer registry data in order to have the most up-to-date data. The information on site of metastasis, among other things, is added after it is checked and verified on the clinical charts at a later time.

Reviewer C

The letter is well written, and the data presented is interesting. Research world-wide are attempting to estimate the impact of delayed cancer diagnoses on the stage distribution, and the

presented data may add to that developing body of evidence. However, I have major concerns regarding the data analysis and its presentation.

Comment 1:
1) The comparison of the proportion of early vs late-stage diagnoses is not very informative, because the number of diagnoses is so much lower. It could simply be that the missed early-stage diagnoses are diagnosed one month later. Therefore, a more sophisticated analysis, such a time-series analysis, may be more informative.

Reply 1:
We thank the reviewer for the suggestion, and have conducted a time–series analysis on the data from fig 1b. we then predicted the percentage of stage 0-II and III-IV during the "pause" and compared to the expected from previous years. We added the following statement to the results, line 53:
A time-series analysis showed that the stage distribution during the months of the "pause" was significantly different from the expected, based on the trend in previous years

Comment 2:
2) Although the presented analyses are very basic, some form of statistical significance should be indicated through either p-values or confidence intervals.

Reply 2:
We added actual numbers and Standard deviations for the comparison period (2018-2019) to Figure 1 A. we also added p-values to figure 1b, where the observed values significantly differ from the predicted values from the time-series analysis (ARIMA)

Comment 3:
3) Several local and global initiatives have performed research with similar aims, but more advanced methods. At least some of such studies should be cited and preferably it should be discussed by the authors what their data adds.
Reply 3: we added more recent references on the topic, as suggested (line 32).
We added to the discussion the following statement to highlight the novelty of our results (line 65):
Although a lot have been said on the delays in diagnosis and treatment following the COVID-19 pandemic (3-5), few studies have shown how delays affect stage at diagnosis (6), and those who studied the problem did not apply the sophisticated approach we used.

Reviewer D

The information is clear, concise and relevant. The authors bravely present the impact that the COVID pandemic has had on one of the dimensions of oncology patient care such as diagnostic delay. In many health systems in different countries it has been systematically denied that this impact has been relevant and/or extended over time.

It would be worthy, in a separate manuscript, to collect follow-up data to establish the real impact on survival or disease progression of these patients.

The manuscript is clearly written and I have no concerns on the results and conclusions.

I have some minor comment to be address by the authors:
comment 1:
1. Please, Include the category to which the manuscript is submitted.
Reply 1: the category is letter to the Editors

Comment 2:
2. Lines 45-46: "based on ICD-10 codes of C34.x. 46 Only those classified as analytic cases (00-22)" for general comprehension, please define this piece of information.
Reply 2: we modified the text as follows: based on ICD-10 codes of C34.00-22 (cases diagnosed at Mount Sinai), as per Commission on Cancer guidelines – line 36 and 37. Only cases diagnosed at Mount Sinai (analytic cases) were included, and their code is 34-00 to 34.22

Reviewer E

Descriptive analysis of a single-center experience of diagnosis of lung cancer using case volume from 2 prior years for comparison.
Several minor comments:
Comment 1:
- Figure A. By using a ratio comparison to monthly averages from 2018 and 2019 rather than absolute numbers, it is not clear what the degree of variability is in pre-pandemic periods. To this end, it is apparent the significant reduction in case numbers corresponding to the state-mandated pause on procedures. However, while probable, it is not clear if the reductions seen during other months (e.g. Jan-Feb 2021) are related to the Pandemic versus within the range of normal volume variability. It would be ideal if somehow the range of cases for 2018 vs. 2019 can be displayed graphically to help with this as reference.

Reply 1: we agree that it is important to show variability over time. For this reason, we have added to figure 1 A a small insert depicting actual cases, and the Standard deviation for the years before COVID-19. The new figure is described on line 97 of the manuscript

Comment 2:
- Figure B: it would be visually helpful to highlight or indicate the 3 month window of the state-mandated procedure pause so readers know when that occurred on the graphical timeline.
Reply 2: this is a great idea; a box was added to figure 1 B, to indicate the pause on elective care, to help the reader.