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# Stage Migration in Newly Diagnosed Oesophago-gastric Cancer during the first wave of the COVID-19 Pandemic

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### **Research letter**

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This study has been presented as oral presentation in the "BJS Prize" session in The Association of Surgeons of Great Britain and Ireland (ASGBI) annual conference on 5<sup>th</sup> May 2021, Association of Upper Gastrointestinal Surgery of Great Britain and Ireland (AUGIS) annual conference on 14<sup>th</sup> October 2021 and Scottish Upper GI Cancer Virtual Audit & Education Day on 29<sup>th</sup> October 2021.

### **Research Letter**

#### Editor

The UK government instituted the first Covid-19 lockdown on 23<sup>rd</sup> March 2020 to protect the National Health Service and to save lives<sup>1</sup>. Elective healthcare provision including cancer care was significantly disrupted. The primary aims of this study were to investigate the impact of the Covid-19 pandemic on the staging of Oesophago-gastric (OG) cancers at presentation and on prognosis. The secondary aims were to determine the time delay in performing gastroscopy and the multidisciplinary team (MDT) treatment outcomes.

A retrospective cohort study of all newly diagnosed OG cancers in a single regional Upper GI MDT for one year, from 1<sup>st</sup> October 2019 was conducted. Patients were dichotomised into two groups, with those presenting before the first UK national lockdown compared to those presenting postlockdown. Two-tailed Fisher's exact test was used for categorical variables and student t-test was used for numerical data. Survival analysis was performed using log rank test.

During the first wave of the pandemic, as positive Covid-19 infections rose, referrals to the MDT fell. A total of 349 new patients were discussed at the MDT (192 pre-lockdown versus 157 post-lockdown). Demographics were evenly matched. Route of patient presentation differed post-lockdown with an increase in acute hospital admissions (28.0% vs 12.5%, p<0.001) and decline in urgent clinic referrals (5.7% vs 12.5%, p=0.042). GP referrals waited longer for diagnostic gastroscopy post-lockdown (28 vs 15 days, p=0.021).

Metastatic disease at presentation was more frequent post-lockdown (47.8% vs 33.3%, p=0.008). Post-lockdown, more patients had a palliative treatment intent (71.3% vs 55.7%, p=0.003) with a corresponding increase in palliative chemotherapy referrals (29.3% vs 15.6%, p=0.003). Overall median survival for all new OG cancer patients was 6 months shorter post-lockdown (7 vs 13 months, p<0.001) (**Figure 1**).

This is the first UK study to assess the impact of the Covid-19 pandemic on the stage of OG cancer at presentation. OG cancer is often at an advanced stage at diagnosis, however, early detection and timely treatment can influence overall survival with the aim of a curative rather than palliative treatment pathway. The strict UK government "*stay at home*" message combined with a degree of national public fear is thought to have contributed to the fall in new cancer cases presentation combined with changes to general practice service delivery, reduced access to secondary specialist care, limited face-to-face encounters and reduced endoscopy availability. The disruptive impact of the pandemic on UK colorectal cancer services has been reported<sup>2</sup>, with concerns regarding stage migration in colorectal cancer secondary to similar delays in detection and treatment<sup>3</sup>. Modelling studies predict a substantial rise in avoidable cancer deaths resulting from delays in diagnosis<sup>4</sup>.

National Public Health Scotland data demonstrates that the numbers of new OG cancers diagnosed in 2020, after the first lockdown, were below levels reported in 2019<sup>5</sup>. Available data for the first half of 2021 demonstrates a rebound increase in the number of oesophageal cancers diagnosed. Of concern, gastric cancer numbers for 2021 have not yet caught up with 2019 levels and therefore there could be a further group of undiagnosed patients yet to present. This presumed delay in presentation and diagnosis may further impact the oncology, palliative, surgical and endoscopic services locally.

In conclusion, the Covid-19 pandemic is associated with a stage migration in newly diagnosed OG cancers, with more metastatic disease, more patients treated with palliative intent and poorer overall survival. This study highlights the importance of maintaining cancer services during any future waves of the Covid-19 pandemic in order to protect the ability to detect OG cancer early, maintain the highest possible rate of curative treatment and ultimately improve overall patient outcomes during this globally challenging period.

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**Figure 1: Compares the survival in pre-lockdown and post-lockdown. 1a: All patients.** Overall, the median survival was 6 months shorter post-lockdown (7 vs 13 months, p<0.001). **1b: Patients not treated with surgical resection**. The median survival was 3 months shorter post-lockdown (5 vs 8 months, p=0.004).



**Figure 1: Compares the survival in pre-lockdown and post-lockdown. 1a: All patients.** Overall, the median survival was 6 months shorter post-lockdown (7 vs 13 months, p<0.001). **1b: Patients not treated with surgical resection**. The median survival was 3 months shorter post-lockdown (5 vs 8 months, p=0.004).