#### SUPPLEMENTARY MATERIALS

# **Supplementary Tables**

Supplementary Table 1. Stay at home order dates by state/territory

State	Month/Day/Year	Level
California	3/19/2020	State
Illinois	3/21/2020	State
New Jersey	3/21/2020	State
New York	3/22/2020	State
Connecticut	3/23/2020	State
Louisiana	3/23/2020	State
Ohio	3/23/2020	State
Oregon	3/23/2020	State
Washington	3/23/2020	State
Delaware	3/24/2020	State
Indiana	3/24/2020	State
Massachusetts	3/24/2020	State
Michigan	3/24/2020	State
New Mexico	3/24/2020	State
West Virginia	3/24/2020	State
Hawaii	3/25/2020	State
Idaho	3/25/2020	State
Oklahoma <sup>a</sup>	3/25/2020	City
Vermont	3/25/2020	State
Wisconsin	3/25/2020	State
Colorado	3/26/2020	State
Minnesota	3/27/2020	State
New Hampshire	3/27/2020	State
Utah <sup>b</sup>	3/27/2020	County
Alaska	3/28/2020	State

Montana	3/28/2020	State
Rhode Island	3/28/2020	State
Wyoming <sup>c</sup>	3/28/2020	County
Kansas	3/30/2020	State
Maryland	3/30/2020	State
North Carolina	3/30/2020	State
Virginia	3/30/2020	State
Arizona	3/31/2020	State
Tennessee	3/31/2020	State
District of Columbia	4/1/2020	State
Nevada	4/1/2020	State
Pennsylvania	4/1/2020	State
Maine	4/2/2020	State
Texas	4/2/2020	State
Florida	4/3/2020	State
Georgia	4/3/2020	State
Mississippi	4/3/2020	State
Alabama	4/4/2020	State
Missouri	4/6/2020	State
South Carolina	4/7/2020	State
Kentucky d	_	None
Arkansas	_	None
Iowa	_	None
Nebraska	_	None
North Dakota	_	None
South Dakota	_	None

<sup>a</sup> Oklahoma: initial stay at home/shelter in place orders were given to major cities, beginning with Norman (March 25), Oklahoma City (March 28), and Tulsa (March 28). — States with no date did not issue full stay-at-home orders statewide or in any major cities or counties.

<sup>&</sup>lt;sup>b</sup> Utah: Initial stay at home orders were county-specific, starting with Summit County(March 27), Salt Lake County (March 30), and Davis County(April 1)

<sup>&</sup>lt;sup>c</sup> Wyoming: Stay at home orders were county-specific, beginning with Jackson County (March 28)

<sup>&</sup>lt;sup>d</sup> Kentucky: A state-level "healthy at home" recommendation was issued on March 26, but no full stay-at-home orders were issued.

#### Supplementary Table 2. Therapy classifications

Sample and analysis	Ordered classification process
Main study sample, TTI analysis	Exclude any regimen that contained a drug that was given as part of a
	clinical trial ("Clinical Study Drug")
	Exclude any regimen that did not contain at least one systemic therapy
	listed on NCCN guidelines
Sub-sample, treatment selection	Exclude any regimen that contained a targeted therapy, defined as: 1)
analysis <sup>a</sup>	EGFR, ALK, ROS1, BRAF targeted therapy in NSCLC cohort; 2) PD-
	L1 monotherapy (for presumed MSI-high) or PARP inhibitor therapy
	(for presumed HRD-positive) prostate cancer; 3) FGFR targeted therapy
	in urothelial cancer; 4) HER-2 targeted therapy in breast cancer
	Classify as myelosuppressive (containing at least one cytotoxic
	chemotherapy or a cyclin-dependent kinase inhibitor) or non-
	myelosuppressive

<sup>&</sup>lt;sup>a</sup> These treatment designations applied only to the sub-sample of patients diagnosed with advanced breast, prostate, urothelial, or non-small cell lung cancer. NSCLC = non-small cell lung cancer, NCCN = National Comprehensive Cancer Network ®, MSI = microsatellite instability, PARP = Poly (ADP-ribose) polymerase, HRD = Homologous recombination deficiency

Supplementary Table 3. Population characteristics for Treatment Selection Analysis

		2019			2020		Total
Variable	Jan 1-Mar 8 (n=1246)	Apr 8-Jul 31 (n=1949)	SMD	Jan 1-Mar 8 (n=1121)	Apr 8-Jul 31 (n=1646)	SMD	(n=5962)
Cancer, No. (%)							
Breast	238 (19.1)	391 (20.1)	0.079	194 (17.3)	278 (16.9)	0.070	1101 (18.5)
NSCLC	715 (57.4)	1146 (58.8)		684 (61.0)	973 (59.1)		3518 (59.0)
Prostate	191 (15.3)	246 (12.6)		140 (12.5)	245 (14.9)		822 (13.8)
UCC	102 (8.2)	166 (8.5)		103 (9.2)	150 (9.1)		521 (8.7)
Median Age (IQR), years	70 (63, 77)	71 (62, 78)	0.023	69 (62, 77)	70 (63, 78)	0.073	70 (63, 78)
Gender, No. (%)							
Female	557 (44.7)	964 (49.5)	0.095	536 (47.8)	768 (46.7)	0.023	2825 (47.4)
Male	689 (55.3)	985 (50.5)		585 (52.2)	878 (53.3)		3137 (52.6)
Race, No. (%)							
Hispanic	58 (5.2)	85 (4.9)		45 (4.6)	70 (4.8)		258 (4.9)
Non-Hispanic Black	109 (9.8)	170 (9.8)		112 (11.4)	141 (9.7)		532 (10.1)
Non-Hispanic White	801 (71.8)	1246 (71.9)	0.014	679 (69.1)	1016 (69.7)	0.059	3742 (70.8)
Other	147 (13.2)	231 (13.3)		146 (14.9)	230 (15.8)		754 (14.3)
Missing	131	217		139	189		676
Insurance, No. (%)							
Commercial	597 (47.9)	973 (49.9)	0.07	575 (51.3)	817 (49.6)	0.044	2962 (49.7)
Government	263 (21.1)	434 (22.3)		243 (21.7)	352 (21.4)		1292 (21.7)
Unknown/not documented/self-	386 (31.0)	542 (27.8)		303 (27.0)	477 (29.0)		1708 (28.6)
pay Practice type, No. (%)							
Academic	95 (7.6)	154 (7.9)	0.01	66 (5.9)	104 (6.3)	0.018	419 (7.0)
Community	1151 (92.4)	1795 (92.1)		1055 (94.1)	1542 (93.7)		5543 (93.0)
ECOG performance status, No. (%)	. ,	, ,		, ,	, ,		, ,
0-1	543 (83.5)	780 (81.4)	0.056	505 (82.9)	728 (82.0)	0.025	2556 (82.3)
≥2	107 (16.5)	178 (18.6)		104 (17.1)	160 (18.0)		549 (17.7)

Missing	596	991 (50.8)		512 (45.7)	758 (46.1)		2857 (47.9)
Opioid prescription, No. (%)	77 (6.2)	120 (6.2)	0.001	63 (5.6)	90 (5.5)	0.007	350 (5.9)
De novo metastatic, No. (%)	638 (57.3)	1057 (60.5)	0.066	613 (60.2)	967 (65.6)	0.113	3275 (61.2)
Missing	132	202		102	172		608

<sup>&</sup>lt;sup>a</sup> NSCLC = Non-small cell lung carcinoma; UCC = urothelial cell carcinoma; ECOG = Eastern Cooperative Oncology Group; SMD=standardized mean difference

Supplementary Table 4. Adjusted probabilities of treatment within 30 days by race and ethnicity

		2019			2020		Difference in differences
Category	Jan 1-Mar 8	Apr 8-Jul 31	Difference	Jan 1-Mar 8	Apr 8-Jul 31	Difference	2020-2019
	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)
	0.405	0.414	0.009	0.395	0.466	0.071	0.063
Hispanic	(0.215, 0.596)	(0.286, 0.542)	(-0.105, 0.122)	(0.209, 0.581)	(0.206, 0.727)	(-0.038, 0.180)	(-0.122, 0.247)
	0.395	0.386	-0.009	0.460	0.431	-0.029	-0.021
Non-Hispanic Black	(0.103, 0.687)	(0.204, 0.568)	(-0.150, 0.133)	(0.275, 0.646)	(0.173, 0.690)	(-0.166, 0.108)	(-0.285, 0.244)
	0.422	0.429	0.007	0.446	0.468	0.022	0.015
Non-Hispanic White	(0.308, 0.536)	(0.318, 0.540)	(-0.027, 0.041)	(0.282, 0.610)	(0.359, 0.577)	(-0.056, 0.099)	(-0.062, 0.092)
	0.411	0.440	0.029	0.450	0.490	0.039	0.010
Other	(0.177, 0.645)	(0.259, 0.622)	(-0.057, 0.116)	(0.162, 0.738)	(0.265, 0.714)	(-0.045, 0.124)	(-0.050, 0.070)

<sup>&</sup>lt;sup>a</sup> Results are from race:period interaction model. CI = confidence interval

## Supplementary Table 5. Adjusted probabilities of treatment within 30 days by age

		2019			2020		Difference in differences
Category	Jan 1-Mar 8	Apr 8-Jul 31	Difference	Jan 1-Mar 8	Apr 8-Jul 31	Difference	2020-2019
•	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)
	0.379	0.388	0.009	0.412	0.445	0.033	0.024
Age >75 years	(0.279, 0.479)	(0.304, 0.471)	(-0.043, 0.061)	(0.254, 0.570)	(0.321, 0.570)	(-0.028, 0.094)	(-0.042, 0.091)
	0.432	0.441	0.009	0.459	0.478	0.019	0.010
Age ≤75 years	(0.308, 0.556)	(0.326, 0.557)	(-0.043, 0.060)	(0.309, 0.609)	(0.339, 0.616)	(-0.025, 0.062)	(-0.043, 0.062)

<sup>&</sup>lt;sup>a</sup>Results are from age:period interaction model. CI = confidence interval

## Supplementary Table 6. Adjusted probabilities of receiving myelosuppressive therapy by race and ethnicity

		2019			2020		Difference in difference
Category	Jan 1-Mar 8	Apr 8-Jul 31	Difference	Jan 1-Mar 8	Apr 8-Jul 31	Difference	2020-2019
	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)
	0.696	0.711	0.015	0.662	0.586	-0.075	-0.091
Hispanic	(0.591, 0.801)	(0.625, 0.798)	(-0.094, 0.125)	(0.559, 0.764)	(0.491, 0.682)	(-0.193, 0.042)	(-0.245, 0.063)
	0.711	0.696	-0.016	0.706	0.660	-0.047	-0.031
Non-Hispanic Black	(0.639, 0.783)	(0.613, 0.778)	(-0.102, 0.071)	(0.639, 0.773)	(0.584, 0.735)	(-0.118, 0.025)	(-0.134, 0.072)
	0.705	0.672	-0.034	0.684	0.683	0.000	0.033
Non-Hispanic White	(0.660, 0.751)	(0.620, 0.724)	(-0.072, 0.005)	(0.653, 0.714)	(0.651, 0.716)	(-0.031, 0.030)	(-0.017, 0.084)
-	0.657	0.608	-0.049	0.667	0.629	-0.038	0.011
Other	(0.566, 0.748)	(0.461, 0.755)	(-0.157, 0.059)	(0.576, 0.758)	(0.524, 0.734)	(-0.092, 0.016)	(-0.104, 0.126)

 $<sup>^{\</sup>rm a}$  Results are from race:period interaction model. CI = confidence interval

## Supplementary Table 7. Adjusted probabilities of receiving myelosuppressive therapy by age

		2019			2020		Difference in differences
Category	Jan 1-Mar 8	Apr 8-Jul 31	Difference	Jan 1-Mar 8	Apr 8-Jul 31	Difference	2020-2019
	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)
	0.593	0.542	-0.051	0.582	0.538	-0.044	0.007
Age >75 years	(0.534, 0.652)	(0.469, 0.616)	(-0.109, 0.007)	(0.539, 0.625)	(0.488, 0.588)	(-0.090, 0.001)	(-0.067, 0.081)
	0.747	0.726	-0.021	0.730	0.731	0.001	0.022
Age ≤75 years	(0.701, 0.793)	(0.671, 0.781)	(-0.058, 0.016)	(0.697, 0.762)	(0.698, 0.764)	(-0.026, 0.028)	(-0.021, 0.064)

<sup>&</sup>lt;sup>a</sup> Results are from age:period interaction model. CI = confidence interval

Supplementary Table 8. Adjusted probability of treatment within 30 days using state-specific COVID-19 period exposure dates

		2019		•	2020	-	Difference in differences
Model and category	Pre SAHO	Post SAHO	Difference	Pre SAHO	Post SAHO	Difference	2020-2019
	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)
Unadjusted	0.453 (0.431, 0.473)	0.432 (0.417, 0.447)	_	0.457 (0.434, 0.478)	0.470 (0.453, 0.486)	_	_
Adjusted							
Combined	0.424 (0.336, 0.512)	0.443 (0.340, 0.546)	0.019 (-0.030, 0.068)	0.439 (0.323, 0.555)	0.483 (0.379, 0.587)	0.044 (0.014, 0.074)	0.025 (-0.042, 0.092)
Breast	0.552 (0.399, 0.705)	0.576 (0.344, 0.808)	0.024 (-0.172, 0.219)	0.607 (0.427, 0.787)	0.650 (0.542, 0.758)	0.043	0.019 (-0.266, 0.304)
Colorectal	0.407 (0.316, 0.499)	0.424 (0.313, 0.535)	0.017 (-0.082, 0.116)	0.422 (0.269, 0.575)	0.446 (0.332, 0.560)	0.024 (-0.050, 0.099)	0.007 (-0.156, 0.171)
NSCLC	0.400 (0.313, 0.487)	0.403 (0.316, 0.489)	0.003	0.404 (0.282, 0.526)	0.450 (0.325, 0.574)	0.046 (0.020, 0.071)	0.043
Pancreatic	0.549 (0.321, 0.777)	0.592 (0.430, 0.755)	0.044 (-0.215, 0.302)	0.533 (0.389, 0.677)	0.559 (0.373, 0.744)	0.026 (-0.215, 0.266)	-0.018 (-0.342, 0.307)
Prostate	0.362 (0.201, 0.524)	0.388 (0.168, 0.608)	0.026 (-0.284, 0.336)	0.359 (0.178, 0.540)	0.454 (0.312, 0.595)	0.094 (-0.148, 0.337)	0.069 (-0.465, 0.602)
RCC	0.353 (0.207, 0.499)	0.403 (0.202, 0.604)	0.050 (-0.158, 0.257)	0.405 (0.168, 0.642)	0.465 (0.340, 0.590)	0.060 (-0.108, 0.227)	0.010 (-0.307, 0.327)
UCC	0.357 (0.242, 0.472)	0.418 (0.260, 0.576)	0.061 (-0.088, 0.210)	0.400 (0.233, 0.568)	0.441 (0.310, 0.571)	0.040 (-0.151, 0.232)	-0.021 (-0.244, 0.202)

<sup>&</sup>lt;sup>a</sup> Results are from cancer type:period interaction model. Washout period defined using state stay-at-home order dates. SAHO = Stay at home order. NSCLC = Non-small cell lung carcinoma; RCC = renal cell carcinoma; UCC = urothelial cell carcinoma; Est = estimate; CI = 95% confidence interval

Supplementary Table 9. Adjusted probability of receiving myelosuppressive treatment using state-specific COVID-19 period exposure dates

Model and -		2019			2020		Difference in differences
category	Pre SAHO	Post SAHO	Difference	Pre SAHO	Post SAHO	Difference	2020-2019
	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)	Est (95% CI)
Unadjusted	0.687	0.676	-0.012	0.691	0.658	-0.033	-0.022
	(0.651, 0.723)	(0.622, 0.729)	(-0.059, 0.036)	(0.656, 0.727)	(0.626, 0.690)	(-0.062, -0.004)	(-0.081, 0.038)
Adjusted	, , ,	, , ,	, ,	, , ,	, , ,	, , ,	, , ,
Combined	0.698	0.667	-0.031	0.683	0.668	-0.015	0.016
	(0.651, 0.744)	(0.609, 0.725)	(-0.065, 0.002)	(0.651, 0.714)	(0.633, 0.702)	(-0.038, 0.008)	(-0.026, 0.058)
Breast	0.815	0.776	-0.039	0.827	0.807	-0.019	0.020
	(0.746, 0.883)	(0.701, 0.851)	(-0.122, 0.044)	(0.783, 0.870)	(0.767, 0.848)	(-0.073, 0.034)	(-0.077, 0.116)
NSCLC	0.835 (0.797, 0.872)	0.808 (0.761, 0.856)	-0.026 (-0.071, 0.018)	0.807 (0.773, 0.841)	0.783 (0.749, 0.817)	-0.024 (-0.059, 0.012)	0.003 (-0.056, 0.061)
Prostate	0.046	0.025	-0.022	0.025 (0.008,	0.041	0.016	0.037
	(0.000, 0.101)	(0.004, 0.045)	(-0.080, 0.036)	0.042)	(0.012, 0.071)	(-0.015, 0.047)	(-0.025, 0.100)
UCC	0.558	0.497	-0.061	0.583	0.589	0.007	0.068
	(0.452, 0.664)	(0.402, 0.593)	(-0.190, 0.068)	(0.505, 0.660)	(0.518, 0.661)	(-0.081, 0.095)	(-0.086, 0.221)

<sup>&</sup>lt;sup>a</sup> Results are from cancer type:period interaction model. Washout period defined using state stay-at-home order dates. SAHO = Stay at home order. NSCLC = Non-small cell lung carcinoma; UCC = urothelial cell carcinoma; Diff = difference between post SAHO and pre SAHO probabilities; Est = estimate; CI = 95% confidence interval

## **Supplementary Figure**

Supplementary Figure 1. CONSORT diagram. <sup>a</sup> NCCN = National Comprehensive Cancer Network; NSCLC = Non-small cell lung carcinoma

	Criteria	Patients lost	Patients remaining
	Total unique patients		164,188
	Exclude patients outside of study frame (all		
	patients not diagnosed in Jan-Jul 2019 or		
	Jan-Jul 2020)	143,927	20,261
	Exclude patients with no structured activity		
	within 90 days of diagnosis	1,631	18,630
	Exclude patients with <2 observations after		
	diagnoses	1,275	17,355
	Exclude patients with multiple		
	malignancies (only study cohorts		
	considered)	66	17,289
	Treatment begins prior to advanced		
	diagnosis	682	16,607
	Exclude patients on non-NCCN		
	recommended therapy or a therapy that		
	involved a clinical study drug	344	16,263
	Washout	2,127	14,136
	Excluded patients who were not diagnosed		
	with breast cancer, prostate cancer,		
Aim 2	urothelial cancer, or NSCLC.	4,603	9,533
	Excluded patients not treated within 60		
	days of advanced diagnosis.	2,812	6,721
	Excluded patients who received targeted		
	therapy	759	5,962