Medical Student Knowledge of Oncology and Survivorship Care

Dear Student,

You are being asked to complete a survey on your knowledge of oncology and the short- and long-term care of patients with cancer. You are being asked to fill out the following survey, which should take about 15 minutes to complete.

The survey is composed of 5 sections: 1) Clinical vignettes, 2) Prior oncology experience, 3) Oncology knowledge, 4) Survivorship, and 5) Future career interests/Demographics.

No identifying information will be collected about you, but your responses to survey questions in aggregate with all other responses will be used to help direct efforts for curricular innovation related to care of patients with cancer and cancer survivors.

Your participation is optional. There will be no penalty for refusing to participate.

We greatly appreciate your honest and thoughtful response.

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**CLINICAL VIGNETTES**

Please answer the following four questions based on your existing knowledge. We kindly ask that you refrain from using outside resources (internet, books, etc).

A 39 year-old woman receives adriamycin as a component of systemic therapy for treatment of breast cancer. Which of the following long-term toxicities is associated with this treatment?

- [ ] Peripheral neuropathy
- [ ] Cardiotoxicity
- [ ] Renal failure
- [ ] Ototoxicity
- [ ] Don’t know/unsure

This same 39 year-old female patient has been found on genetic testing to be BRCA 1 positive. How would you alter her management?

- [ ] Refer her for bilateral prophylactic mastectomies
- [ ] Refer her for a bilateral salpingo-oophorectomy
- [ ] Refer her to a genetic counselor
- [ ] Start her on lifelong tamoxifen
- [ ] Don’t know/unsure

A 9 year-old girl is treated with thoracic radiation for early-stage Hodgkin lymphoma. Which of the following radiation-related neoplasms is she at highest risk of developing?

- [ ] Breast cancer
- [ ] Brain tumor
- [ ] Colorectal cancer
- [ ] Skin cancer
- [ ] Don’t know/unsure
A 4 year-old boy undergoes a gross total resection of a craniopharyngioma. With which medical specialist should he follow long term?

- Nephrologist
- Cardiologist
- Pulmonologist
- Endocrinologist
- Don't know/unsure

A 67 year-old man is newly diagnosed with metastatic lung cancer to the bones. He denies any pain and is preparing to start first-line chemotherapy. At what point do you recommend referral to a hospice/palliative medicine physician?

- Immediately
- When the patient develops pain related to the cancer
- When cancer-related pain is no longer controlled by oral analgesics
- When the patient requests referral
- Never
- Don't know/unsure
PRIOR ONCOLOGY EXPERIENCE

What prior exposure have you had to MEDICAL oncology (pediatric or adult) as a medical discipline (select all that apply)?

☐ Regular lecture topic in class  
☐ Guest lecture or presentation from an oncologist  
☐ Shadowing a medical oncologist (pediatric or adult)  
☐ Student group meeting or discussion  
☐ Your diagnosis/treatment for a malignancy  
☐ Family member diagnosed/treated for a malignancy  
☐ Friend diagnosed/treated for a malignancy  
☐ Worked in a basic science laboratory conducting cancer-related research  
☐ Other

Please describe your other exposure to medical oncology:

What prior exposure have you had to RADIATION oncology as a medical discipline (select all that apply)?

☐ Regular lecture topic in class  
☐ Guest lecture or presentation from an oncologist  
☐ Shadowing a radiation oncologist  
☐ Student group meeting or discussion  
☐ Your diagnosis/treatment for a malignancy  
☐ Family member diagnosed/treated for a malignancy  
☐ Friend diagnosed/treated for a malignancy  
☐ Worked in a basic science laboratory conducting cancer-related research  
☐ Other

Please describe your other exposure to radiation oncology:

What prior exposure have you had to SURGICAL oncology as a medical discipline (select all that apply)?

☐ Regular lecture topic in class  
☐ Guest lecture or presentation from an oncologist  
☐ Shadowing a surgical oncologist  
☐ Student group meeting or discussion  
☐ Your diagnosis/treatment for a malignancy  
☐ Family member diagnosed/treated for a malignancy  
☐ Friend diagnosed/treated for a malignancy  
☐ Worked in a basic science laboratory conducting cancer-related research  
☐ Other

Please describe your other exposure to surgical oncology:
What prior exposure have you had to HOSPICE/PALLIATIVE MEDICINE as a medical discipline (select all that apply)?

- Regular lecture topic in class
- Guest lecture or presentation from a hospice/palliative medicine physician
- Shadowing a hospice/palliative medicine physician
- Student group meeting or discussion
- Your diagnosis/treatment for a malignancy
- Family member diagnosed/treated for a malignancy
- Friend diagnosed/treated for a malignancy
- Other

Please describe your other exposure to hospice/palliative medicine:

What prior exposure have you had to CANCER SURVIVORSHIP CARE (select all that apply)?

- Regular lecture topic in class
- Guest lecture or presentation from a physician who cares for survivors
- Shadowing a physician who cares for survivors
- Student group meeting or discussion
- Your diagnosis/treatment for a malignancy and participation in survivorship care
- Family member diagnosed/treated for a malignancy who participated in survivorship care
- Friend diagnosed/treated for a malignancy who participated in survivorship care
- Other

Please describe your other exposure to cancer survivorship care:

Have you attended a multidisciplinary tumor board during medical school?

- Yes
- No
ONCOLOGY KNOWLEDGE

The following questions ask you to rate your comfort level with your knowledge of oncology, its subspecialties and their practices on a scale of "not at all comfortable" to "extremely comfortable."

How comfortable are you with your knowledge of general oncologic patient care as it relates to pain management?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

How comfortable are you with your knowledge of general oncologic patient care as it relates to follow-up needs?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

How comfortable are you with your knowledge of general oncologic patient care as it relates to risk of recurrence?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

How comfortable are you with your ability to discuss a cancer diagnosis with a patient?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

How comfortable are you with your knowledge of the diagnosis and staging workup of a patient with cancer?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

How comfortable are you with your knowledge of cancer staging (ability to differentiate between early stage, locally advanced, and metastatic disease)?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

MEDICAL ONCOLOGY (pediatric or adult)

How comfortable are you with your knowledge of medical oncology (including hematology/oncology) as a medical specialty?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

How comfortable are you with your knowledge of when a medical oncologist should be consulted for a patient?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

How comfortable are you with your knowledge of the short-term adverse effects of chemotherapy (during to several weeks after treatment)?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

How comfortable are you with your knowledge of the long-term adverse effects of chemotherapy (months to years after treatment)?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely

RADIATION ONCOLOGY

How comfortable are you with your knowledge of radiation oncology as a medical specialty?
- Not at all
- Somewhat
- Moderately
- Quite
- Extremely
How comfortable are you with your knowledge of when a radiation oncologist should be consulted for a patient?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of the short term adverse effects of radiotherapy (during to several weeks after treatment)?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of the long-term adverse effects of radiotherapy (months to years after treatment)?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

SURGICAL ONCOLOGY
How comfortable are you with your knowledge of surgical oncology as a medical specialty?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of when a surgeon who focuses on oncologic procedures should be consulted for a patient?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of the short-term adverse effects of surgery as a component of oncologic care (up to several weeks after surgery)?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of the long-term adverse effects of surgery as a component of oncologic care (months to years after surgery)?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

HOSPICE/PALLIATIVE MEDICINE
How comfortable are you with your knowledge of hospice/palliative medicine as a medical specialty?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of when a hospice/palliative medicine physician should be consulted for a patient?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of the short-term role of hospice/palliative medicine as a component of oncologic care (during treatment to several weeks after treatment)?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of the long-term role of hospice/palliative medicine as a component of oncologic care (months to years after treatment)?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

SURVIVORSHIP CARE
How comfortable are you with your knowledge of survivorship care as a medical specialty?
☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely
How comfortable are you with your knowledge of when a survivorship care physician should be consulted for a patient?

☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of the short-term role of survivorship care as a component of oncologic care (up to several weeks after treatment)?

☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely

How comfortable are you with your knowledge of the long-term role of survivorship care as a component of oncologic care (months to years after treatment)?

☐ Not at all  ☐ Somewhat  ☐ Moderately  ☐ Quite  ☐ Extremely
SURVIVORSHIP

The following questions ask you to rate your comfort level with your knowledge of caring for cancer survivors on a scale of "not at all comfortable" to "extremely comfortable."

How comfortable are you with your ability to find information for the care of cancer survivors?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely

How comfortable are you with your knowledge of how to screen for recurrence/new malignancies in cancer survivors?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely

How comfortable are you with your knowledge of which cancer treatments increase the risk of developing a second malignant neoplasm?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely

How comfortable are you with your knowledge of when to refer a cancer survivor for genetic counseling services to discuss the risk versus benefit of genetic testing for a possible hereditary cancer syndrome?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely

How comfortable are you with your knowledge of fertility preservation techniques for patients about to undergo chemotherapy?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely

How comfortable are you with your knowledge of treating low hormone levels and sexual dysfunction from cancer-treatment induced gonadal injury?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely

How comfortable are you with your knowledge of addressing psychological issues in cancer survivors?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely

How comfortable are you with your knowledge of how to counsel cancer survivors on diet, exercise, and smoking?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely

How comfortable are you with your knowledge of rehabilitation measures to reduce impairments during and after cancer therapy?
- □ Not at all
- □ Somewhat
- □ Moderately
- □ Quite
- □ Extremely
FUTURE CAREER INTERESTS

Do you intend to pursue a career in oncology?

☐ Yes
☐ No
☐ Undecided

If yes, in what discipline?

☐ Adult hematology/oncology
☐ Pediatric hematology/oncology
☐ Radiation oncology
☐ Surgery
☐ Hospice/Palliative medicine
☐ Other

If surgery, in what surgical specialty?

__________________________________

What oncology specialty do you plan to pursue?

__________________________________

In what area(s) of medicine are you interested in practicing (check all that apply)?

☐ Allergy & Immunology
☐ Anesthesiology
☐ Colon & Rectal Surgery
☐ Dermatology
☐ Emergency Medicine
☐ Family Medicine
☐ Hospice & Palliative Medicine
☐ Internal Medicine
☐ Medical Genetics
☐ Medical Oncology
☐ Neurological Surgery
☐ Nuclear Medicine
☐ Obstetrics & Gynecology
☐ Ophthalmology
☐ Orthopedic Surgery
☐ Otolaryngology
☐ Pathology
☐ Pediatrics
☐ Physical Medicine & Rehabilitation
☐ Plastic Surgery
☐ Preventative Medicine
☐ Psychiatry
☐ Neurology
☐ Radiation Oncology
☐ Radiology
☐ Surgery
☐ Surgical Oncology
☐ Thoracic Surgery
☐ Urology
☐ Other

If other, please specify:

__________________________________

DEMOGRAPHICS
Please create an anonymous identifier by entering the first four letters of the town in which you were born, the day of the month in which you were born (two numbers) and the first four letters of your high school’s name.

__________________________________

What is your age in years?

__________________________________

What is your gender?

☐ Male
☐ Female

What is your current year in medical school?

☐ MS1
☐ MS2
☐ MS3
☐ MS4
☐ MD/PhD year

What medical school do you attend?

☐ Stanford
☐ UCSF
☐ University of Chicago
☐ Yale

If MS3 or MS4, have you completed a clinical rotation related to oncology (medical oncology, pediatric oncology, surgical oncology, radiation oncology, or hospice/palliative medicine)? (This can include an elective component of a core clerkship)

☐ Yes
☐ No

If yes, in what specialty (check all that apply)?

☐ Medical Oncology
☐ Pediatric Oncology
☐ Surgical Oncology
☐ Radiation Oncology
☐ Hospice/Palliative Medicine
☐ Other

Please specify the “other” oncology clinical rotation:

__________________________________

What was your highest degree obtained prior to starting medical school?

☐ Associates
☐ Bachelors
☐ Masters
☐ PhD
☐ Other

If you received another degree, please specify:

__________________________________
FINAL COMMENTS

Please provide any additional comments regarding your oncology and cancer survivorship educational experience: