**Phase 1 Instructions**

Thank you again for participating in the development of OncQA!

You are now beginning Phase 1. Please determine whether there is enough information to provide an initial response, and if not provide what additional information from the patient’s medical record is needed. Then, provide a response to the best of your ability, similarly to how you would respond to a patient’s electronic medical record inbox message. You should type your answers where indicated below each question. Each question will be followed by a 2-question survey.

*It is important that you do not change the order of any of the samples in this document.*

*Please do not discuss or show the samples to anyone, including other participants.*

Please email us if you have any questions.

We are so appreciative of your help with this project.

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=================== New example ======================

Input: EHR Context:

Age: 68 years

Gender: Male

Cancer diagnosis: Stage IV colorectal cancer with liver metastases

PMH: coronary artery disease, type 2 diabetes

Prior cancer treatments: None

Current cancer treatments: FOLFIRI + bevacizumab (started 2 months ago)

Current medication list: metformin, aspirin, atorvastatin, metoprolol, lisinopril

Summary of most recent oncology visit (6 weeks ago): 68-year-old male with newly diagnosed stage IV colorectal cancer with liver metastases. He is on first-line FOLFIRI + bevacizumab and tolerating treatment well. Will continue treatment as planned.

Patient message:

I've been experiencing severe diarrhea for the past three days. I've tried over-the-counter medications, but they don't seem to help. What should I do?

Type response here:

The diarrhea could be related to the anti-cancer medications, among other causes. You need to come to the outpatient clinic or ER for vital signs and labs check, and intravenous fluid and electrolytes replenishment as needed. We will run other tests like stool analysis and culture to identify the cause of diarrhea and manage it accordingly. We might need to modify the systemic therapies doses.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  | x |  |

=================== New example ======================

Input: EHR Context:

Age: 58 years

Gender: Female

Cancer diagnosis: Stage IV pancreatic adenocarcinoma

PMH: hypertension, type 2 diabetes

Prior cancer treatments: None

Current cancer treatments: FOLFIRINOX (started 1 month ago)

Current medication list: metformin, lisinopril, amlodipine, aspirin

Summary of most recent oncology visit (2 weeks ago): 58-year-old female with newly diagnosed stage IV pancreatic adenocarcinoma. She is on first-line FOLFIRINOX and tolerating treatment well. Will continue treatment as planned.

Patient message:

I've been experiencing severe nausea and vomiting for the past two days. I've tried over-the-counter medications, but they don't seem to help. What should I do?

Type response here:

The nausea and vomiting could be attributed to the cancer itself, the anti-cancer medications, among other causes. You need to come to the outpatient clinic or ER for vital signs and labs check, and intravenous anti-nausea medications, and fluid and electrolytes replenishment as needed. I could order some imaging. We might need to modify the systemic therapies doses.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  | x |  |

=================== New example ======================

Input: EHR Context:

Age: 64 years

Gender: Male

Cancer diagnosis: Stage III multiple myeloma

PMH: hypertension, hyperlipidemia

Prior cancer treatments: None

Current cancer treatments: bortezomib/lenalidomide/dexamethasone (started 2 months ago)

Current medication list: lisinopril, amlodipine, simvastatin, aspirin

Summary of most recent oncology visit (4 weeks ago): 64-year-old male with newly diagnosed stage III multiple myeloma. He is on first-line bortezomib/lenalidomide/dexamethasone and tolerating treatment well. Will continue treatment as planned.

Patient message:

I've been experiencing persistent lower back pain for the past week. Is this a side effect of my treatment, or should I be concerned about something else?

Type response here:

The back pain can be a medication side effect especially lenalidomide, a cancer manifestation, or something else. I’d recommend you come to the clinic so I can examine your back and assess pain severity to prescribe adequate pain medications. I can’t see recent spine imaging in your records, so I’ll order an MRI Spine and Sacrum.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
| x |  |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 45 years

Gender: Male

Cancer diagnosis: Stage IV renal cell carcinoma

PMH: None

Prior cancer treatments: None

Current cancer treatments: sunitinib (started 2 months ago)

Current medication list: None

Summary of most recent oncology visit (4 weeks ago): 45-year-old male with newly diagnosed stage IV renal cell carcinoma. He is on first-line sunitinib and tolerating treatment well. Will continue treatment as planned.

Patient message:

I've been experiencing persistent headaches and dizziness for the past week. Is this a side effect of my treatment, or should I be concerned about something else?

Type response here:

Your symptoms can be a medication side effect, a cancer manifestation, or something else. I’d recommend you come to the clinic so I can do a full physical examination including vital signs and detailed neurologic examination to prescribe adequate medications. I can’t see recent brain imaging in your records, so I’ll order a brain MRI.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 60 years

Gender: Male

Cancer diagnosis: Stage III esophageal adenocarcinoma

PMH: gastroesophageal reflux disease, hypertension

Prior cancer treatments: None

Current cancer treatments: neoadjuvant chemoradiotherapy (started 1 month ago)

Current medication list: omeprazole, lisinopril, amlodipine, aspirin

Summary of most recent oncology visit (2 weeks ago): 60-year-old male with newly diagnosed stage III esophageal adenocarcinoma. He is on neoadjuvant chemoradiotherapy and tolerating treatment well. Will continue treatment as planned.

Patient message:

I've been experiencing difficulty swallowing and pain when swallowing for the past week. Is this a side effect of my treatment, or should I be concerned about something else?

Type response here:

Your symptoms can be a reaction to chemoradiation, a cancer manifestation, or combination of both. We’ll examine your throat tomorrow in the clinic and ensure your medications include proper painkillers and medications that coat and protect your throat from chemoradiation injury. We are monitoring the disease via daily/weekly pre-radiation imaging of your chest.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 52 years

Gender: Male

Cancer diagnosis: Stage III gastric adenocarcinoma

PMH: peptic ulcer disease, hypertension

Prior cancer treatments: None

Current cancer treatments: FLOT regimen (started 1 month ago)

Current medication list: omeprazole, lisinopril, amlodipine, aspirin

Summary of most recent oncology visit (2 weeks ago): 52-year-old male with newly diagnosed stage III gastric adenocarcinoma. He is on peri-operative FLOT and tolerating treatment well. Will continue treatment as planned.

Patient message:

I've been experiencing persistent heartburn and indigestion for the past week. Is this a side effect of my treatment, or should I be concerned about something else?

Type response here:

Your symptoms can be a reaction to chemotherapy, a cancer manifestation, or combination of both. We’ll examine you tomorrow in the clinic and ensure your medications include proper painkillers and medications that coat and protect your throat and stomach from chemotherapy-induced injury. We may order imaging, if needed.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 54 years

Gender: Male

Cancer diagnosis: Stage IV hepatocellular carcinoma

PMH: cirrhosis, hepatitis C

Prior cancer treatments: None

Current cancer treatments: sorafenib (started 2 months ago)

Current medication list: lactulose, spironolactone, furosemide, ledipasvir/sofosbuvir

Summary of most recent oncology visit (6 weeks ago): 54-year-old male with newly diagnosed stage IV hepatocellular carcinoma. He is on first-line sorafenib and tolerating treatment well. Will continue treatment as planned.

Patient message:

I've been experiencing abdominal pain and swelling for the past few days. Is this a side effect of my treatment, or should I be concerned about something else?

Type response here:

Your symptoms can be a reaction to cancer therapy, a cancer manifestation, or combination of both. We’ll examine you tomorrow in the clinic and ensure your medications include proper painkillers and medications that get rid of excess bodily fluids, if any. We may order imaging, if needed.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

=================== New example ======================

Input: EHR Context:

Age: 56 years

Gender: Male

Cancer diagnosis: locally advanced pancreatic adenocarcinoma

PMH: diabetes, hyperlipidemia, chronic pancreatitis

Prior cancer treatments: none

Current cancer treatments: chemotherapy and radiation therapy (started 3 weeks ago)

Current medication list: insulin glargine, metformin, atorvastatin, omeprazole

Summary of most recent oncology visit (1 week ago): 56 year old male with a new diagnosis of locally advanced pancreatic cancer. He has started first-line systemic therapy and concurrent radiation therapy. Mild nausea and fatigue noted, but overall tolerating treatment. Will continue treatment as planned.

Patient message:

I've been experiencing severe abdominal pain and vomiting since this morning. Should I go to the emergency room?

Type response here:

Your symptoms can be a manifestation of the cancer itself, the anti-cancer medications, uncontrolled diabetes, among other causes. You need to come to the outpatient clinic or ER today for vital signs and labs check, intravenous anti-nausea medications, and fluid and electrolytes replenishment as needed. I might order some imaging. We might need to modify the cancer medications doses.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  | x |  |

=================== New example ======================

Input: EHR Context:

Age: 42 years

Gender: Male

Cancer diagnosis: Stage III Hodgkin's lymphoma

PMH: none

Prior cancer treatments: none

Current cancer treatments: chemotherapy and immunotherapy (started 4 weeks ago)

Current medication list: None

Summary of most recent oncology visit (1 week ago): 42 year old male recently diagnosed with Hodgkin's lymphoma. He has started first-line systemic therapy and is tolerating it well with no significant side effects. Will continue treatment as planned.

Patient message:

I am feeling short of breath and my arm is starting to swell up. Is this normal?

Type response here:

Your symptoms can be a manifestation of the cancer itself, a reaction to the anti-cancer medications, among other causes. You need to come to the outpatient clinic or ER today for vital signs, physical exam, and labs check. I might order some imaging.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  | x |  |

=================== New example ======================

Input: EHR Context:

Age: 61 years

Gender: Male

Cancer diagnosis: Stage IV prostate adenocarcinoma

PMH: benign prostatic hyperplasia (BPH), coronary artery disease

Prior cancer treatments: none

Current cancer treatments: chemotherapy and androgen deprivation therapy (started 1 month ago)

Current medication list: tamsulosin, metoprolol, atorvastatin, aspirin, finasteride

Summary of most recent oncology visit (2 weeks ago): 61 year old male with a new diagnosis of metastatic prostate cancer. He has started first-line systemic therapy and androgen deprivation therapy. Mild fatigue and hot flashes noted, but overall tolerating treatment. Will continue treatment as planned.

Patient message:

I've been experiencing several hot flashes throughout the day and night. Is this a common side effect of the treatment? Can I do anything to manage these symptoms?

Type response here:

Your symptoms represent a common manifestation of your anti-cancer medications. Possible management options include gabapentin, antidepressants, and a wide variety of complementary therapies.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
| x |  |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 71 years

Gender: Female

Cancer diagnosis: Stage II breast cancer

PMH: osteoporosis, osteoarthritis

Prior cancer treatments: lumpectomy, adjuvant radiation therapy (completed 2 weeks ago)

Current cancer treatments: tamoxifen (started 1 week ago)

Current medication list: alendronate, calcium with vitamin D, acetaminophen, ibuprofen

Summary of most recent oncology visit (3 weeks ago): 71 year old female with a history of breast cancer s/p lumpectomy and radiation therapy, now on tamoxifen.

Patient message:

I have a feeling of pressure in my chest which is worse when I walk up the stairs. Is this related to the tamoxifen that I just started? What can I do to manage this pain?

Type response here:

It is unlikely that your symptoms can be attributed to the tamoxifen. You need to go to the ER to rule out more serious conditions like an angina. You will get your vital signs and labs checked in addition to an EKG. I could order more imaging.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  | x |  |

=================== New example ======================

Input: EHR Context:

Age: 66 years

Gender: Male

Cancer diagnosis: Stage IV prostate adenocarcinoma

PMH: benign prostatic hyperplasia (BPH), hypertension

Prior cancer treatments: hormone therapy and radiation therapy (completed 7 months ago)

Current cancer treatments: chemotherapy and androgen deprivation therapy (started 1 month ago)

Current medication list: tamsulosin, amlodipine, lisinopril, atorvastatin, aspirin

Summary of most recent oncology visit (4 weeks ago): 66 year old male with a history of prostate cancer s/p hormone therapy and radiation therapy, now with metastatic disease involving the bones and lymph nodes. He has started first-line chemotherapy and androgen deprivation therapy. Mild fatigue and hot flashes noted today.

Patient message:

I've been experiencing episodes of burning pain shooting down my left arm for the past two weeks. Is this a common side effect of the treatment? Can I take anything to make it better?

Type response here:

The pain can be a cancer manifestation, or something else. I’d recommend you come to the clinic so I can examine your arm and assess pain severity to prescribe adequate pain medications. I can’t see recent spine imaging in your records, so I’ll order a bone scan and MRI Spine.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  | x |  |

=================== New example ======================

Input: EHR Context:

Age: 59 years

Gender: Female

Cancer diagnosis: Stage IV ovarian serous carcinoma

PMH: hypertension, hyperlipidemia

Prior cancer treatments: surgery, adjuvant chemotherapy (completed 10 months ago)

Current cancer treatments: chemotherapy (started 2 months ago)

Current medication list: lisinopril, atorvastatin, aspirin

Summary of most recent oncology visit (6 weeks ago): 59 year old female with a history of ovarian cancer s/p surgery and adjuvant chemotherapy, now with distant metastases in the liver and brain. She has started second-line chemotherapy and is tolerating it well, although labs showed low-grade AKI today.

Patient message:

I've been feeling extremely fatigued and dizzy lately. Should I take any supplements or change my diet to improve my energy levels?

Type response here:

Your symptoms can be a manifestation of the cancer itself, the anti-cancer medications, among other causes. Supplements, a healthy diet with high caloric intake, well-tolerated exercise, and good sleep are good strategies. You need to come to the outpatient clinic if these symptoms worsened for vital signs and labs check. I might order some imaging and/or medications. We might need to modify the cancer medications doses.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
| x |  |  |  |  |

=================== New example ======================

Input:

EHR Context:

Age: 67 years

Gender: Male

Cancer diagnosis: favorable intermediate risk prostate adenocarcinoma

PMH: Benign prostatic hyperplasia (BPH), high cholesterol

Prior cancer treatments: Radical prostatectomy followed by adjuvant radiation therapy (completed 1 year ago)

Current cancer treatments: None

Current medication list: Tamsulosin, finasteride, atorvastatin, aspirin

Summary of most recent oncology visit (3 months ago): 67-year-old male with a history of prostate cancer s/p surgery and adjuvant radiation therapy presents for follow-up. Patient's PSA levels remain undetectable. Urinary incontinence, which occurred post-operatively, is slowly improving.

Patient message:

I have been experiencing worsening urinary incontinence again and new lower back pain. Should I come to the emergency room?

Type response here:

If you’re experiencing a severe lower back pain not responding to pain medications, you should go to the emergency room. Otherwise, I think the worsening urinary incontinence -whilst inconvenient- is a frequent consequence of prostate surgery and radiation and not necessarily a sign of regrowing disease. You can benefit from a follow-up visit with your urologist. Regarding the new lower back pain, I’ll prescribe you a pain medication, I’ll do a full physical exam in the outpatient clinic, and may order some imaging of your back.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

=================== New example ======================

Input:

EHR Context:

Age: 59 years

Gender: Female

Cancer diagnosis: Stage IIA colorectal adenocarcinoma

PMH: Hypertension, gastroesophageal reflux disease (GERD)

Prior cancer treatments: Surgery followed by adjuvant chemotherapy with oxaliplatin and fluorouracil (completed 6 months ago)

Current cancer treatments: None

Current medication list: Losartan, omeprazole, simvastatin

Summary of most recent oncology visit (4 months ago): 59-year-old female with a history of Stage IIA colorectal cancer s/p surgery and adjuvant chemotherapy presents for follow-up. Patient is clinically without evidence of recurrence but ongoing bowel issues with very frequent stools. Will trial bulking agents.

Patient message:

I have been experiencing severe abdominal pain and I am very bloated. Do I need to go to the emergency room?

Type response here:

If you’re experiencing a severe abdominal pain not responding to pain medications, you should go to the emergency room. Otherwise, I think your symptoms -whilst inconvenient- are a relatively common consequence of colon surgery. It can be a delayed chemotherapy side effect. I’ll prescribe you pain medication and Simethicone. I’ll schedule you for a follow-up visit for a full physical exam in the outpatient clinic. I may order some imaging to rule out regrowing disease.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

=================== New example ======================

Input:

EHR Context:

Age: 70 years

Gender: Male

Cancer diagnosis: Stage IV renal cell carcinoma

PMH: Hypertension, diabetes

Prior cancer treatments: Nephrectomy followed by sunitinib (completed 6 months ago)

Current cancer treatments: None

Current medication list: Lisinopril, metformin, atorvastatin

Summary of most recent oncology visit (3 months ago): 70-year-old male with a history of Stage IV renal cancer s/p surgery and sunitinib presents for follow-up. Patient shows no evidence of disease.

Patient message:

I've been experiencing pain in my lower back and sides. Could this be a sign of my kidney cancer coming back?

Type response here:

It is unlikely that your symptoms are a manifestation of a regrowing cancer. However, we will schedule an outpatient clinic appointment for you to undergo a physical exam and get new imaging.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
| x |  |  |  |  |

=================== New example ======================

Input:

EHR Context:

Age: 52 years

Gender: Female

Cancer diagnosis: Stage II lung adenocarcinoma

PMH: None

Prior cancer treatments: Lobectomy followed by adjuvant chemotherapy with cisplatin and pemetrexed (completed 6 months ago)

Current cancer treatments: None

Current medication list: None

Summary of most recent oncology visit (3 months ago): 52-year-old female with a history of Stage II lung cancer s/p surgery and chemotherapy presents for routine follow-up. No evidence of disease recurrence observed.

Patient message:

I've been having a fever, cough, and shortness of breath. Should I come in to see a doctor?

Type response here:

You need to go to the ER to rule out more serious conditions like severe chest infection or pulmonary embolism. You will get your vital signs, oxygen concentrations in blood, and labs checked in addition to chest imaging. The doctors will prescribe you proper medications that you will continue to receive as an inpatient or an outpatient.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  |  | x |

=================== New example ======================

Input:

EHR Context:

Age: 67 years

Gender: Male

Cancer diagnosis: Stage IV prostate cancer

PMH: Hypertension, diabetes, osteoarthritis

Prior cancer treatments: intermittent androgen deprivation therapy (last 4 months ago)

Current cancer treatments: None

Current medication list: Amlodipine, metformin, insulin, aspirin

Summary of most recent oncology visit (2 months ago): 67-year-old male with a history of Stage IV prostate cancer on intermittent androgen deprivation therapy. Will continue to monitor PSA and will re-image in 2 months.

Patient message:

I've been experiencing worsening left hip pain. Should I be concerned that my cancer is worsening?

Type response here:

Your symptoms can be a manifestation of the cancer itself, or bone weakness as a consequence of your anti-cancer medications, among other causes. I’ll prescribe you some pain medications. You need to come to the outpatient for your scheduled work-up including imaging and labs.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
| x |  |  |  |  |

=================== New example ======================

Input:

EHR Context:

Age: 68 years

Gender: Female

Cancer diagnosis: Stage IB1 cervical squamous cell carcinoma

PMH: Hypothyroidism, osteoporosis

Prior cancer treatments: Radical hysterectomy followed by adjuvant radiotherapy with concurrent cisplatin (completed 9 months ago)

Current cancer treatments: None

Current medication list: Levothyroxine, alendronate, calcium supplement

Summary of most recent oncology visit (5 months ago): 68-year-old female with a history of FIGO Stage IB1 cervical cancer s/p surgery and chemotherapy presents for follow-up. Patient is without evidence of disease recurrence. She has not been using the vaginal dilator, and dilator use was encouraged.

Patient message:

I've been experiencing vaginal dryness and discomfort during intercourse. Do you have any recommendations to help?

Type response here:

Your symptoms are a manifestation of the prior cancer treatments you received. I’d highly recommend regular use of the vaginal dilator. We can connect you with your gynecologist if you feel adjustments or training are needed. The use of vaginal moisturizers, vaginal estrogen therapy, and application of lubricants during sex are good strategies. You need to come to the outpatient clinic if these symptoms worsened for vital signs and labs check. I might order some imaging and/or medications.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
| x |  |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 67 years

Gender: Male

Cancer diagnosis: Stage II colorectal cancer

PMH: type 2 diabetes, osteoarthritis

Prior cancer treatments: surgery and adjuvant chemotherapy (completed 10 months ago)

Current cancer treatments: None

Current medication list: metformin, glipizide, celecoxib, calcium, vitamin D

Summary of most recent oncology visit (1 month ago): 67-year-old male with a history of Stage IVA colorectal cancer s/p surgery and adjuvant chemotherapy presents for follow-up 10 months post-treatment. He is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing abdominal pain and bloating for the past week. It's been getting worse, and over-the-counter medications aren't helping. Should I come in for an evaluation? Is this a sign of recurrence?

Type response here:

If you’re experiencing a severe abdominal pain not responding to pain medications, you should go to the emergency room. Otherwise, I think your symptoms -whilst inconvenient- can be attributed to the colon surgery. It can be a delayed chemotherapy side effect. I’ll prescribe you pain medication and Simethicone. I’ll schedule you for a follow-up visit for a full physical exam in the outpatient clinic. I may order some imaging to rule out other causes including regrowing disease.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 65 years

Gender: Male

Cancer diagnosis: Stage IVA head and neck cancer

PMH: COPD, GERD

Prior cancer treatments: surgery, radiation therapy, and chemotherapy (completed 1 year ago)

Current cancer treatments: None

Current medication list: tiotropium, omeprazole, acetaminophen

Summary of most recent oncology visit (3 months ago): 65-year-old male with a history of Stage IVA head and neck cancer s/p surgery, radiation therapy, and chemotherapy presents for follow-up 1 year post-treatment. He is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing difficulty swallowing and a sore throat for the past two weeks. I'm worried that my cancer might be coming back. Should I schedule an appointment to discuss my symptoms?

Type response here:

It is unlikely that your symptoms are a manifestation of a regrowing cancer. Your symptoms -whilst inconvenient- can be attributed to your prior cancer therapies. I’ll prescribe you stronger pain medications and mouth care regimens. I’ll schedule you for a follow-up visit with radiation oncology and speech therapy for a full physical exam in the outpatient clinic. I may order some imaging to rule out other causes including regrowing disease if needed.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
| x |  |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 60 years

Gender: Female

Cancer diagnosis: resectable pancreatic cancer

PMH: type 2 diabetes, hypertension

Prior cancer treatments: surgery and adjuvant chemotherapy (completed 8 months ago)

Current cancer treatments: None

Current medication list: metformin, lisinopril, atorvastatin

Summary of most recent oncology visit (2 months ago): 60-year-old female with a history of resectable pancreatic cancer s/p surgery and adjuvant chemotherapy presents for follow-up 8 months post-treatment. She is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing persistent abdominal pain and nausea for the past week. I'm concerned that my cancer might be coming back. Should I schedule an appointment to discuss my symptoms?

Type response here:

Your symptoms can be a manifestation of a regrowing cancer, delayed side effects of your prior cancer therapies, among other causes. I’ll prescribe some pain and anti-nausea medications. You need to come to the outpatient clinic for a physical exam and labs check. I will order some imaging to rule out regrowing cancer.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

=================== New example ======================

Input: EHR Context:

Age: 54 years

Gender: Male

Cancer diagnosis: Stage IIIA colon cancer

PMH: hypertension, hyperlipidemia

Prior cancer treatments: surgery and adjuvant chemotherapy (completed 9 months ago)

Current cancer treatments: None

Current medication list: lisinopril, atorvastatin, aspirin

Summary of most recent oncology visit (2 months ago): 54-year-old male with a history of Stage IIIA colon cancer s/p surgery and adjuvant chemotherapy presents for follow-up 9 months post-treatment. He is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing changes in my bowel habits and rectal bleeding for the past week. I'm worried that my cancer might be coming back. Should I schedule an appointment to discuss my symptoms?

Type response here:

Your symptoms can be a manifestation of a regrowing cancer, delayed side effects of your prior cancer therapies, among other causes. You need to come to the outpatient clinic for a physical exam and labs check. I will order some imaging to rule out regrowing cancer.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  | x |  |

=================== New example ======================

Input: EHR Context:

Age: 47 years

Gender: Female

Cancer diagnosis: Stage IIA breast cancer

PMH: hypothyroidism, depression

Prior cancer treatments: mastectomy and radiation therapy (completed 6 months ago)

Current cancer treatments: None

Current medication list: levothyroxine, sertraline, ibuprofen

Summary of most recent oncology visit (3 months ago): 47-year-old female with a history of Stage IIA breast cancer s/p mastectomy and radiation therapy presents for follow-up 6 months post-treatment. She is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing swelling and pain in my arm on the same side as my surgery. It's been like this for a few days now. Is this something I should be worried about? Should I come in for a check-up?

Type response here:

Your symptoms are a manifestation of the prior cancer treatments you received. I’d highly recommend doing regular arm exercises per your physical therapist’s recommendations. You need to come to the outpatient clinic if these symptoms worsened for vital signs and physical exam. I might order some imaging and/or medications.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
| x |  |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 68 years

Gender: Male

Cancer diagnosis: Stage III gastric cancer

PMH: type 2 diabetes, osteoarthritis

Prior cancer treatments: surgery and peri-operative chemotherapy (completed 10 months ago)

Current cancer treatments: None

Current medication list: metformin, glipizide, celecoxib, calcium, vitamin D

Summary of most recent oncology visit (1 month ago): 68-year-old male with a history of Stage III gastric cancer s/p surgery and peri-operative chemotherapy presents for follow-up 10 months post-treatment. He is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing persistent heartburn and indigestion for the past two weeks. I'm concerned that my cancer might be coming back. Should I schedule an appointment to discuss my symptoms?

Type response here:

It is unlikely that your symptoms are a manifestation of a regrowing cancer. Your symptoms -whilst inconvenient- can be attributed to your prior cancer therapies or diabetes mellitus, among other causes. I’ll prescribe you medications to relieve your symptoms. I’ll schedule you for a routine follow-up visit for a full physical exam in the outpatient clinic. I may order some imaging to rule out other causes including regrowing disease, if symptoms worsened.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  | x |  |  |  |

=================== New example ======================

Input: EHR Context:

Age: 59 years

Gender: Male

Cancer diagnosis: Stage IIIB non-small cell lung cancer

PMH: COPD, GERD

Prior cancer treatments: chemotherapy and radiation therapy (completed 8 months ago)

Current cancer treatments: None

Current medication list: tiotropium, omeprazole, acetaminophen

Summary of most recent oncology visit (2 months ago): 59-year-old male with a history of Stage IIIB non-small cell lung cancer s/p chemotherapy and radiation therapy presents for follow-up 8 months post-treatment. He is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing shortness of breath and a persistent cough for the past week. I tried using my inhaler, but it doesn't seem to help. Should I be concerned about my symptoms? Do I need to schedule an appointment with you?

Type response here:

Your symptoms can be a manifestation of regrowing cancer, the anti-cancer medications, chest infection, among other causes. I’ll prescribe some medications to relieve your symptoms. I’ll schedule you for a follow-up visit at the outpatient clinic for physical exam and chest imaging to identify what is causing your symptoms.

**How challenging was it to respond to this message?**

| Very trivial | Trivial | Neutral | Challenging | Very challenging |
| --- | --- | --- | --- | --- |
|  |  | x |  |  |

**Do you believe this patient is experiencing a severe medical event?**

| Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree |
| --- | --- | --- | --- | --- |
|  |  |  | x |  |