

Telemedicine Use Among U.S. Patients With Cancer During the COVID-19 Pandemic

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Disclosures

- Lu Chen is an employee of Genentech, Inc.
- Palak Kundu is an employee of Genentech, Inc.
- Michael Taylor is an employee of Genentech, Inc.
- Carlos Flores Avile is an employee of Genesis Research
- Aaron B. Cohen is an employee of Flatiron Health, Inc., which is an independent subsidiary of the Roche Group. He also reports stock ownership in Roche
- Amy Webster is an employee of Flatiron Health, Inc., which is an independent subsidiary of the Roche Group. She also reports equity ownership in Flatiron Health, Inc. and stock ownership in Roche
- Rebecca Rohrer is an employee of Flatiron Health, Inc., which is an independent subsidiary of the Roche Group. She also reports equity ownership in Flatiron Health, Inc. and stock ownership in Roche

Background



Objective: to describe telemedicine use in cancer care during the COVID-19 pandemic in an electronic health record-derived database

The COVID-19 pandemic may have influenced the role of telemedicine in oncology care

Telemedicine, with real-time and remote interactions between patients and providers, enabled access to essential health care while helping to mitigate the spread of COVID-19

Use of telemedicine in patients with cancer is not well characterized, which may have implications on electronic health record studies, particularly in areas estimating follow-up time and care gaps

Methods

Flatiron Health Nationwide EHR-derived de-identified database^a

Cancer types

- Metastatic Breast Cancer
- Diffuse Large B-Cell Lymphoma
- Multiple Myeloma
- Advanced Non-Small Cell Lung Cancer

Data collected

Follow-up period was 3/1/2020-12/31/2020

- TM visits: billable, remote evaluation and management
- Traditional visits: presence of medication administration, lab test or vital signs

All patient analyses

- Monthly TM use
- Patient characteristics by TM use

Patient subgroups by care stages

- Newly diagnosed
- Initiated 1L treatment
- Continuing 1L treatment^b
- Established treatment^c

Subgroup analyses

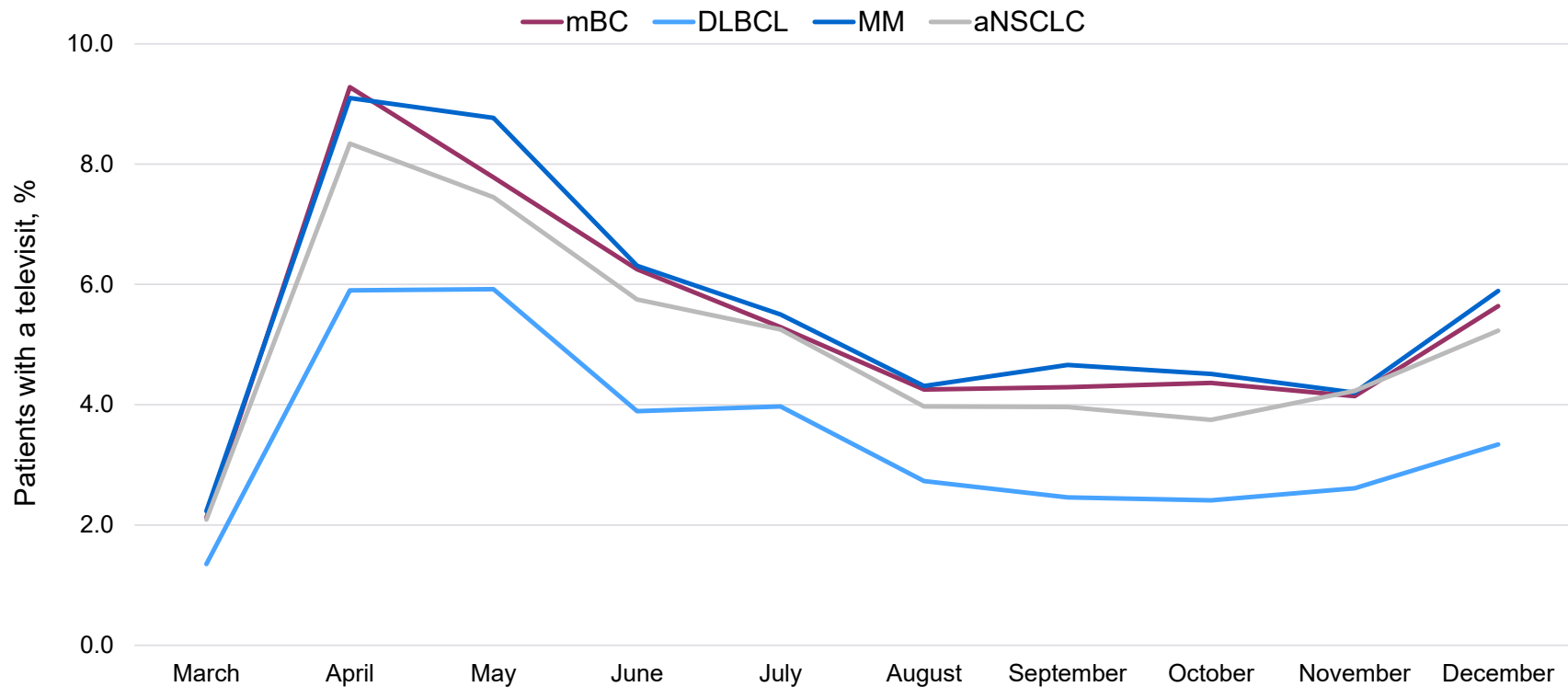
Traditional visits only vs TM + traditional visits compared for:

- Estimated FU time
- Care gaps of ≥ 60 days during FU

1L, first-line; EHR, electronic health records; FU, follow-up; TM, telemedicine. ^a The Flatiron Health database is a longitudinal database, comprising de-identified patient-level structured and unstructured data, curated via technology-enabled abstraction; Ma X, et al. medRxiv. 2020.03.16.20037143; Birnbaum B, et al. arXiv:2001.09765. During the study period, the de-identified data originated from approximately 280 US cancer clinics (~800 sites of care) ^b Patients who started 1L in February 2020. ^c Patients who started 1L in August 2019 and were still alive at the time of analysis.

Results: Telemedicine Use From March 2020 – December 2020

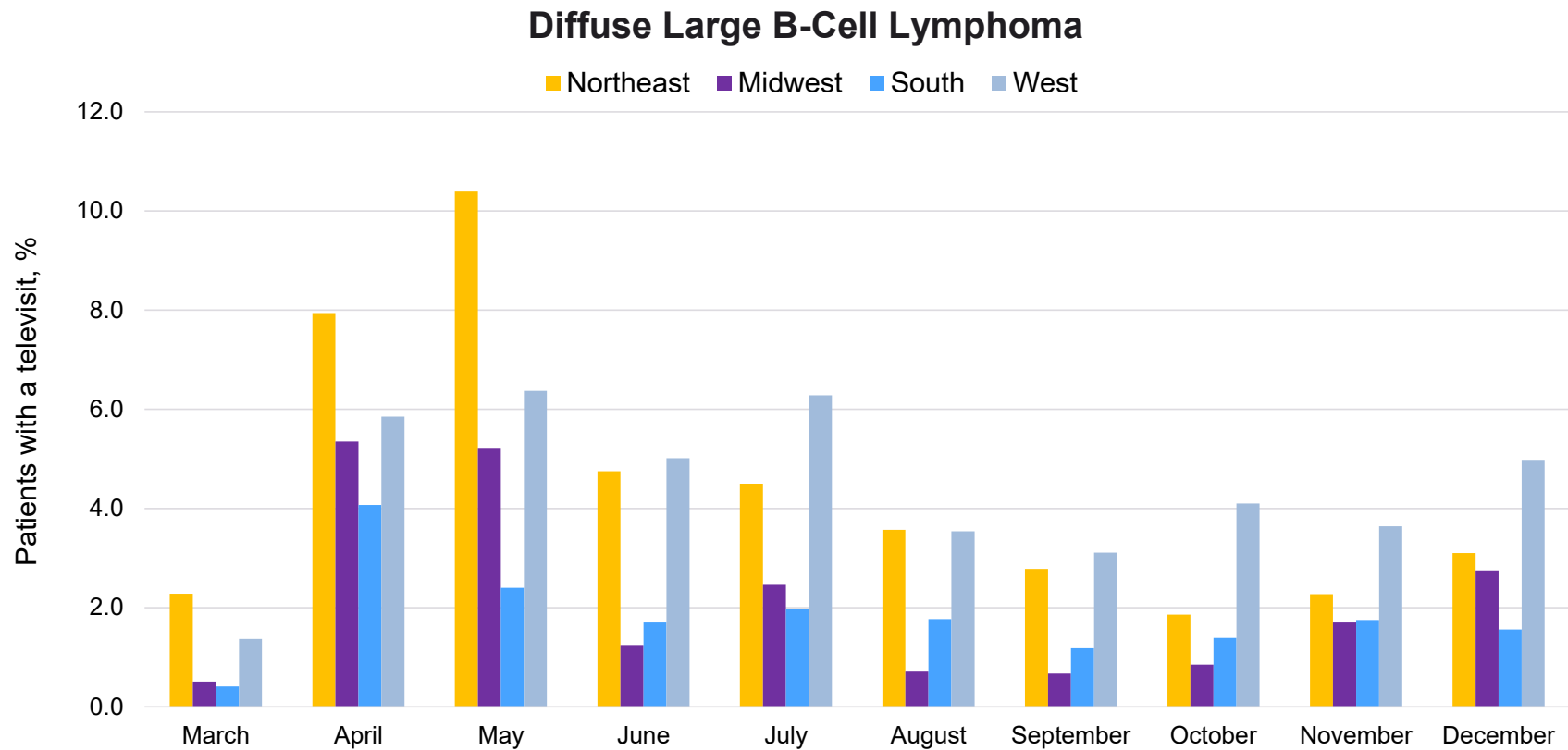
- Monthly telemedicine use peaked in April and May for all cancers



aNSCLC, advanced non-small cell lung cancer; DLBCL, diffuse large B-cell lymphoma; mBC, metastatic breast cancer; MM, multiple myeloma.

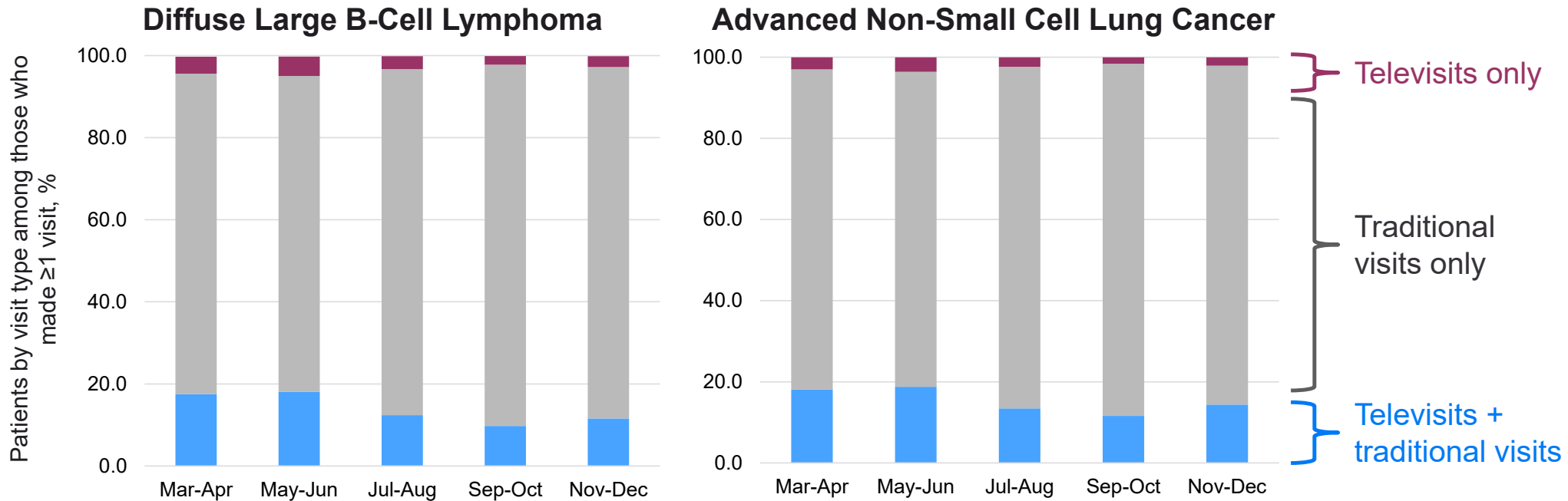
Results: Regional Trends

- Across cancer types, telemedicine was adopted more rapidly in the Northeast region during April and May
- In the later half of 2020, telemedicine was used more frequently in the West region



Results: Telemedicine Was Used as Supplementary Care

- Among patients with any visit during the follow-up period, the majority had traditional visits only, some had both (10-19%) and few had televisits only (<5% for all cancers)



Results: Demographics and Characteristics

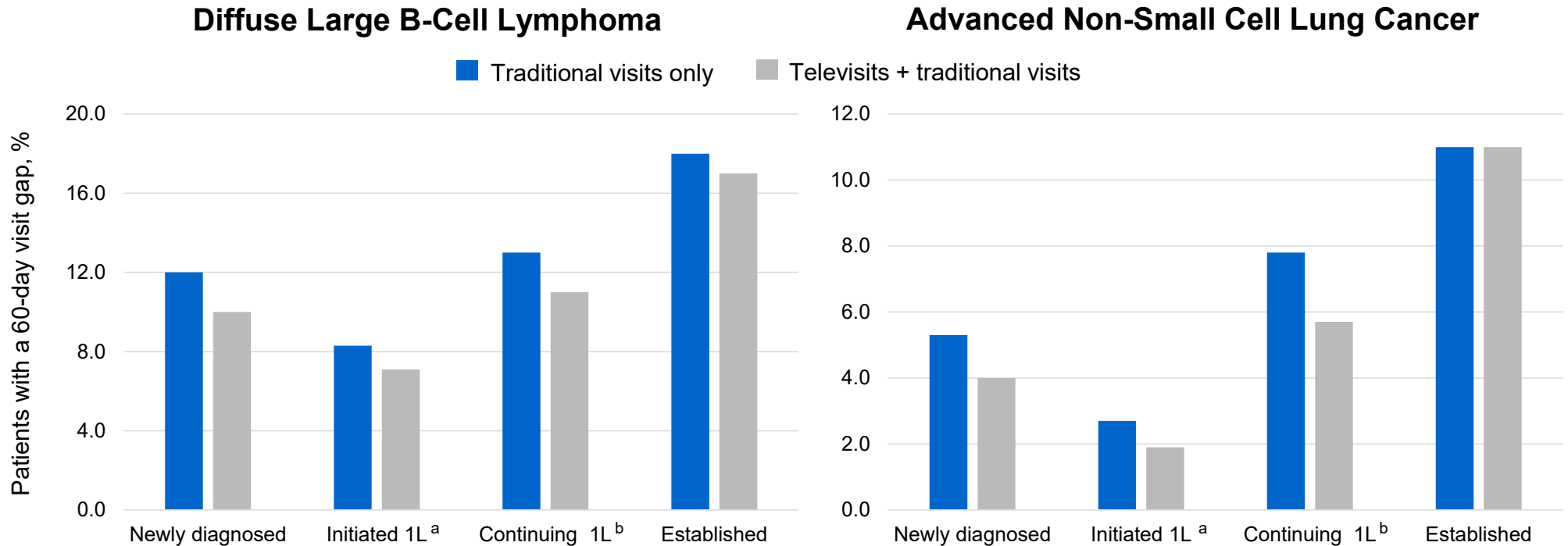
- Patients using televisits were more likely to receive care from academic sites and receive only oral regimens compared with patients using only traditional visits, but no differences in sex or disease stage by visit type were observed

Characteristic, n (%)	DLBCL		aNSCLC ^a	
	Any televisits n=1021	Traditional visits only n=2354	Any televisits n=4938	Traditional visits only n=10,063
Female	473 (46)	1095 (47)	2729 (55)	5101 (51)
Stage at initial diagnosis				
I-II	290 (28)	754 (32)	604 (12)	1690 (17)
III	169 (17)	468 (20)	1248 (25)	2466 (25)
IV	12 (26)	657 (28)	2758 (56)	5697 (57)
Unknown	298 (29)	475 (20)	107 (2.2)	209 (2.1)
Academic sites	283 (28)	219 (9.3)	700 (14)	717 (7.1)
Oral regimens only	53 (5.2)	79 (3.4)	651 (13)	700 (7.0)

aNSCLC, advanced non-small cell lung cancer; DLBCL, diffuse large B-cell lymphoma. ^a Only patients with advanced disease were eligible to be included in the aNSCLC database. Therefore, the distribution of stages at initial diagnosis is only for comparison purposes within the database and is not reflective of all patients with non-small cell lung cancer.

Results: Follow-Up and Care Gaps

- For patients with DLBCL or aNSCLC, including TM did not significantly affect FU time estimates
- The proportion of patients with care gaps changed <2% regardless of care stage between traditional visits only and televisits + traditional visits



1L, first-line; aNSCLC, advanced non-small cell lung cancer; DLBCL, diffuse large B-cell lymphoma; FU, follow-up; TM, telemedicine. ^a Patients who started 1L in February 2020. ^b Patients who started 1L in August 2019 and were still alive at the time of analysis.

Conclusions

Telemedicine was used in cancer care to complement traditional care during the pandemic, with its role varying by disease and specific cohorts

Telemedicine usage peaked during April and May 2020 across cancer types overall, but patients exclusively using telemedicine remained <5% at all times

While the short-term impact of including telemedicine visits in patients' follow-up time was limited, research on the longer-term impact and complex measures are warranted