



SURGICAL CONSIDERATIONS DURING THE TIME OF COVID

Saturday, August 1, 1:00 pm-2:00 pm



**ADAPTING ONCOLOGY PRACTICE DURING THE
COVID CRISIS:**

Ronda Henry-Tillman, MD, FACS
Moderator

**Professor and Chief of Breast Oncology,
University of Arkansas for Medical Sciences**

COVID-19

Public Health Emergency

January 30, 2020, WHO declared the COVID-19 outbreak a public health emergency of international concern



Pandemic

March 2020, began to characterize it as a pandemic, in order to emphasize the gravity of the situation and urge all countries to take action in detecting infection and preventing spread.

GOALS

- **Optimize patient treatment without any impact on cancer outcomes**
- **Maximize patient safety and minimize virus exposure**
- **Minimize use of resources (HB, ICU, VENTS, PPE)**
- **Communication of these goals is key to ensure that patients understand and adhere to treatment plans and guidelines**

ACS: COVID-19 and Surgery



ACS: COVID-19
and Surgery



Guiding Principles for Cancer Care Triage

- **Communication (health care unit, patients, policy leaders)**
- **Resource Considerations**
- **Cancer Care Coordination**
- **Cancer Care Triage Related Phase (COVID CAPACITY/URGENCY)**
 - **Phase I. Semi-Urgent Setting (Preparation Phase)**
 - **Few COVID-19 patients, hospital resources not exhausted, institution still has ICU ventilator capacity and COVID-19 trajectory not in rapid escalation phase.**
 - **Phase II. Urgent Setting**
 - **Many COVID-19 patients, ICU and ventilator capacity limited, OR supplies limited**
 - **Phase III.**
 - **Hospital resources are all routed to COVID 19 patients, no ventilator or ICU capacity, OR supplies exhausted. Patients in whom death is likely within hours if surgery deferred.**

Phase I. Semi-Urgent Setting (Preparation Phase)

Few COVID-19 patients, hospital resources not exhausted, institution still has ICU ventilator capacity and COVID-19 trajectory not in rapid escalation

Cases that need to be done as soon as feasible

(recognizing status of each hospital likely to evolve over next week or two):

- Nearly obstructing colon
- Nearly obstructing rectal cancer
- Cancers requiring frequent transfusions
- Asymptomatic colon cancers
- Rectal cancers after neoadjuvant chemoradiation with no response to therapy
- Cancers with concern about local perforation and sepsis
- Early stage rectal cancers where adjuvant therapy not appropriate

Diagnoses that could be deferred 3 months

- Malignant polyps, either with or without prior endoscopic resection
- Prophylactic indications for hereditary conditions
- Large, benign appearing asymptomatic polyps
- Small, asymptomatic colon carcinoids
- Small, asymptomatic rectal carcinoids

Alternative treatment approaches to delay surgery that can be considered:

- Locally advanced resectable colon cancer
 - Neoadjuvant chemotherapy for 2-3 months followed by surgery
- Rectal cancer cases with clear and early evidence of downstaging from neoadjuvant chemoradiation
 - Where additional wait time is safe
 - Where additional chemotherapy can be administered
- Locally advanced rectal cancers or recurrent rectal cancers requiring exenterative surgery
 - Where additional chemotherapy can be administered
- Oligometastatic disease where effective

Phase II. Urgent Setting

Many COVID-19 patients, ICU and ventilator capacity limited, OR supplies limited

Cases that need to be done as soon as feasible (recognizing status of hospital likely to progress over next few days):

- Nearly obstructing colon cancer where stenting is not an option
- Nearly obstructing rectal cancer (should be diverted)
- Cancers with high (inpatient) transfusion requirements
- Cancers with pending evidence of local perforation and sepsis

Cases that should be deferred:

- All colorectal procedures typically scheduled as routine

Alternative treatment approaches:

- Transfer patients to hospital with capacity
- Consider neoadjuvant therapy for colon and rectal cancer
- Consider more local endoluminal therapies for early colon and rectal cancers when safe

Phase II. Urgent Setting

Many COVID-19 patients, ICU and ventilator capacity limited, OR supplies limited

Cases that need to be done as soon as feasible (recognizing status of hospital likely to progress over next few days):

- Perforated cancer of esophagus – not septic
- Tumor associated infection – compromising, but not septic (e.g. debulking for post obstructive pneumonia)
- Management of surgical complications (hemothorax, empyema, infected mesh) – in a hemodynamically stable patient

Cases that should be deferred:

- All thoracic procedures typically scheduled as routine/elective (i.e. not add-ons)

Alternative treatment approaches RECOMMENDED (assuming resources permit):

- Transfer patient to hospital that is in Phase I
- If eligible for adjuvant therapy then give neoadjuvant therapy
- Stereotactic Ablative Radiotherapy (SABR)
- Ablation (e.g. cryotherapy, radiofrequency ablation)
- Reconsider neoadjuvant as definitive chemo/radiation, and follow patients for “local

Phase III.

Hospital resources are all routed to COVID 19 patients, no ventilator or ICU capacity, OR supplies exhausted. Patients in whom death is likely within hours if surgery deferred

- **Cases that need to be done as soon as feasible (status of hospital likely to progress in hours)**
- **Perforated, obstructed, or actively bleeding (inpatient transfusion dependent) cancers**
- **Cases with sepsis**
- **All other cases deferred**
- **Alternate treatment recommended**
- **Transfer patients to hospital with capacity**
- **Diverting stomas**
- **Chemotherapy**
- **Radiation**

Phase III.

Hospital resources are all routed to COVID 19 patients, no ventilator or ICU capacity, OR supplies exhausted. Patients in whom death is likely within hours if surgery deferred

Cases that need to be done as soon as feasible (status of hospital likely to progress in hours)

- Perforated cancer of esophagus – septic patient
- Threatened airway
- Tumor associated sepsis
- Management of surgical complications – unstable patient (active bleeding not amenable to nonsurgical management, dehiscence of airway, anastomotic leak with sepsis)

All other cases deferred

Alternate treatment recommended

Phase III.

Hospital resources are all routed to COVID 19 patients, no ventilator or ICU capacity, OR supplies exhausted. Patients in whom death is likely within hours if surgery deferred

Cases that need to be done as soon as feasible (status of hospital likely to progress in hours)

- Perforated cancer of esophagus – septic patient
- Threatened airway
- Tumor associated sepsis
- Management of surgical complications – unstable patient (active bleeding not amenable to nonsurgical management, dehiscence of airway, anastomotic leak with sepsis)

All other cases deferred

Alternate treatment recommended

Phase III.

Hospital resources are all routed to COVID 19 patients, no ventilator or ICU capacity, OR supplies exhausted. Patients in whom death is likely within hours if surgery deferred

Cases that need to be done as soon as feasible (status of hospital likely to progress in hours)

- Perforated cancer of esophagus – septic patient
- Threatened airway
- Tumor associated sepsis
- Management of surgical complications – unstable patient (active bleeding not amenable to nonsurgical management, dehiscence of airway, anastomotic leak with sepsis)

All other cases deferred

Alternate treatment recommended

- ***Breast Cancer Patients During the COVID-19 Pandemic [1]***

- *Recommendations for Prioritization, Treatment and Triage of Breast Cancer Patients During the COVID-19 Pandemic [1]*
- Guidelines established by representatives from the American Society of Breast Surgeons (ASBrS), National Accreditation Program for Breast Centers (NAPBC), National Comprehensive Care Network (NCCN), Commission on Cancer (CoC), American College of Radiology (ACR)
- Patients given priority status on case-by-case basis and treatment plans are made accordingly

DEFINITIONS

- Priority A: condition is immediately life threatening
 - Patient is clinically unstable
 - A short delay will alter the patient's prognosis
 - Top priority for preservation of life and control of symptom progression

DEFINITIONS

- Priority B: condition is not immediately life threatening but treatment should not be delayed until the end of the pandemic
 - Short delay (6-12 weeks) will not affect outcomes
 - Most patients fall into this category
 - Divided into 3 subcategories: B1 (higher), B2 (mid-level), and B3 (lower)

DEFINITIONS

- **Priority C: treatment can be indefinitely be deferred until the end of the pandemic without impacting outcomes**

MULTIDISCIPLINARY APPROACH

- Basic tenets of breast cancer care must be followed
- Challenges
 - Deferring surgical intervention will increase the workload of the medical oncology team and will cause a backlog of procedures at the end of the pandemic
 - Documentation of priority is necessary
 - Tumor board discussion should include COVID-19 recommendations

OUTPATIENT VISITS

- Most encounters should be performed remotely via telemedicine
 - In-person visits risk viral transmission, and this risk must be weighed for each patient
- Priority A: need in-person evaluation
 - Examples: unstable post-operative patients, febrile neutropenia in a patient on chemotherapy

SURGICAL ONCOLOGY

- All patients with invasive cancer should undergo multidisciplinary assessment and evaluation of risks to determine priority

Priority	Patient Description	COVID-19 Treatment Considerations
Priority A		
A	Breast abscess in a septic patient	Operative drainage if unable to be drained at the bedside
A	Expanding hematoma in a hemodynamically unstable patient	Operative evacuation and control of bleeding

SURGICAL ONCOLOGY

Priority B		
B1	Ischemic autologous tissue flap	Revascularize or remove flap
B1	Revision of a full thickness ischemic mastectomy flap with exposed prosthesis	Debride and remove expander/implant
B1	Patients who have completed neoadjuvant chemotherapy for Inflammatory BC	Operate (mastectomy without reconstruction) as soon as possible depending on institutional resources
B1	TNBC and HER2 + patients	Neoadjuvant chemotherapy or HER2 targeted therapy. In some cases, institutions may decide to proceed with surgery first versus neoadjuvant therapy. These decisions will depend on institutional resources and patient factors.*
B2	Neoadjuvant: -finishing treatment -progressing on treatment	Operate if feasible depending on resources or extend/change neoadjuvant therapy*
B3	Clinical Stage T2 or N1 ER +/- HER2 - tumors	Consider hormonal treatment, delay operation
B3	Discordant biopsies likely to be malignant	Perform excisional biopsy when conditions allow
B3	Malignant or suspected local recurrence	Begin with staging when feasible. Perform excision when conditions allow if there is no distant disease.
Priority C		

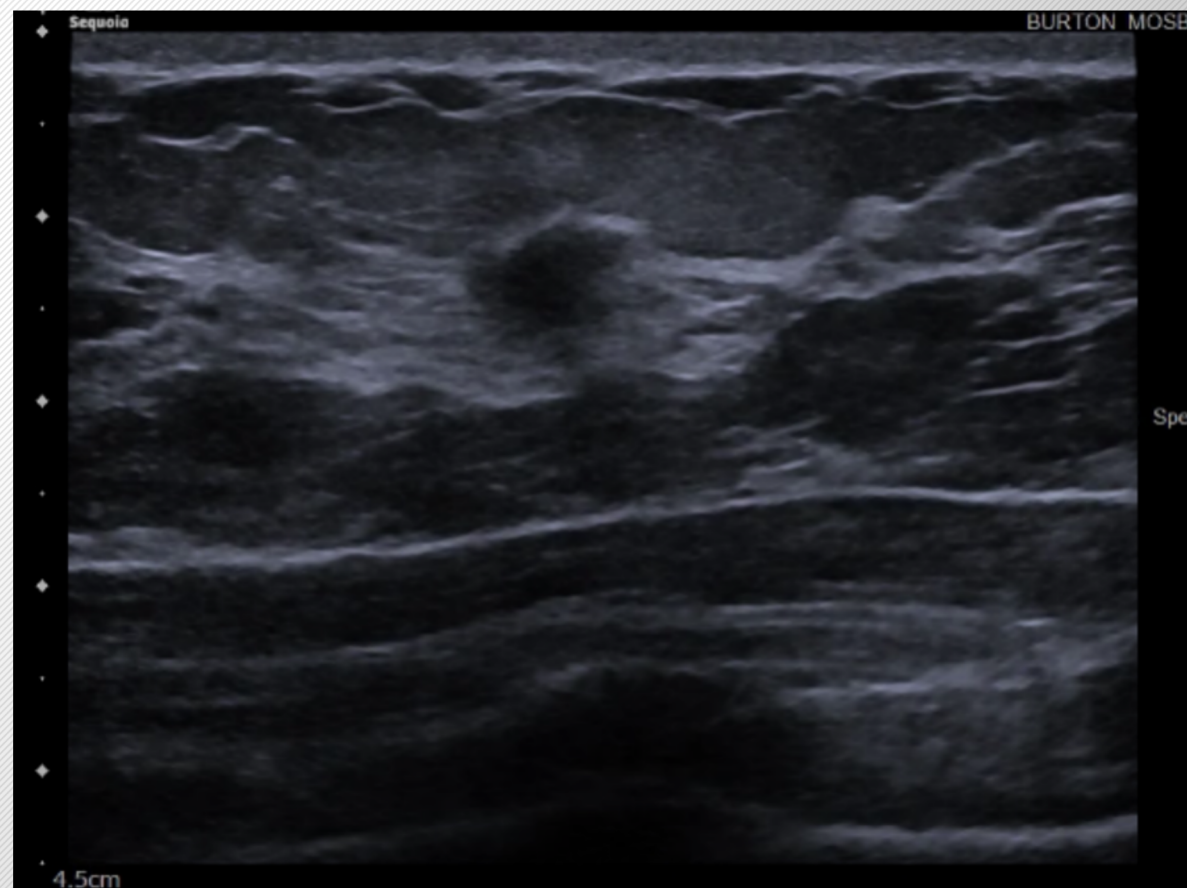
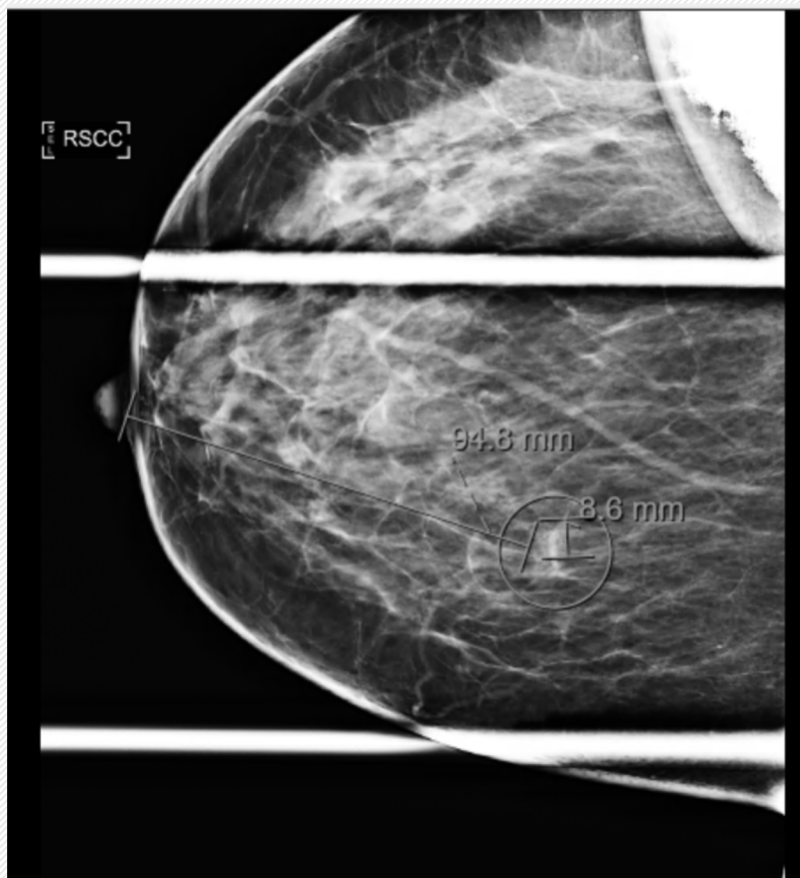
SURGICAL ONCOLOGY

Priority C		CRITICAL CARE
C1	ER - DCIS	Delay operation until after COVID-19 unless there is a high risk of invasive cancer (Move to B3)
C1	Positive margin(s) for invasive cancer	Delay re-excision until after COVID-19
C1	Clinical Stage T1N0 ER +/- HER2 - cancers.	Hormonal treatment; delay operation until after COVID-19
C1	BC patients requiring additional axillary surgery	Delay operation until after COVID-19
C2	ER+ DCIS	Hormonal treatment; delay operation until after COVID-19
C2	High risk lesions	Delay operation until after COVID-19
C2	Reconstruction for previously completed mastectomy	Delay operation until after COVID-19
C3	Excision of benign lesions- fibroadenomas, nodules, papillomas, etc	Delay operation until after COVID-19
C3	Discordant biopsies likely to be benign	Delay operation until after COVID-19
C3	Prophylactic surgery-for cancer and noncancer	Delay operation until after COVID-19

CASE EXAMPLE

- 46 yo F with abnormal screening mammogram 1/15/20
 - Diagnostic mammogram and ultrasound 2/27/20 showed 1 cm suspicious mass in right upper inner quadrant
 - Ultrasound guided core needle biopsy 3/9/20 resulted with invasive tubulolobular carcinoma, grade 1, no lymphovascular invasion, ER+/PR+/Her2-, Ki67 <10%
- Surgical consultation 3/23/20
 - Placed on Endocrine Therapy
 - Right partial mastectomy with right axillary sentinel lymph node biopsy

CASE EXAMPLE



CASE EXAMPLE

- Phone consultation with patient 4/6/20 to discuss COVID-19 protocols and concerns
 - Surgical oncology: priority C1, hormonal therapy and delay operation until after COVID-19 pandemic
 - Started on tamoxifen 4/6/20
 - Discussed at multidisciplinary conference on 4/8/20 and all in agreement with plan
- Surgical follow up set for 7/6/20 to evaluate response
 - Plan: re-evaluate with breast MRI for surgical planning and continue endocrine therapy (C2)

Selected Publications Cancer/COVID-19

Studies highlight COVID-19 impact on cancer patients

Coronavirus disease 2019 (COVID-19): Cancer care during the pandemic

Authors: [Robert G Uzzo, MD, MBA, FACS](#), [Alexander Kutikov, MD, FACS](#), [Daniel M Geynisman, MD](#)

Section Editors: [Michael B Atkins, MD](#), [Larissa Nekhlyudov, MD, MPH](#), [Richard A Larson, MD](#), [David I Soybel, MD](#)

Deputy Editors: [Diane MF Savarese, MD](#), [Sadhna R Vora, MD](#)

All topics are updated as new evidence becomes available and our [peer review process](#) is complete.

Literature review current through: Jun 2020. | This topic last updated: Jul 20, 2020.

THE LANCET
Oncology

Log in Register Subs

ARTICLES | [ONLINE FIRST](#)

PDF [784 KB] Figures Save

The impact of the COVID-19 pandemic on cancer deaths due to delays in diagnosis in England, UK: a national, population-based, modelling study

[Camille Maringe, PhD](#) • [Prof James Spicer, PhD](#) • [Melanie Morris, PhD](#) • [Prof Arnie Purushotham, MD](#) • [Prof Ellen Nolte, PhD](#) • [Prof Richard Sullivan, PhD](#) • et al. [Show all authors](#) • [Show footnotes](#)

[Open Access](#) • Published: July 20, 2020 • DOI: [https://doi.org/10.1016/S1470-2045\(20\)30388-0](https://doi.org/10.1016/S1470-2045(20)30388-0)

MENU

nature cancer

Comment | Published: 20 May 2020

The impact of the COVID-19 pandemic on cancer care

[Mike Richards](#), [Michael Anderson](#), [Paul Carter](#), [Benjamin L. Ebert](#) & [Elias Mossialos](#) 

Nature Cancer 1, 565–567(2020) | [Cite this article](#)

Selected Publications Cancer/COVID-19

Oncology during the COVID-19 pandemic: challenges, dilemmas and the psychosocial impact on cancer patients (Review)

Open Access

Estimating excess mortality in people with cancer and multimorbidity in the COVID-19 emergency

Authors: ✉ Konstantinos Tsamal

Stravodimou, Aikaterini Mougkou, Dimitrios Tsiptsios, Vasileios Sioulas, Eleftherios Spartalis, Athanasios D. Sioulas, Charalampos Tsamakias, Nikolaos Charalambopoulos, Christoph Mueller, Donna Arya, Paul Zarogoulidis, Demetrios A. Spandidos, Dimopoulos, Charalabos Papageorgiou, Emmanouil Rizos

[View Affiliations](#)

Published online on: May 8, 2020 <https://doi.org/10.3892/ol.2020.11599>

Pages: 441-447

Copyright: © Tsamakias et al. This is an open access article distributed under the terms of [Creative Commons Attribution License](#).

ANNALS OF
ONCOLOGY
Using modern oncology

ESMO
GOOD SCIENCE
BETTER MEDICINE
BEST PRACTICE

ESMO Member Access
Subscribe Claim

Log in Register

ORIGINAL ARTICLE | VOLUME 31, ISSUE 8, P1065-1074, AUGUST 01, 2020



PDF [531 KB]



Figures



Save

Collateral damage: the impact on outcomes from cancer surgery of the COVID-19 pandemic

A. Sud † • M.E. Jones † • J. Broggio † • ... G. Lyratzopoulos • R. Houlston • C. Turnbull ✉ ✉

[Show all authors](#) • [Show footnotes](#)

[Open Access](#) • Published: May 19, 2020 • DOI: <https://doi.org/10.1016/j.annonc.2020.05.009>

Selected Publications Cancer/COVID-19

MENU ▾

nature cancer

Comment | Published: 20 May 2020

The impact of the COVID-19 pandemic on cancer care

Mike Richards, Michael Anderson, Paul Carter, Benjamin L. Ebert & Elias Mossialos 

Nature Cancer 1, 565–567(2020) | [Cite this article](#)

The COVID-19 pandemic has disrupted the spectrum of cancer care, including delaying diagnoses and treatment and halting clinical trials. In response, healthcare systems are rapidly reorganizing cancer services to ensure that patients continue to receive essential care while minimizing exposure to SARS-CoV-2 infection.

Implications for Diagnosis, Treatment, and Referrals

- The necessity to divert healthcare staff and resources to address the pandemic resulted in the suspension of all cancer screening programs
- Patients became fearful of exposure to SARS-CoV-2 or of overburdening healthcare services and thus have been less likely to present to healthcare services for cancer screening and diagnosis (delaying treatment)
- Referrals of patients with cancer by primary-care physicians reduced by over 70% by mid-April compared with previous weekly average.
- Capacity for surgery reduced (pt. fear, ventilators requisition to critical care) care reorganized to NACT, XRT, followed by surgery)
- ACS – semi- elective surgery (nearly obstruction colon, stenting for esophageal cancer @ peak only urgent or emergent surgery

COVID-19 Impact On Cancer Patients

Two Publication The Lancet (May 2020)

High rate of mortality among COVID-19 patients with cancer.

US researchers analyzed data on more than 900 COVID-19 and cancer patients from the United States, Canada, and Spain and found that 13% died
UK patients 800 COVID-19 and cancer found that 28% died

In male patients with other COVID-19 mortality risk factors, such as older age and additional comorbidities, had an increased risk of death.
But cancer treatments, such as chemotherapy, did not appear to have an effect on mortality in either study.

Active cancer, older age linked to death

• COVID-19 and Cancer Consortium

- Mar 17 through Apr 16 Adults with active or previous malignancies and confirmed coronavirus infections
- Data on baseline clinical conditions, medications, cancer diagnosis and treatment, and COVID-19 disease course.
- Patients with non-invasive cancer were excluded
- The primary end point was all-cause mortality within 30 days of COVID-19 diagnosis.
- 928 patients met the criteria for inclusion,
 - the median age was 66, with 279 patients (30%) age 75 or older.
 - Half of the patients (468) were men.
 - The most common malignancies were breast cancer (191(21%))
 - and prostate cancer (152 (16%));
 - 366 patients (39%) were on active anticancer treatment,
 - 396 (43%) had active cancer. At analysis, which was conducted on May 7,
 - 121 patients (13%) had died, all within 30 days of diagnosis.

Active cancer, older age linked to death

- Logistic regression analysis to assess the association between the outcome and potential prognostic variables,
 - **found that increased risk of 30-day mortality, after partial adjustment, was independently associated with increased age** (per 10 years, partially adjusted odds ratio [OR], 1.84; 95% confidence interval [CI], 1.53 to 2.21),
 - **male sex** (partially adjusted OR, 1.63; 95% CI, 1.07 to 2.48),
 - **smoking status** (former smoker vs never smoked, partially adjusted OR, 1.60; 95% CI, 1.03 to 2.47)
 - **number of comorbidities** (two vs none, partially adjusted OR, 4.50; 95% CI, 1.33 to 15.28).

Association Between Outcome and Potential Prognostic Variables

- Active cancer (progressing vs remission, partially adjusted OR, 5.20; 95% CI, 2.77 to 9.77)
- Eastern Cooperative Oncology Group (ECOG) performance status of 2 or higher (status 2 vs zero, partially adjusted OR, 3.89; 95% CI, 2.11 to 7.18) were also associated with an increased risk of mortality.
- An ECOG performance status of 2 or higher indicates cancer has progressed to the point that a patient is active but unable to work.

No mortality effect from cancer treatment

- UK study -The University of Birmingham and the University of Oxford observed
 - 800 patients enrolled in the UK Coronavirus Cancer Monitoring Project, which provides real-time reports to frontline clinicians about the effects of COVID-19 on patients who have cancer.
 - The primary end point of the prospective study,
 - Mar 18 to Apr 26,
 - Was all-cause mortality or discharge from the hospital.
 - The researchers were particularly interested in how patients receiving anticancer treatment had been affected

No mortality effect from cancer treatment

- 800 patients studied
- 412 (52%) had mild COVID-19 illness,
- 96 (12%) did not require hospitalization,
- 315 (39%) required oxygen,
- and 53 (7%) received intensive care.
- A total of 226 patients (28%) died,
- vast majority (211, 93%) dying from COVID-19.
- Multivariable logistic regression analysis showed that risk of death was significantly associated with
 - advancing patient age (OR, 9.42; 95% CI, 6.56 to 10.02),
 - being male (OR, 1.67; 95% CI, 1.19 to 2.34),
 - comorbidities such as hypertension (OR, 1.95; 95% CI, 1.36 to 2.80) and cardiovascular disease (OR, 2.32; 95% CI, 1.47 to 3.64).

No mortality effect from cancer treatment

- A univariate analysis found that, compared with patients who had not received chemotherapy within 4 weeks of testing positive for COVID-19, those who had received recent chemotherapy **did not have a higher death rate** (29% with recent chemotherapy vs 27% without recent chemotherapy).
- A multivariate analysis of 281 of patients who had received recent chemotherapy, after adjusting for age, gender, and comorbidities, found that **chemotherapy had no significant effect on mortality** (OR, 1.18; 95% CI, 0.81 to 1.72).

No mortality effect from cancer treatment

- Multivariate analysis - compared with patients who were not on these therapies, **patients on immunotherapy** (OR, 0.59; 0.27 to 1.27), **hormonal therapy** (OR, 0.90; 95% CI, 0.49 to 1.68), **radiotherapy** (OR, 0.65; 95% CI, 0.36 to 1.18), or **targeted therapies** (OR, 0.83; 95% CI, 0.45 to 1.54)

No additional risk of death.

No mortality effect from cancer treatment

Takeaway

- Anticancer Treatments should not necessarily be withheld in COVID-19 patients.

VIRTUAL

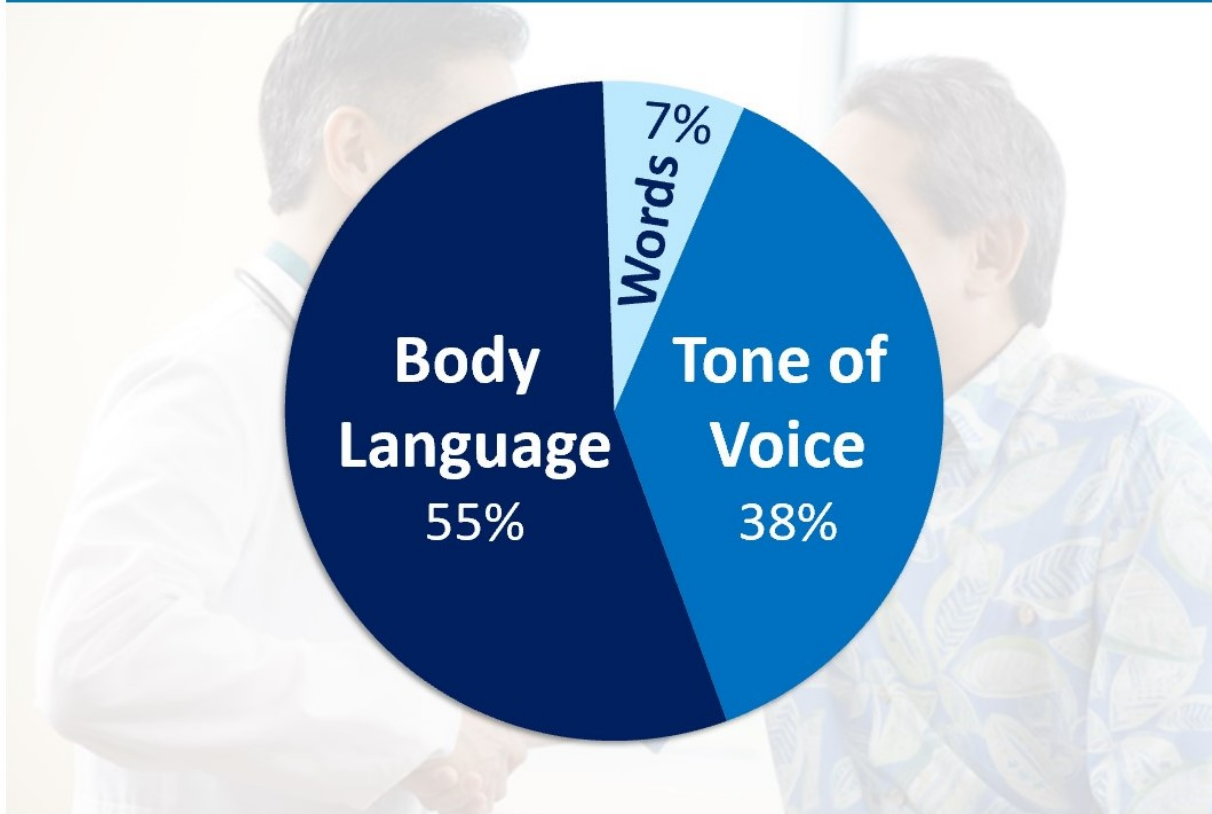
- **Communication In Our New Covid World**

Sensory Input and Virtual Medicine

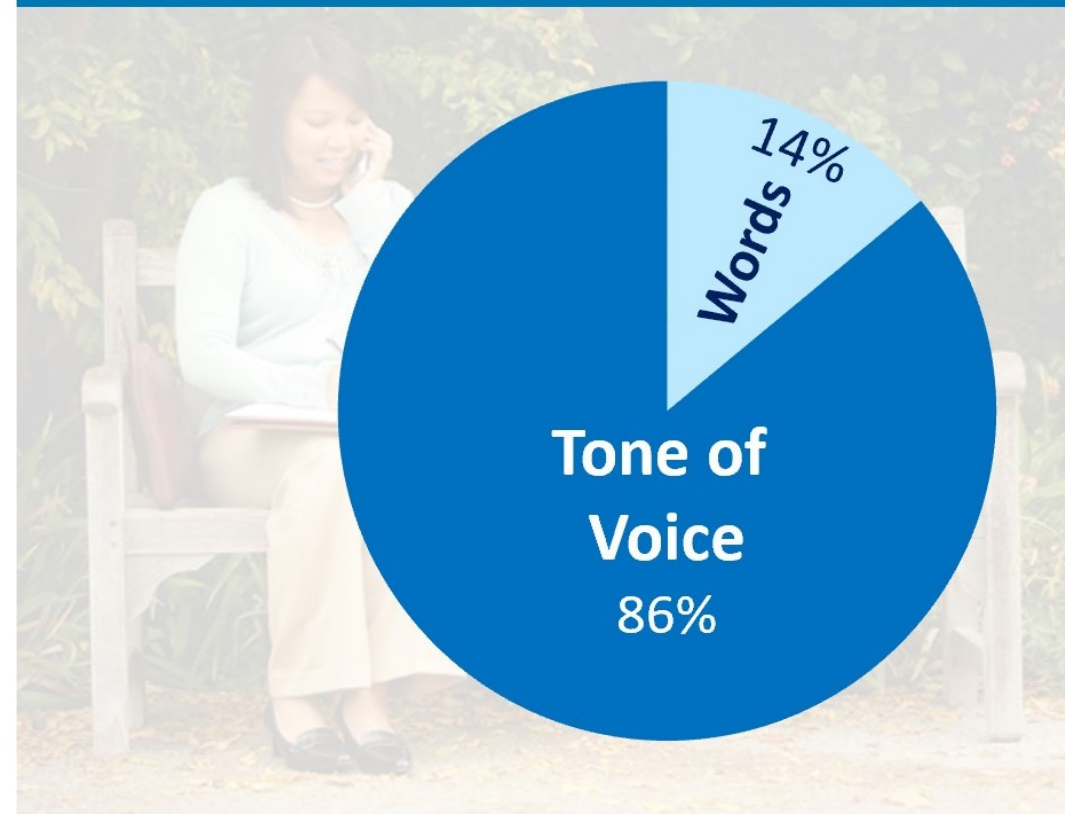


Do words matter?

Face-to-face visits



Telephone visits



“UNMASKING
EMPATHY”



Virtual 4 Habits

Facemask challenges and solutions



- Inability to see facial expressions
- Muffled speech
- Can't lip read
- Fogging up glasses
- Facial recognition in iPhone

- Show empathy and compassion through your work
- Start with a social comment
- Acknowledge the PPE and that it is for everyone's safety
- Consider your tone of voice
- Eye contact
- Smile— your eyes will show it
- Use hand gestures when giving instructions
- Enunciate and slow down your speech

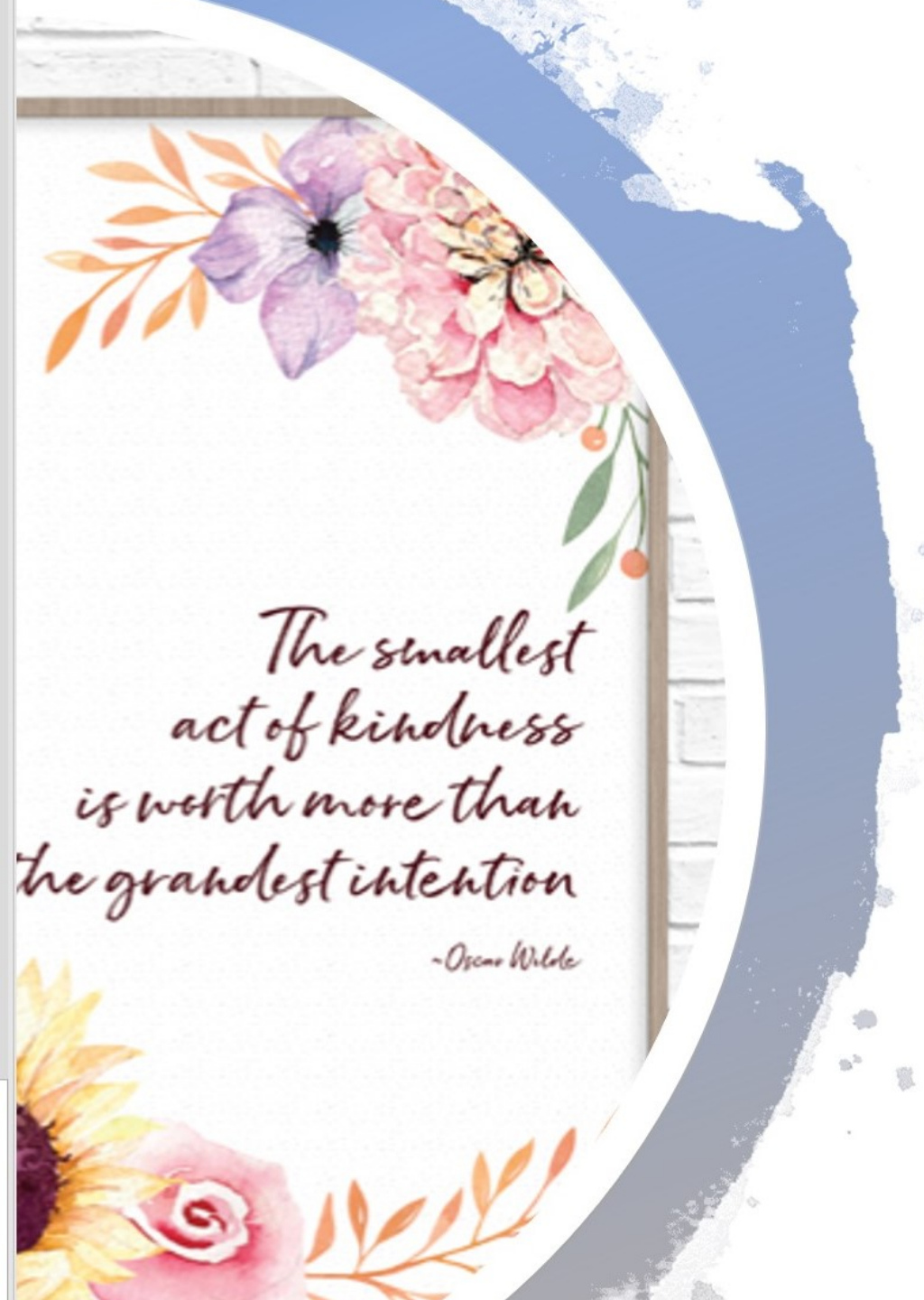
Can you identify emotions?

Upset/Pain

Laughing

Smiling Neutral





May you be well.

ADAPTING ONCOLOGY PRACTICE DURING THE COVID-19 CRISIS FROM COMMUNICATION TO TREATMENT

Ronda Henry-Tillman, MD, FACS
Professor and Division Chief Breast Surgical Oncology
University of Arkansas for Medical Sciences
CHAIR, SSNMA