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Disparities in the uptake of telemedicine and implications for clinical trial enrollment in breast cancer patients

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PII: S0360-3016(22)03447-2
DOI: https://doi.org/10.1016/j.ijrobp.2022.10.016
Reference: ROB 27891

To appear in: *International Journal of Radiation Oncology, Biology, Physics*

Received date: 28 June 2022
Revised date: 14 September 2022
Accepted date: 9 October 2022

Please cite this article as: Camille Hardy-Abeloos , Jerome Karp , Julie Xiao , Cheongeun Oh , David Barbee , Olivier Maisonet , Naamit Gerber , Disparities in the uptake of telemedicine and implications for clinical trial enrollment in breast cancer patients, *International Journal of Radiation Oncology, Biology, Physics* (2022), doi: https://doi.org/10.1016/j.ijrobp.2022.10.016

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TITLE PAGE

Title: Disparities in the uptake of telemedicine and implications for clinical trial enrollment in breast cancer patients

Running Title: Disparities in telemedicine uptake in breast cancer patients

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ACKNOWLEDGEMENTS: None

FUNDING SOURCES: None

CONFLICTS OF INTEREST: None

DATA SHARING STATEMENT: Research data are stored in an institutional repository and will be shared upon request to the corresponding author.

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ABSTRACT

Purpose/Objectives:

Since the COVID-19 pandemic, telemedicine has emerged as an alternative to office visits in routine radiation oncology practice. The purpose of this study was to identify factors associated with patient preference for an initial consult via telemedicine and correlation with clinical trial enrollment.

Materials/Methods:

We evaluated breast cancer patients seen during the open enrollment of a prospective randomized trial from 06/01/2020 to 05/13/2021. Univariate and multivariate logistic regression models were used to identify factors associated with virtual vs in-person initial consultation. All statistical tests were two-sided and the null hypothesis was rejected for $p<0.05$.

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Results:

We identified 476 patient consultations with 259 office visits and 217 telemedicine visits. On multivariate analysis, increased age, unemployment, chemotherapy receipt and radiation at our institution were associated with decreased usage of telemedicine for consultation visit. Out of 217 patients who underwent a telemedicine initial consultation, 10% were eligible to enroll on the trial and of those eligible, 76% enrolled. Out of 259 patients who underwent office visit initial consultation, 14% were eligible to enroll on the trial and of those eligible, 53% enrolled. Among eligible patients, there was no statistically significant difference in clinical trial enrollment between telemedicine and office visits.

Conclusion:

Older patients, unemployed patients, those receiving chemotherapy and those who subsequently received radiation at our institution were less likely to use telemedicine for their initial consult. Despite these disparities in telemedicine usage, there was no difference in clinical trial enrollment. Telemedicine may be an effective platform for clinical trial enrollment though further strategies to improve its access are essential.

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INTRODUCTION

Since the COVID-19 pandemic, numerous studies identified telemedicine as a suitable platform for radiation oncology visits with high patient and physician satisfaction (1-7). Recent data have also found socioeconomic disparities in access to digital technologies which are becoming increasingly important to address in order to not further exacerbate already existing disparities in patient care as the use of telemedicine increases (8-10). Among Medicare

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beneficiaries, the proportion of beneficiaries who lacked digital access was higher among those 85 years or older, those widowed, those with high school education or less, those who identified as Black or Hispanic, those who received Medicaid, those whose primary language was not English or those who had a disability (8). This is further supported by evidence of racial/ethnic, language, insurance and household income disparities between patients completing office visits vs virtual visits in oncologic care (9-12). These disparities are also commonly cited barriers to clinical trial enrollment (13-15).

We aimed to identify factors associated with patient preference for an initial telemedicine visit and correlation with clinical trial enrollment.

MATERIALS AND METHODS

This study was approved by the Institutional Review Board. We reviewed all electronic medical records of breast cancer patients who had an initial consultation either in person or virtual during the open enrollment of a prospective randomized controlled non inferiority trial evaluating radiation fibrosis with five versus three fractions from 06/01/2020 to 05/13/2021 (NYU S14-01306, NCT#02276885). This trial opened on 09/17/2014 and closed to accrual on 5/13/21. In order to capture a period of time when breast cancer patients at our institution were being offered both telemedicine and in-person visits and during which this clinical trial was open, we chose a study period from 06/01/2020 to 05/13/2021 for the present study. All patients on the trial were treated with external beam accelerated partial breast irradiation in the prone position. 3D conformal or intensity modulated radiation therapy treatment planning was allowed. There was only one other competing breast cancer trial open during the study period, the Precision trial, a phase II study of breast conserving surgery without adjuvant radiotherapy for

favorable risk breast cancer (NCT #02653755). The trial was open but no patients were enrolled during this study period. All patients were offered an initial consultation in person or via telemedicine. All virtual consultations were conducted via video except for 5 visits which were telephone only. This study includes patients seen by two providers who see breast cancer patients at our institution. Patient and tumor characteristics and treatment planning parameters were recorded.

Statistical Analysis

Descriptive statistics, including medians, ranges, frequencies, and percents were used to describe patient, tumor, and treatment characteristics. Univariate and multivariate logistic regression were performed to calculate odds ratios (OR) and characterize factors associated with virtual vs in-person initial consultation and factors associated with clinical trial enrollment, where the null hypothesis was rejected for $p < 0.05$. Statistical analyses were conducted in R Studio Version 1.1.383 (Boston, MA).

RESULTS

Between 06/01/2020 and 05/13/2021, 476 breast cancer patients were identified with 259 patients (54%) undergoing initial consultation in person and 217 patients (45%) undergoing initial consultation via telemedicine. All patients were female. Two providers were assessed and both saw an equal number of in person and telemedicine patients. Out of 274 total patients seen by provider 1, 55% underwent in person consultation and 45% underwent a consultation via telemedicine. Out of 202 total patients seen by provider 2, 53% underwent an in person consultation and 47% underwent a consultation via telemedicine.

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Overall patient characteristics

Patient characteristics are summarized in Table 1. Patients with office visits had a median age of 64 years old (IQR range: 54-74 years old), 56% were white, 87.6% were not of Hispanic origin, 46.7% were married or partnered, 50.2% were employed, 29% were retired and 17% were unemployed, 85.7% lived in NYC, 86.9% listed English as their primary language and 88% did not require an interpreter for initial consultation. Most had high performance status: 97.7% had ECOG < 2 and 66.4% had BMI < 30. About 19.3% had a personal prior history of radiation and 45.6% had a family history of breast cancer. Patients with telemedicine visits had a lower median age of 60 years old (IQR range: 50 – 68 years old), were statistically significantly less likely to be divorced (7.4% vs 13.9%) or widowed (4.6% vs 12%), were statistically significantly less likely to be retired (16.1% vs 29.0%) or unemployed (10.1% vs 17.0%).

In terms of disease presentations at time of consult, most patients presented with primary disease (84.6% in office visit arm and 85.3% in telemedicine arm), invasive ductal carcinoma (74.0% in office visit arm and 71% in telemedicine arm), and grade 1-2 (64.1% in office visit arm and 62.7% in telemedicine arm). Most patients presented with early stage disease in both groups: 57.6% presenting with pT0-T1 disease and about 80% presenting with pN0-Nx.

In terms of treatment management, most patients underwent lumpectomy (77% in both arms) and SLNB (about 65% in both arms). On univariate analysis, patients with telemedicine visits were associated with decreased rates of radiation treatment done at our cancer center (82.6% vs 71.9% p =0.01) and decreased rates of patients undergoing radiation treatment when initially recommended at consultation (14.7% vs 6.6% p =0.006). There was no statistically significant difference in terms of radiation dose received in patients who underwent office visit vs virtual initial consultation. Patients with telemedicine consultation were more likely to have

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an additional visit prior to the simulation visit compared to patients with office visit consultation (7.8% vs 3.1% $p < 0.001$).

Multivariate analysis identifying patient factors associated with telemedicine usage for initial consultation is shown in Table 2. Older patients were less likely to use telemedicine for their initial consultation (p=0.024). Patient who were unemployed were also less likely to use telemedicine compared to patients who were employed (p=0.05). Patients who required chemotherapy either neoadjuvantly or adjuvantly were less likely to use telemedicine (p=0.0). Finally, patients receiving their radiation at our institution were less likely to have used telemedicine for their initial consultation (p=0.001). Marital status, interpreter needed, primary language and primary coverage were not associated with visit type preference after covariate adjustment.

Clinical Trial Enrollment

Table 1 shows the proportion of patients who underwent telemedicine vs office visit consultation and who were eligible for the trial and who then enrolled. Out of 217 patients who underwent a telemedicine initial consultation, 10% were eligible to enroll on the trial and of those eligible, 76% enrolled. Out of 259 patients who underwent office visit initial consultations, 14% were eligible to enroll on the trial and of those eligible, 53% enrolled. Among eligible patients, there was no statistically significant difference in clinical trial enrollment between telemedicine and office visits. For both in person consultation and telemedicine consultations, 75% of patients were enrolled by provider 1. Provider 1 had higher enrollment than provider 2 but the two providers saw very similar proportions of telemedicine to in person visits. This limits the potential bias of provider on clinical trial enrollment as it relates to visit type.

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Trend in telemedicine consultations and clinical trial enrollment

Figure 1 shows the trend in telemedicine and in person consultations and the number of patients enrolled after telemedicine or in person consultation from June 2020 to May 2021. The number of telemedicine consults decreased from June to September 2020 until it was less than the number of in person consults in September 2020. In parallel, the number of patients enrolled via telemedicine decreased during that time and the first person to enroll after an in-person consultation occurred in September 2020. From September 2020 to May 2021, the number of telemedicine and in-person consults fluctuated with slightly more in-person consults. Clinical trial enrollment after in person consult increased as the number of in person consults increased.

Enrolled Patient characteristics

Patient characteristics of enrolled patients are summarized in Table 2. Patients who enrolled had median age of 70 years old (IQR: 62.5 – 74 year old). Out of the 35 patient who enrolled, 65% were white, 94.3% were not of Hispanic origin, 51.4% were married or partnered, 57.1% were employed, 88.5% lived in NYC, 94.3% spoke English as a primary language and did not need an interpreter, all had ECOG < 2 and 62.9% had BMI < 30. There were no statistically significant difference in patients who were eligible but chose not to enroll. All eligible African American and Asian patients and all eligible patients who did not speak English as a primary language enrolled in the clinical trial.

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DISCUSSION

While multiple studies have compared characteristics of patients seen pre-pandemic and intra-pandemic, our study evaluated factors associated with the selection of in person vs virtual initial consultation among breast cancer patients intra-pandemic from June 2020 to May 2021 when all patients were offered both types of visits (7,9). In June 2020, the number of

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telemedicine visits initially greatly surpassed the number of in person visits. It decreased over time until it was less than the number of in person consults in September 2020. The decrease in telehealth visits over time is consistent with the national trend analysis from the Assistant Secretary for Planning and Evaluation office (ASPE) using the household pulse survey conducted from April 2021 to October 2021 which showed a modest decline in telehealth use over the course of the year though telehealth visit rates still remained above pre-pandemic rates (16).

Our data supports that increasing age is associated with decreased telemedicine usage most likely due to decreased access and comfort in use in digital technologies. A recent study showed that approximately one-quarter of Medicare beneficiaries lack either a smart phone or a computer with a high-speed internet connection (8). The proportion of beneficiaries who lacked digital access was higher among those with low socioeconomic status, those 85 years or older, and in communities of color. Expanding policies to provide reduced cost phone or internet services to families with lower income and assistance programs for the elderly to learn how to use technology may help reduce these disparities. While our study showed that increasing age and unemployment was associated with decreased telemedicine usage, our study showed no statistically significant difference in age or employment status between eligible patients who enrolled and those who did not enroll on the trial, suggesting that decreased telemedicine usage in older and unemployed patients had no impact on clinical trial enrollment. This should however be interpreted with caution given the low number of eligible patients for the trial.

Many studies have also shown that ethnic minorities and non-English speaking patients are less likely to use telemedicine (12,16,17). In a multicenter, prospective cohort study of 2,365 outpatients receiving cancer care during the pandemic, Schmidt et al. showed that Black and Hispanic patients were less likely to have an increase in telehealth utilization and Hispanic

patients were more likely than White patient to have pandemic related delays in cancer care (17). Our study showed no statistically significant difference in telemedicine vs in person consultations between patients of difference races or ethnicities. In fact, all eligible patients who did not speak English as a primary language enrolled in the clinical trial. There were only two eligible patients who did not speak English as a primary language limiting any definite explanation. However, both patients were seen in person with an in person interpreter which potentially highlights the importance of in person visits and in person interpreters for improved communication and clinical trial enrollment. All eligible African American and Asian patients also enrolled in the clinical trial. Aside from low numbers of African American and Asian patients, this finding may also be due to our institution being located in a highly urban setting and strongly promoting an inclusive community through health equity research, clinical care, medical education and recruitment initiatives which may increase trust between providers and patients from diverse backgrounds. Institutional efforts to reduce racial and ethnic barriers may help narrow these disparities and improve care.

There have been a few studies assessing the impact of disparities in telemedicine usage on cancer outcomes. In a retrospective study of 720 US patients with thoracic cancer during the Covid 19 pandemic, telemedicine visits were described as successful if a patient completed the entire scheduled visit with video capability or as unsuccessful if the visit was conducted via telephone without video or the patient had a no-show or missed encounter (18). Patients with Medicaid had a significantly higher odds of unsuccessful telemedicine visit compared to those with private insurance and those with at least once unsuccessful telemedicine visit had higher likelihood of an emergency department or urgent care visit or hospitalization. In a propensity matched analysis pre and post pandemic of newly referred patients with cancer starting systemic

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therapy comparing in person vs virtual visits, there were no discernable differences in 3-month clinical outcomes among cohorts including rates of chemotherapy discontinuation and all-cause or cancer-specific emergency visits or hospitalizations (19). The number of treatment delays and mean duration of delays were similar across cohorts. As we integrate virtual care into healthcare systems, further high quality research studies are needed to assess outcomes for patients with decreased telemedicine usage to not perpetuate already existing disparities in patient care.

Demographic disparities in telemedicine use persist in regards to audio versus video telehealth usage, further potentially increasing inequality in quality of care and clinical outcome. Based on the National Census Bureau's Household Pulse Survey conducted from July 2021 to October 2021, patients without a high school diploma, adults ages 65 and older, those who self-identified as Latino, Asian American or Black and those with household income < $100,000 had lower odds of using video enables telehealth services (16). In contrast to a phone visit, a video visit may allow a partial physical exam and nonverbal communication leading to a strong patient provider relationship (20,21). In a large NCCN network survey sent to oncology providers including 10% of radiation oncology physicians, office visits were compared to both telephone and video visits. Of the 1038 providers who answered the survey, 93% indicated that office visit was better than telephone visit and 86% indicated that office visit was better than video visit for establishing a personal connection with a patient or family (4). This highlighted the potential limitation of telemedicine visits in establishing a therapeutic alliance as well as the use of video to further optimize patient physician communication. Shaverdian et al reported that telephone-only patients were two times more likely than those who had an audiovisual encounter to report that their understanding of the treatment plan would be better with an in-person visit (7).

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Effective patient-physician communication has been shown to be even more crucial in clinical trial enrollment (22,23). Given that clinical trial protocols are discussed during the initial consultation, we aimed to characterize whether telemedicine initial consultations impacted clinical trial enrollment. All patients were offered telemedicine visits and only two providers were assessed with an equal number of patients seen in-person or via telemedicine, thus limiting any patient and provider selection bias. Our study showed no difference in clinical trial enrollment between telemedicine and office visits suggesting that video visits may be just as effective as office visits in establishing therapeutic alliance. Out of the 21 eligible patients who underwent telemedicine visit, 76% enrolled while out of the 26 patients eligible who underwent office visit, 53% enrolled. Of note, all of the patients in our study underwent telemedicine visits with video except for five patients who underwent telephone only encounters. Out of the patients eligible for the trial, all underwent telemedicine visits with video.

Our study found patients who required chemotherapy either neoadjuvantly or adjuvantly were more likely to undergo an office visit consultation. This could potentially be due to multiple factors including patients scheduling their initial consultation in person on the same day as their chemotherapy infusion in order to limit travel or increased familiarity with cancer center from previous visits. Patients for whom radiation was recommended did not preferentially select a virtual or in person initial consultation. However, patients who underwent their initial consultation in person were then more likely to receive their radiation at our institution compared to those receiving their radiation elsewhere or not receiving radiation at all. Our study did not show a significant difference in patient's home location between patients undergoing in person vs telemedicine initial consult so this is less likely to account for the lower rates of telemedicine patients receiving radiation at our institution. It is unknown whether this observed difference

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represents the effect of an increased patient-physician therapeutic alliance during an office visit leading to higher patient compliance or the cause of patient preferring to undergo radiation at our institution which led to preferential selection of an in-person initial consultation.

Our study showed no statistically significant difference in telemedicine usage by patient disease presentation including primary, recurrent or metastatic disease or by radiation treatment recommendation. Similarly, Shaverdian et al showed no significant difference by cancer diagnosis, radiation consultation intent, symptomatic or metastatic disease among patients with a wide variety of disease sites (7). This further demonstrates that patients with diverse clinical presentations and radiation treatment recommendations did not preferentially select a telemedicine or office visit type. However, further studies are needed to better define underlying reasons for patient selection and impact on care in order to ensure equal access and benefit from telemedicine, especially in already disadvantaged patient populations.

Our study is limited in the diversity of patients including only female breast cancer patients and the limited number of patient eligible for the clinical trial. Based on the National Census Bureau's Household Pulse Survey conducted from July 2021 to October 2021, men were associated with lower odds of using video enable telehealth services compared to females and transgender individuals had higher odds of using video enable telehealth compared to females though the sample size for transgender individuals was small (16). This data suggests potential variations in technological use based on gender though reasons for these disparities are not well defined. Our data does not provide causal relationship between patient characteristics and selection of telemedicine vs office visits or between telemedicine and office visit consultation and clinical trial enrollment. Additional studies are needed to further characterize disparities

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associated with variations in telemedicine usage in order to optimize patient care and clinical trial enrollment for the most vulnerable patients.

CONCLUSION

This study demonstrates that older patients, unemployed patients and those requiring chemotherapy were less likely to use telemedicine for their initial consult. Those who underwent an in-person initial consultation were then more likely to receive their radiation at our institution. Despite these disparities in telemedicine usage, there was no difference in clinical trial enrollment. Telemedicine may be an effective platform for clinical trial enrollment though further strategies to improve its access are essential to not perpetuate already existing disparities in patient care and clinical trials.

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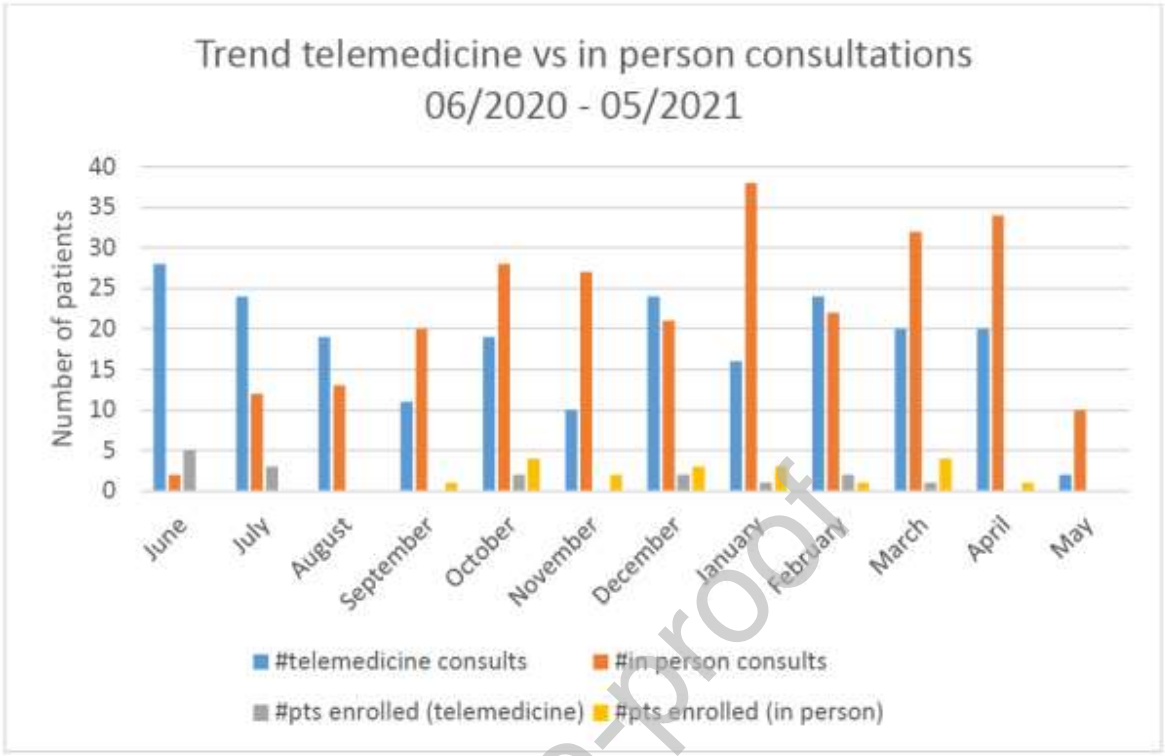

Figure 1: Trend telemedicine vs in person consultations (06/2020 - 05/2021)

Tables:

Table 1: Baseline patient characteristics according to type of visit

Patient Characteristics			
	Office Visit, N (%)	Telemedicine, N (%)	p value
Patients, N	259 (54)	217 (45)	
Female, N	259 (100)	217 (100)	
Median age (IQR), years	64 (54-73)	60 (50-68)	< 0.001
Race			0.183
White	145 (56)	141 (65)	
Asian	35 (13.5)	19 (8.8)	
African American	36 (13.9)	28 (12.9)	
Unknown	43 (16.6)	29 (13.4)	
Ethnicity			0.339
Not of Hispanic origin	227 (87.6)	188 (86.6)	

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Hispanic/Latino	27 (10.4)	20 (9.2)	
Unknown	5 (1.9)	9 (4.1)	
Marital Status			0.005
Single	67 (25.9)	69 (31.8)	
Divorced	36 (13.9)	16 (7.4)	
Married	115 (44.4)	115 (53.0)	
Partnered	6 (2.3)	6 (2.8)	
Widowed	31 (12.0)	10 (4.6)	
Unknown	4 (1.5)	1 (0.5)	
Occupation			< 0.001
Employed	130 (50.2)	146 (67.3)	
Retired	75 (29.0)	35 (16.1)	
Unemployed	44 (17.0)	22 (10.1)	
Unknown	10 (3.9)	14 (6.5)	
Home Location			0.499
Manhattan	87 (33.6)	68 (31.3)	
Out of NY state	27 (10.4)	24 (11.1)	
NYC borough (not Manhattan)	135 (52.1)	110 (50.7)	
NY state	10 (3.9)	15 (6.9)	
Language			0.002
English	225 (86.9)	207 (95.4)	
Non English	34 (13.1)	10 (4.6)	
Interpreter needed			0.007
no	228 (88)	207 (95.4)	
yes	31 (12)	10 (4.6)	
Current Covid vaccination			
yes	190 (73.4)	164 (75.6)	0.655
MyChart			
yes	243 (93.8)	211 (97.2)	0.122
Primary Coverage			
Private	183 (70.7)	173 (79.7)	0.031
Public (Medicare/Medicaid)	76 (29.3)	44 (20.3)	
ECOG			
< 2	253 (97.7)	215 (99.1)	0.412
≥ 2	6 (2.3)	2 (0.9)	
BMI			
< 30	172	148	0.751
> 30	87	69	
Family History Breast Cancer			
yes	118 (45.6)	113 (52.1)	0.185
Radiation History			
yes	50 (19.3)	30 (13.8)	0.142
Disease type at consult			
primary	219 (84.6)	185 (85.3)	0.934
recurrent	21 (8.1)	18 (8.3)	1
metastatic	19 (7.3)	14 (6.5)	0.844
Disease characteristics			
T stage			0.082

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Tis	44 (17.0)	43 (19.8)	
T0-T1	146 (56.4)	118 (54.4)	
T2-T4	31 (12.0)	31 (14.3)	
X	22 (8.5)	16 (7.4)	
N stage			0.336
Negative	141 (54.4)	115 (53)	
Positive	36 (13.9)	33 (15.2)	
X	69 (26.6)	63 (29.0)	
M1	18 (6.9)	16 (6.5)	0.974
Histology			0.063
IDC	194 (74.9)	154 (71)	
DCIS	44 (17)	43 (19.8)	
ILC	19 (7.3)	11 (5.1)	
Other	2 (0.8)	9 (4.1)	
Grade			1
1-2	166 (64.1)	146 (62.7)	
> 2	58 (22.4)	48 (22.1)	
unknown	11 (4.2)	33 (15.2)	
ER positive	221 (85.3)	172 (79.3)	0.394
PR positive	193 (74.5)	160 (73.7)	0.431
HER2 positive	28 (10.8)	25 (11.5)	0.932
LVI	41 (15.8)	31 (14.3)	0.69
EIC	44 (17.0)	31 (14.3)	0.001
Positive IDC margin	11 (4.2)	10 (4.6)	1
Positive DCIS margin	5 (1.9)	4 (1.8)	1
Surgical Management			
Lumpectomy	200 (77.2)	167 (77.0)	0.903
Mastectomy	35 (13.5	33 (15.2)	0.715
None	24 (9.3)	17 (7.8)	
Axillary Management			0.864
SLNB	168 (64.9)	133 (61.3)	
ALND	25 (9.7)	23 (10.6)	
None	46 (17.8)	44 (20.3)	
Unknown	20 (7.7)	17 (7.8)	
Chemotherapy	105 (40.5)	65 (30.0)	0.021
Hormone therapy	180 (69.5)	144 (66.4)	0.527
Radiation recommended	242 (93.4)	193 (88.9)	0.115
Radiation	N =242	N = 193	
Yes, at our institution	215 (88.8)	157 (81.3)	0.007
yes elsewhere	14 (5.8)	16 (8.3)	0.490
no	13 (5.4)	20 (10.4)	0.106
Radiation fields	N = 227	N =171	
Whole	106 (40.9)	87 (40.1)	0.269
Partial	52 (20.1)	27 (12.4)	0.140
CW + RNI	28 (10.8)	15 (6.9)	0.393
Breast + RNI	19 (7.3)	18 (8.3)	0.499
Other	13 (5.0)	0 (0)	0.001
Unknown	9 (3.5)	24 (11)	

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Radiation Dose	N =227	N = 171	0.545
Conventional	47 (18.1)	37 (17.1)	
Hypofractionation	100 (38.6)	81 (37.3)	
Accelerated	66 (25.5)	41 (18.9)	
Unknown	14 (5.4)	12 (5.5)	
Radiation oncology visits prior to sim			0.008
> 1	9 (4.2)	19 (12.2)	
NA	45 (17.4)	61 (28.1)	
Median time interval consult to sim (days) (IQR)	12.5 (6,22)	13 (8.5, 27)	0.073
Median time interval consult to treatment (days) (IQR)	27 (20, 35)	27 (24, 42)	0.115
Eligible for clinical trial, N	36 (14)	21 (10)	0.204
Enrolled on clinical trial, N (% of those eligible)	19 (53)	16 (76)	0.142
Enrolled by provider 1	14 (74)	12 (75)	1
Enrolled by provider 2	5 (26)	4 (25)	1

Abbreviations: IDC = invasive ductal carcinoma; DCIS = ductal carcinoma in situ; ILC = invasive lobular carcinoma; ER = estrogen receptor, PR = progesterone receptor; HER2 = human epidermal growth factor receptor 2; LVI = lymphovascular invasion; EIC = extensive intraductal component; CW = chest wall; RNI = regional node irradiation

Table 2: Multivariate analysis

Variable	OR (95% CI)	p value
Age	0.97 (0.94 - 1.0)	0.024
Marital Status		
Single (ref)		
Divorced	0.63 (0.25-1.58)	0.33
Married	0.16 (0.66-2.07)	0.6
Partnered	0.72 (0.19-2.72)	0.63
Widowed	0.49 (0.17-1.4)	0.19
Unknown	0.25 (0.02-3.78)	0.32
Occupation		
Employed		
Retired	064 (0.31-1.3)	0.22
Unemployed	0.47 (0.22-1.01)	0.05
Unknown	0.85 (0.27 - 2.76)	0.79
Interpreter needed		
yes	0.71 (0.25-2.0)	0.52
Primary Coverage		
Medicaid/Medicare	1.16 (0.59-2.3)	0.67
Chemo		
yes	0.32 (0.19-0.55)	0
Radiation at our institution		
yes	0.34 (0.17-0.65)	0.001

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Table 3: Baseline eligible patient characteristics according to enrollment in clinical trial

Patient Characteristics Eligible			
	Not Enrolled, N (%)	Enrolled, N (%)	p value
Patients, N	22	35	
Median age (IQR), years	65 (63 - 71)	70 (62.5 - 74)	0.471
Race			0.328
White	19 (86.4)	26 (74.2)	
Asian	0 (0)	1 (2.9)	
African American	0 (0)	4 (11.4)	
Unknown	3 (13.6)	4 (11.4)	
Ethnicity			
Not of Hispanic origin	22 (100%)	33 (94.3)	0.688
Hispanic/Latino	0 (0)	2 (5.7)	
Marital Status			0.856
Single	3 (13.6)	4 (11.4)	
Divorced	4 (18.2)	6 (17.1)	
Married	12 (54.5)	16 (45.7)	
Partnered	1 (4.5)	2 (5.7)	
Widowed	2 (9.1)	7 (20. 0)	
Occupation			0.142
Employed	10 (45.5)	20 (57.1)	
Retired	7 (31.8)	13 (37.1)	
Unemployed	2 (9.1)	2 (5.7)	
Unknown	3 (13.6)	0 (0)	
Location			0.725
Manhattan	8 (36.4)	13 (37.1)	
Out of NY state	1 (4.5)	3 (8.6)	
NYC borough (not Manhattan)	11 (50.0)	18 (51.4)	
NY state	2 (9.1)	1 (2.9)	
Language			0.688
English	22 (100.0)	33 (94.3)	
Non English	0 (0)	2 (5.7)	
Interpreter needed			0.688
no	22 (100.0)	33 (94.3)	
yes	0 (0)	2 (5.7)	
Current Covid vaccination			
yes	22 (100.0)	34 (97.1)	0.647
MyChart			
yes	243 (93.8)	211 (97.2)	1
Primary Coverage			
Private	15 (68.2)	24 (68.5)	1
Public (Medicare/Medicaid)	7 (31.8)	11 (31.4)	1
ECOG			
< 2	22 (100.)	35 (100.0)	1
BMI			0.901
< 30	15 (68.2)	22 (62.9)	
> 30	7 (31.8)	13 (37.1)	

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Family History Breast Cancer			
yes	15 (68.2)	20 (57.1)	0.58
Radiation History			
yes	2 (9.1)	1 (2.9)	0.677
Median time interval consult to sim (days) (IQR)	13 (6-22)	13 (6.25 - 16)	0.114
Median time interval consult to treatment (days) (IQR)	28 (21 -34)	27 (20-33)	0.198
Telemedicine	5 (22.7)	16 (45.7)	0.142

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