Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

access to CT services, and smoking cessation efforts, were most vulnerable to compromise. Our findings also suggest that once patients had completed the LDCT scan, screening workflows were relatively unaffected. These findings underscore the role telemedicine can play in the delivery of LCS within the context of COVID-19 when in-person visits are placed on hiatus. More research is needed to fully understand and optimize the use of telehealth visits to conduct patient recruitment, education, and smoking cessation efforts. The importance of the ongoing participation in this survey effort cannot be overstated as it establishes a longitudinal understanding of real-world LCS challenges, particularly in the context of COVID-19, and helps guide targeted solutions to optimize the future of LCS. **Keywords:** Lung Cancer Screening, Covid-19, Patient Education

P1.12-02
The Impact of COVID-19 on Quality of Care for Lung Cancer - Analyses of Prospective Clinical Data from The EnRICH Cohort

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Introduction: The COVID-19 pandemic has impacted healthcare systems worldwide, causing substantial changes to routine healthcare delivery such as a shift to virtual-health consultations, and postponed or cancelled planned-procedures. Simultaneously, patients have changed their healthcare-seeking behaviours. In New South Wales (NSW), Australia's most populous State, there were sizeable declines in a wide range of healthcare activities from March-June 2020 compared with the same period in 2019, prior to the emergence of COVID-19. Of note, were decreases of 22.1% in primary care face-to-face consultations, 13.9% in emergency department visits, and 32.6% in public-hospital planned surgical activity. There is a need to understand how these changes in healthcare delivery have affected quality-of-care and outcomes for lung cancer. The EnRICH program, a prospective clinical cohort of over 2000 consecutive patients diagnosed with lung cancer between 2016 and 2021 in regional and metropolitan hospitals across the State, is ideally placed to examine the impact of COVID-19 on quality-of-care for lung cancer in NSW. The EnRICH dataset includes comprehensive patient, diagnostic, treatment, and outcome data, mapped against evidence-based clinical-quality-indicators (QIs). **Methods:** Sample: Pre-COVID cohort, n=1144 patients diagnosed 8 September 2016 to 10 March 2020; post-COVID cohort, n=849 patients diagnosed 11 March 2020 (date COVID-19 declared global pandemic by World Health Organisation) to 29 October 2021. Data collection: Clinical data are extracted from medical records longitudinally. This analysis reports data collected to 12-months post-diagnosis. Statistical methods: Patient characteristics and performance against QIs were compared between pre- and post-COVID-19 cohorts using Wilcoxon rank sum and chi-square tests. One-year survival was compared using Kaplan-Meier estimates. **Results:** Patient and disease characteristics were similar in the pre- versus post-COVID-19 cohorts (median age 70; 55% v53% male; 88%v80% NSCLC, 42%v40% stage IV). Fewer patients received a diagnosis within 28-days of presentation with symptoms in the post-COVID-19 cohort (80%v75%; p=0.01) (Table1). The proportion of stage III patients discussed by a multidisciplinary team (MDT) and the proportion of those with advanced disease promptly referred to palliative care improved post-COVID-19. There was no significant difference in the proportion of patients commencing treatment within 28-days of diagnosis. One-year survival did not differ (70%v71%; p~0.54).

Table 1. Performance against quality indicators pre- and post-COVID-19

ALL PATIENTS	Pre-COVID-19 N=1144[1]	Post-COVID-19 N=849[1]	p value[2]
Diagnostic Quality Indicators			
Proportion diagnosed within 28 days of first presentation	910 (80%)	582 (75%)	0.01
Proportion with a pathological diagnosis within 28 days of first presentation	668 (61%)	419 (56%)	0.078
Proportion of Stage III patients reviewed by MDT	341 (54%)	277 (60%)	0.037
Proportion of Stage IV patients with molecular testing	343 (96%)	220 (97%)	0.4
Treatment Quality Indicators			
Proportion of Stage I-III patients commencing curative treatment with 28 days of diagnosis	129 (24%)	101 (27%)	0.2
Proportion of Stage IV patients commencing systemic treatment with 28 days of diagnosis	87 (21%)	75 (26%)	0.14
Proportion of Stage IV patients referred to palliative care within 8 weeks of diagnosis	146 (48%)	108 (60%)	0.014
Outcome Quality Indicators			
1-year survival[3]	70% (67, 73)[4]	71% (68, 75)[5]	~0.54

[1]n (%) [2]Pearson"s Chi-squared test [3]Kaplan Meier estimates (95% CI) [4] Median follow-up 3.1 years [5] Median follow-up 1.2 years

Conclusions: After the emergence of COVID-19, performance changed against several QIs. Of concern, fewer patients received a lung cancer diagnosis within 28-days, however, to date, there has been no impact on survival. Whether the observed variations are due to changes in routine healthcare delivery or changes in patient healthcare-seeking behaviour requires further investigation. **Keywords:** Quality of care, Impact of COVID-19

P1.12-03
Computed Tomography-based Artificial Intelligence System in the Diagnosis of COVID-19

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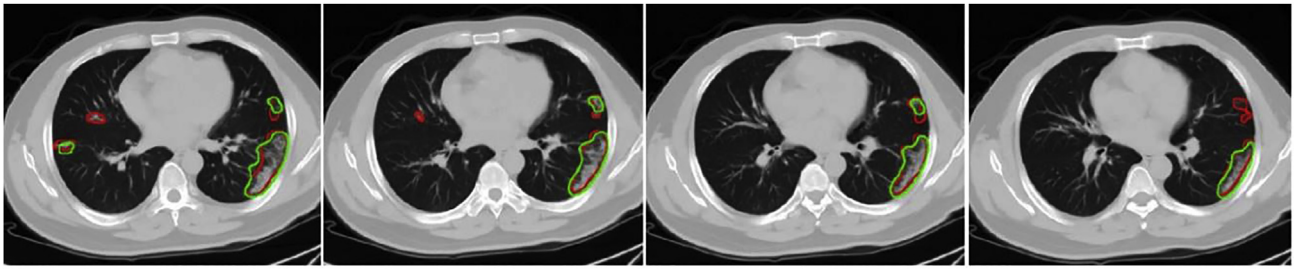
Introduction: Thorax computed tomography (CT) is the main imaging method in the diagnosis of Coronavirus disease 2019 (COVID-19) which requires an experienced radiologist, workforce and time for the interpretation of radiologic findings. In this study, it was aimed to evaluate the results of the computed tomography-based artificial intelligence (AI) system in the diagnosis of COVID-19. **Methods:** Ten thousand cases of pneumonia (COVID-19/non-COVID-19 pneumonia) or non-pneumonic lung pathologies were detected with CT. After completing machine learning with these patients' images, an AI diagnosis platform was provided by a medical technology company originating from the People's Republic of China (*Dr.Turing AI-assisted diagnosis platform Huiying Medical Technology Co., Ltd.*). Thorax CT of 30 patients (Test set 1) who were operated for lung adenocarcinoma with subsolid radiological appearance and 32 COVID-19 positive patients (Test set 2) in our center between 2011-2020 was uploaded to the platform and the diagnostic success of the platform was tested. **Results:** Automatic contour marking (automatic segmentation) of the images of the test sets was successfully achieved [Dice score=0.9 (0-1)] by the platform (Figure 1: Lung window sections of thorax CT of a



COVID-19 positive patient. The segmentation performed by the radiologist (red marking) and automatic segmentation (green marking) overlaps to a large extent.) In the ROC analysis, the area under the curve [area under curve=AUC (0.5-1)] of test sets 1 and 2 were found to be 0.94 and 1, respectively. With AI, test set 1 and 2 could be differentiated by 100%. **Conclusions:** During extraordinary processes such as the COVID-19 pandemic, there is a need for fast, cost-effective, non-invasive diagnostic tools with a high specification that protect healthcare workers from possible contamination, and neither PCR test nor thorax CT could meet these needs. AI can be successfully used in the diagnosis of COVID-19, as demonstrated in our study. Experiences gained from AI studies will be important in terms of being prepared for possible future pandemics. **Keywords:** COVID-19, Artificial Intelligence, Machine Learning

P1.12-04

The FLARE score and circulating neutrophils are associated with poor Covid-19 outcomes in patients with thoracic cancers

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Introduction: Inflammation and neutrophils play a central role in severe Covid-19 disease. In previous data, we showed that the FLARE score, combining both tumor and Covid-19-induced proinflammatory status (proinflam-status), predicts early mortality in cancer patients (pts) with Covid-19 infection. We aim to assess the impact of this score in a cohort of only thoracic cancers (TC) and to characterize the immunophenotype (IF) of circulating neutrophils. **Methods:** Multicenter retrospective cohort (RC) of pts with TC and Covid-19 infection across 14 international centers. Circulating inflammatory markers were collected at two timepoints: baseline (-15 to -45d before Covid-19 diagnosis) and Covid-19 diagnosis. Tumor-induced proinflam-status was defined by high dNLR (neutrophils/(leucocytes-neutrophils)>3) at baseline. Covid-19-induced proinflam-status was defined by +100% increase of dNLR between both timepoints.We built the FLARE score combining both Tumor and Infection-induced inflammation: **T+/I+ (poor)**, if both proinflam-status; **T+/I- (T-only)**, if inflammation was only due to tumor; **T-/I+ (I-only)**, if inflammation was only due to Covid; **T-/I- (favorable)**, if there was no proinflam-status.The IF of circulating neutrophils by flow cytometry was determined in a unicenter prospective cohort (PC) of pts with TC during Covid-19 infection and in healthy volunteers (HV). Primary endpoint was 30-day mortality. **Results:** 134 pts were enrolled in the RC with a median follow-up of 96 days (95%CI 86-108). Median age was 67 (range 41-88), 66% were male and 75% had baseline PS <1. 78% had active disease, 4% advanced stage and 58% were under systemic therapy.dNLR was high in 31% at baseline vs 57.6% at Covid-19 diagnosis. The median dNLR increase between both timepoints was +59% (IQR:0-54%); 43% had +100% increase of dNLR.Pts distribution and mortality across FLARE groups are shown in Table 1. Overall mortality rate was 36%.Thirteen pts were enrolled in the PC. Median circulating neutrophils were higher in pts with TC (n=7, 75.5% [IQR:71.9-78.7%]) vs HV (n=6, 35.8% [IQR:25.6-21%]), and particularly higher in pts with TC and severe Covid-19 infection (n=2, 87.1% [IQR:82.9-91.3%]. A more comprehensive characterization of the IF of circulating neutrophils, including Lox1/CD62/CD64, will be presented at the meeting. **Conclusions:** The FLARE score, combining tumor and Covid-19-induced proinflam-status, can identify patients at higher risk for mortality. A better characterization of circulating neutrophils may help us to improve the prediction of Covid-19 outcomes in pts with cancer.

Table 1.

	Distribution	30-day mortality	
FLARE T+/I+	5% (n=5)	60%	p=0.004
FLARE T+/I-	27% (n=28)	48%	
FLARE T-/I+	38% (n=40)	42%	
FLARE T-/I-	30% (n=31)	30%	

Keywords: Covid-19, Neutrophils, Inflammation

P1.12-05

Prediction of Clinically Significant Pathological Upstaging in Resected Lung Cancer: Insight from COVID-19 Pandemic (1st wave)

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Introduction: We aim to investigate clinicopathological characteristics of our surgical lung cancer population presenting during