**Phase 1 Instructions**

Thank you again for participating in the development of OncQA!

You are now beginning Phase 2. 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 4-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.

Shan Chen: schen73@bwh.harvard.edu

Danielle Bitterman: dbitterman@bwh.harvard.edu

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

Input: EHR Context:

Age: 55 years

Gender: Male

Cancer diagnosis: Stage III non-small cell lung cancer (NSCLC)

PMH: hypertension, hyperlipidemia

Prior cancer treatments: None

Current cancer treatments: radiotherapy with concurrent cisplatin (started 2 weeks ago)

Current medication list: lisinopril, amlodipine, simvastatin, aspirin, pantoprazole

Summary of most recent oncology visit (1 week ago): 55-year-old male with newly diagnosed stage III NSCLC. He is on chemoradiation and tolerating treatment well. No significant side effects were reported. Will continue treatment as planned.

Patient message:

I've been feeling more fatigued than usual for the past week, and I'm having trouble completing my daily tasks. Is this normal? Should I be concerned?

Type response here: Are there any other symptoms besides fatigue that you are experiencing? What daily tasks are you having trouble with?

I would like to reassure you that the fatigue you are feeling is normal for people undergoing chemotherapy and radiation therapy. Usually the fatigue builds up through the course of treatment, peaks 1-2 weeks following the end of treatment, and then starts to resolve.

**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: 51 years

Gender: Female

Cancer diagnosis: Stage IIIB melanoma

PMH: hypothyroidism, osteoarthritis

Prior cancer treatments: wide local excision (completed 3 months ago)

Current cancer treatments: nivolumab/ipilimumab (started 1 month ago)

Current medication list: levothyroxine, ibuprofen, acetaminophen

Summary of most recent oncology visit (2 weeks ago): 51-year-old female with stage IIIB melanoma s/p wide local excision. She is on adjuvant nivolumab/ipilimumab and tolerating treatment well. Will continue treatment as planned.

Patient message:

I've developed a rash on my arms and legs over the past few days. Is this a side effect of my treatment, or should I be concerned about something else?

Type response here:

What does the rash look like? Are you having any other symptoms?

The rash you are experiencing is possibly a side effect of your treatment. I would like to see you and examine the rash if you can come into my office.

**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: Female

Cancer diagnosis: Stage IV diffuse large B-cell lymphoma

PMH: hypertension, type 2 diabetes

Prior cancer treatments: None

Current cancer treatments: R-CHOP (started 1 month ago)

Current medication list: metformin, lisinopril, amlodipine, aspirin

Summary of most recent oncology visit (2 weeks ago): 70-year-old female with newly diagnosed stage IV diffuse large B-cell lymphoma. She is on R-CHOP and tolerating treatment well. Will continue treatment as planned.

Patient message:

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

Type response here:

This would be an unusual side effect of your treatment, and I am concerned that you might have an infection or something else going on. I would recommend you come into my office for evaluation or go to your local urgent care center.

**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 glioblastoma multiforme

PMH: hypertension, type 2 diabetes

Prior cancer treatments: surgical resection (completed 2 months ago)

Current cancer treatments: temozolomide + radiation therapy (started 1 month ago)

Current medication list: metformin, lisinopril, amlodipine, aspirin

Summary of most recent oncology visit (2 weeks ago): 61-year-old male with stage IV glioblastoma multiforme s/p resection. He is on adjuvant temozolomide + radiation therapy and tolerating treatment well. Will continue treatment as planned.

Patient message:

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

Type response here:

This is likely a side effect of your treatment. Alternatively, but less likely, it could be related to the tumor itself progressing despite treatment, though this is rare, or another cause. I would recommend you come in for evaluation.

**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 cholangiocarcinoma

PMH: hypertension, type 2 diabetes

Prior cancer treatments: None

Current cancer treatments: gemcitabine/cisplatin (started 2 months ago)

Current medication list: metformin, lisinopril, amlodipine, aspirin

Summary of most recent oncology visit (4 weeks ago): 59-year-old female with newly diagnosed stage IV cholangiocarcinoma. She is on first-line gemcitabine/cisplatin and tolerating treatment well. Will continue treatment as planned.

Patient message:

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

Type response here:

I am concerned about a problem with your liver. While it is possible this is a rare side effect of your treatment, it is more likely that the cancer itself is causing this symptom, which might require a change in your treatment plan and coming in for an evaluation.

**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: Male

Cancer diagnosis: Stage IV non-small cell lung cancer

PMH: chronic obstructive pulmonary disease (COPD), hypertension

Prior cancer treatments: none

Current cancer treatments: chemo-immunotherapy (started 2 weeks ago)

Current medication list: albuterol inhaler, fluticasone/salmeterol inhaler, amlodipine, lisinopril, atorvastatin, ibuprofen

Summary of most recent oncology visit (1 week ago): 47 year old male with a new diagnosis of metastatic lung cancer. He has started first-line systemic therapy and is scheduled for imaging in about 2 months to assess response. No significant side effects noted. Will continue treatment as planned.

Patient message:

I've been experiencing shortness of breath and wheezing. Is this normal? Should I adjust my medications or contact the oncology clinic?

Type response here:

This is not normal, and could be related to a medication side effect, worsening of your COPD, infection, or an issue related to your cancer. I would recommend contacting the oncology clinic.

**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: Male

Cancer diagnosis: favorable intermediate risk prostate adenocarcinoma

PMH: benign prostatic hyperplasia (BPH), hypertension

Prior cancer treatments: none

Current cancer treatments: radiation therapy (started 2 weeks ago)

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

Summary of most recent oncology visit (1 week ago): 71 year old male with a new diagnosis of intermediate-risk prostate cancer, on definitive radiotherapy. No significant side effects reported. Will continue treatment as planned.

Patient message:

I haven‚Äôt been able to urinate all day and it is becoming very painful What should I do?

Type response here:

You should seek urgent medical attention and go to the nearest emergency department.

**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 IIA breast cancer

PMH: hypertension, hyperlipidemia

Prior cancer treatments: lumpectomy and adjuvant radiation therapy (completed 6 years ago)

Current cancer treatments: chemotherapy (started 3 months ago)

Current medication list: lisinopril, atorvastatin, aspirin

Summary of most recent oncology visit (4 weeks ago): 58 year old female with a history of breast cancer s/p surgery and adjuvant radiation therapy, now on chemotherapy for metastatic recurrence (brain). She has mild fatigue and peripheral neuropathy, but it is not particularly bothersome so will not make changes to treatment.

Patient message:

The tingling in my fingers is getting a lot worse since my last visit, and I am having a hard time using my cell phone. What should I do to manage the pain?

Type response here:

We may need to make a modification to your chemotherapy treatment to improve the pain. In the meantime, you could try a medication like gabapentin to help with symptoms. I would recommend coming in for clinical evaluation.

**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 IIIA non-small cell lung cancer

PMH: chronic obstructive pulmonary disease (COPD), hypertension

Prior cancer treatments: none

Current cancer treatments: chemotherapy and radiation therapy (started 2 weeks ago)

Current medication list: albuterol inhaler, fluticasone/salmeterol inhaler, amlodipine, lisinopril, atorvastatin, ibuprofen

Summary of most recent oncology visit (1 week ago): 61 year old male with a new diagnosis of locally advanced lung cancer. He has started first-line systemic therapy and concurrent radiation therapy. He is starting to develop esophagitis as expected.

Patient message:

I've been experiencing increased shortness of breath and coughing up blood. Is this normal? Should I go to the emergency room?

Type response here:

This sounds concerning to me, and I would go directly to the emergency room.

**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: Metastatic renal cell carcinoma

PMH: none

Prior cancer treatments: nephrectomy, targeted therapy with tyrosine kinase inhibitors

Current cancer treatments: immunotherapy (started 3 months ago)

Current medication list: None

Summary of most recent oncology visit (2 weeks ago): 52 year old male with a history of renal cell carcinoma s/p nephrectomy, now on immune checkpoint inhibitors. He is tolerating the treatment well with no significant side effects. Will return to clinic in 4 weeks for re-staging scans

Patient message:

I've developed a rash over my chest and upper arms. It is very itchy. Is this a side effect of the treatment?

Type response here:

What does the rash look like? Any other symptoms?

This is possibly a side effect of immunotherapy, though I would like to evaluate you in the clinic.

**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 colorectal adenocarcinoma

PMH: hypertension, hyperlipidemia

Prior cancer treatments: none

Current cancer treatments: chemotherapy and targeted therapy (started 2 months ago)

Current medication list: amlodipine, atorvastatin, aspirin

Summary of most recent oncology visit (5 weeks ago): 61 year old male with metastatic colorectal cancer involving the liver, lungs, and lymph nodes, on started first-line systemics. He is doing very well with treatment, labs today showed mild AKI. Blood counts are lower limit of normal. Will continue to monitor.

Patient message:

I've been experiencing frequent episodes of diarrhea and it's affecting my daily routine. There is some blood mixed in. Can I do anything to manage it?

Type response here:

Any other associated symptoms? How much diarrhea and blood? I would like to run a few tests before we determine how to best manage the diarrhea. You should also come into clinic, because you may need hydration.

**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: 57 years

Gender: Female

Cancer diagnosis: locally advanced pancreatic adenocarcinoma

PMH: diabetes, hypertension, hyperlipidemia

Prior cancer treatments: FOLFIRINOX

Current cancer treatments: stereotactic radiotherapy (started 3 day ago)

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

Summary of most recent oncology visit (2 weeks ago): 57 year old female with locally advanced pancreatic cancer s/p FOLFIRINOX with slight radiographic progression. She will start stereotactic radiation shortly, and next steps will be based on response.

Patient message:

I've been feeling extremely tired and weak lately. Is this a common side effect of the treatment? Should I be concerned?

Type response here:

Any other symptoms? Please describe your weakness in more detail.

It is unlikely that your radiation therapy would make you feel weak, though having some tiredness is possible. I would come to clinic to be evaluated.

**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: Feale

Cancer diagnosis: Stage IV cervical cancer

PMH: none

Prior cancer treatments: Cisplatin/paclitaxel/bevacizumab

Current cancer treatments: decetaxel (started 2 months ago)

Current medication list: aspirin, prochlorperazine

Summary of most recent oncology visit (1 week ago): 42 year old woman with metastatic cervical cancer, currently on second-line docetaxel She is extremely fatigued and having trouble keeping her weight up. She will come in again in 2 weeks for a symptom check, at which point we will re-evaluate her treatment plan.

Patient message:

I noticed quite a bit of blood in the toilet this morning and I feel even more weak than I did when I saw you last week. What should I do?

Type response here:

Please seek urgent medical attention at the emergency department.

**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: 63 years

Gender: Female

Cancer diagnosis: Stage IIB breast ductal carcinoma

PMH: Hypertension, osteoporosis

Prior cancer treatments: Lumpectomy followed by adjuvant chemotherapy with doxorubicin and cyclophosphamide and radiation (completed 8 months ago)

Current cancer treatments: None

Current medication list: Amlodipine, alendronate, oxycodone, ibuprofen

Summary of most recent oncology visit (4 months ago): 63-year-old female with a history of Stage IIB breast cancer presents for routine follow-up visit. Patient is clinically without evidence of recurrence. Mammogram scheduled in 8 months.

Patient message:

I have noticed some swelling and tenderness in my breasts. Could this be a sign of cancer recurrence?

Type response here:

How quickly did the symptoms arise?

It is possible this is a sign of cancer recurrence, though it is more likely this could be a late side effect of your treatment, or another cause, like infection.

**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 III colon adenocarcinoma

PMH: None

Prior cancer treatments: Surgery followed by adjuvant chemotherapy with FOLFOX (completed 10 months ago)

Current cancer treatments: None

Current medication list: None

Summary of most recent oncology visit (6 weeks ago): 45-year-old male with a history of Stage III colon cancer s/p surgery and FOLFOX chemotherapy presents for follow-up. Patient is clinically and radiographically without evidence of recurrence.

Patient message:

I have been experiencing new constipation and abdominal discomfort. Could this be related to my previous cancer treatment?

Type response here:

Any other symptoms?

Yes, this could be related to your prior cancer treatment, though it could also be a sign of something else like cancer recurrence, or dietary related. You should come into the clinic for evaluation.

**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: 55 years

Gender: Female

Cancer diagnosis: Stage IV ovarian serous carcinoma

PMH: Hypertension, hypothyroidism

Prior cancer treatments: Debulking surgery followed by chemotherapy with carboplatin and paclitaxel (completed 4 months ago)

Current cancer treatments: None

Current medication list: Atenolol, levothyroxine, metformin

Summary of most recent oncology visit (1 week): 55-year-old female with a history of Stage IV ovarian cancer s/p surgery and carboplatin-paclitaxel chemotherapy presents for follow-up. Imaging today showed a good response to treatment with no evidence of disease progression, CA-125 is stable. She has ongoing stable peripheral neuropathy.

Patient message:

I have been experiencing bloating and abdominal pain. Could this be a sign that my cancer is coming back?

Type response here:

It is possible this is related to your cancer coming back, but it could also be a symptom related to your prior treatment.

**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: Stage IB non-small cell lung cancer

PMH: Chronic obstructive pulmonary disease (COPD)

Prior cancer treatments: Stereotactic body radiotherapy (completed 9 months ago)

Current cancer treatments: None

Current medication list: Albuterol, tiotropium, prednisone, aspirin

Summary of most recent oncology visit (3 months ago): 60-year-old female with a history of Stage IB lung cancer s/p stereotactic body radiation who presents for follow-up. Patient is clinically without evidence of recurrence.

Patient message:

I have a twinging pain in my chest that is worse when I press on it It is minor but annoying. What should I do to make it better?

Type response here:

Where specifically is the pain located? Any other symptoms? What are the dosages of the medications you are on and what indications are you taking them for?

You could first try taking tylenol. You could also try the use of a topical lidocaine patch. It looks like you are already on aspirin, but you may be able to take an NSAID like ibuprofen temporarily instead of this.

**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: 74 years

Gender: Female

Cancer diagnosis: resectable pancreatic adenocarcinoma

PMH: Diabetes, hypertension

Prior cancer treatments: Whipple procedure followed by adjuvant chemotherapy with gemcitabine and nab-paclitaxel (completed 5 months ago)

Current cancer treatments: None

Current medication list: Insulin, metformin, lisinopril, atorvastatin

Summary of most recent oncology visit (3 months ago): 74-year-old female with a history of resectable pancreatic cancer s/p surgery and chemotherapy presents for follow-up. Patient is without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing persistent abdominal pain and bloating. Is this normal after my pancreatic cancer treatment?

Type response here:

How severe are the symptoms and how long have they persisted? Any other symptoms?

Some degree of abdominal discomfort and bloating is typical after surgery for pancreatic cancer, however a sudden change in symptoms could be a sign of something more concerning. I recommend a clinic evaluation.

**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 IIIA breast ductal carcinoma

PMH: None

Prior cancer treatments: Neoadjuvant chemotherapy, lumpectomy with axillary lymph node dissection, and radiotherapy (completed 9 months ago)

Current cancer treatments: None

Current medication list: None

Summary of most recent oncology visit (3 months ago): 47-year-old female with a history of Stage IIIA breast cancer s/p neoadjuvant chemotherapy, lumpectomy with axillary lymph nodes dissection, and radiotherapy presents for follow-up. No evidence of recurrence noted, plan is for mammogram in 3 months.

Patient message:

I've noticed some swelling and tenderness in my armpit. Could this be related to my previous breast cancer treatment?

Type response here:

Yes, this may be a common side effect of your treatment called lymphedema. It is less likely related to an infection or other cause. Please schedule a clinic visit so that we can evaluate you.

**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: 32 years

Gender: Male

Cancer diagnosis: Stage I testicular seminoma

PMH: None

Prior cancer treatments: Orchidectomy (completed 1 year ago)

Current cancer treatments: None

Current medication list: None

Summary of most recent oncology visit (6 weeks ago): 32-year-old male with a history of Stage I testicular cancer s/p surgery presents for follow-up. Exam and imaging showed no evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've had a cough and fever for the past 3 days. Could this be a sign of my cancer coming back?

Type response here:

It is unlikely that this is related to your cancer coming 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: 55 years

Gender: Male

Cancer diagnosis: Stage IIA colon adenocarcinoma

PMH: None

Prior cancer treatments: Surgery followed by adjuvant chemotherapy with oxaliplatin and fluorouracil (completed 7 months ago)

Current cancer treatments: None

Current medication list: None

Summary of most recent oncology visit (3 months ago): 55-year-old male with a history of Stage IIA colon cancer s/p surgery and chemotherapy presents for follow-up. He is doing well, no evidence of disease recurrence observed.

Patient message:

I've been experiencing frequent and urgent bowel movements. Could this be related to my cancer?

Type response here:

How long has this been going on? Any other symptoms?

This could be related to your cancer, but it is more likely to be related to your prior treatment, or another cause, such as infection, or dietary reason. Please come in for evaluation.

**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: 55 years

Gender: Male

Cancer diagnosis: Stage IIIB non-small cell lung cancer

PMH: hypertension, hyperlipidemia

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

Current cancer treatments: None

Current medication list: lisinopril, atorvastatin, aspirin, albuterol inhaler

Summary of most recent oncology visit (2 months ago): 55-year-old male with a history of Stage IIIB non-small cell lung cancer s/p chemotherapy and radiation 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:

There could be a few things going on, and I would recommend coming in to see me for an evaluation.

**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: Male

Cancer diagnosis: favorable intermediate risk prostate cancer

PMH: benign prostatic hyperplasia, type 2 diabetes

Prior cancer treatments: radical prostatectomy (completed 1 year ago)

Current cancer treatments: None

Current medication list: tamsulosin, metformin, aspirin

Summary of most recent oncology visit (3 months ago): 58-year-old male with a history of favorable intermediate risk prostate cancer s/p radical prostatectomy 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 frequent urination and discomfort during urination for the past few days. Is this something I should be worried about? Should I schedule an appointment to discuss my symptoms?

Type response here:

You should schedule an appointment to discuss your symptoms. This may be related to a urinary tract infection, and we need to run some tests to determine the cause.

**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: Sample Given 1:

EHR Context:

Age: 54 years

Gender: Male

Cancer diagnosis: Stage II colon adenocarcinoma

PMH: hypertension, gastroesophageal reflux disease (GERD)

Prior cancer treatments: Laparoscopic colectomy (completed 3 months ago)

Current cancer treatments: Adjuvant CAPEOX chemotherapy (initiated 1 month ago)

Current medication list: amlodipine, omeprazole, acetaminophen, ASA, oxaliplatin, capecitabine

Summary of most recent oncology visit (1 month ago): 54 year old male with a history of Stage II colon adenocarcinoma s/p laparoscopic colectomy. Post-operative pathology showed clear margins and no nodal involvement. Initiated adjuvant CAPEOX chemotherapy to minimize risk of recurrence. Will continue follow-up every 2 weeks with a focus on monitoring toxicity and tolerability.

Patient message:

Hi doctor, I'm feeling extremely fatigued lately, and I've also developed a rash on my hands and feet. Is it a side effect of chemotherapy? What can I do to manage these symptoms? Should I be worried about it?

Type response here:

This is likely related to your chemotherapy. There are a few things we could try to help your symptoms, such as steroid creams, moisturizers, ice packs, or possibly reducing or modifying your chemotherapy. Please come into clinic for evaluation.

**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: 53 years

Gender: Female

Cancer diagnosis: Stage IIIC endometrial cancer

PMH: hypertension, obesity

Prior cancer treatments: chemoradiotherapy (completed 1 year ago)

Current cancer treatments: None

Current medication list: lisinopril, metformin, aspirin

Summary of most recent oncology visit (3 months ago): 53-year-old female with a history of Stage IIIC endometrial cancer s/p chemoradiotherapy presents for follow-up 1 year post-treatment. She is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing pelvic pain and some vaginal bleeding 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:

Yes, you should schedule an appointment to discuss 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 |  |

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

Input: EHR Context:

Age: 64 years

Gender: Female

Cancer diagnosis: Stage IIA cervical cancer

PMH: hypothyroidism, diabetes

Prior cancer treatments: chemoradiotherapy (completed 1 year ago)

Current cancer treatments: None

Current medication list: levothyroxine, metformin, acetaminophen, aspirin, atorvastatin, vitamin D

Summary of most recent oncology visit (6 weeks ago): 64-year-old female with a history of Stage IIA cervical cancer s/p definitive cisplatin-based chemoradiation presents for follow-up one year post-treatment. She is clinically and radiographically without evidence of recurrence. Will continue ongoing surveillance.

Patient message:

I've been experiencing persistent pelvic pain for the past two weeks. I tried ibuprofen, but it didn't help much. What should I do to feel better? Do I need to go to the emergency room?

Type response here:

What exacerbates the pain? What are associated symptoms?

You should come in for an evaluation to the emergency room or urgent care clinic.

**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 |  |  |