ASHP CLINICAL SKILLS COMPETITION
PHARMACIST'S PATIENT DATA BASE FORM

Demographic and Administrative Information

Name: DP
Address: 356 Golden Way
Pittsburgh, PA
Date of Birth: 6/12/1946
Height: 5'6" Weight: 175 # (79.5kg)
Gender: Female
CC: shortness of breath, diarrhea, skin rash

Patient ID: 718729
Location: Cancer Center Clinic
Physician: O'Connell
Pharmacy: East Side Specialty Pharmacy
Race: Asian
Religion: Unknown

History of Present Illness

DP presents to the medical oncology clinic today (12/5/09) for diarrhea which she describes as 4-6 more stools over baseline, but it does not interfere with her activities of daily living. She also states she has a rash on her face and back. She also complains of progressively worsening shortness of breath. Finally the patient reports increased left arm pain of 7/10 intensity, changed from a baseline 2/10 intensity on 9/15/09.

Vitals & Other Tests

	9/15/09	12/5/09
BP	128/90 mm/Hg	110/75 mm/Hg
Pulse	67 bpm	110 bpm
Tmax	36.7°C	37.9°C
Resp	12 breaths/min	20 breaths/min
Weight	165.2 pounds	175 pounds
O2 Sat		92% on room air

Past Medical History

Metastatic breast cancer (ER /PR negative, Her2Neu positive) treated with left mastectomy, trastuzumab, and FAC (5-flurorouracil, doxorubicin, and cyclophosphamide) as adjuvant chemotherapy. DP is also taking a nutritional supplement called Avemar because she heard it could be useful in the treatment of breast cancer. Avemar has been associated with diarrhea, nausea, flatulence, soft stool, and constipation.

She developed metastatic disease (to the liver and bones) in June 2009 and is currently on lapatinib and paclitaxel. She has had some worsening dyspnea since starting that regimen.

DP also has a 6 month history of neuropathic pain in the left axillary area associated with her malignancy.

The patient has no cardiac history and all cardiac studies prior to her cancer therapy have been within normal limits. She has a history of type II diabetes for the past 15 years. She checks her blood glucose before meals and it is usually between 80-100 mg/dL.

Two days ago the patient visited her primary care physician for shortness of breath. The physician prescribed clarithromycin for suspected community acquired pneumonia.

Labs

	9/15/09	12/5/09
Na	140 mEq/L	138 mEq/L
K	4.1 mEq/L	3.7 mEq/L
Cl	100 mEq/L	104 mEq/L
CO_2	22 mEq/L	18 mEq/L
BUN	19 mg/dL	52 mg/dL
SCr	0.8 mg/dL	1.6 mg/dL
Glucose	94 mg/dL	108 mg/dL
WBC	5.8 K/μL	9.9 K/μL
Hgb	13.0 gm/dL	12.5 gm/dL
HCT	36%	33%
Plts	242 K/μL	211 K/μL
Calcium	10.2 mg/dL	10.5 mg/dL
AST	104 IU/L	115 IU/L
ALT	88 IU/L	97 IU/L
Total bili	0.6 mg/dL	0.7 md/dL
Direct bili	0.4 mg/dL	0.3 mg/dL
Albumin	4 g/dL	3.9 g/dL
INR	1	1.1
A1C	7.5%	
BNP		Pending

Family History

Father: 85, alive, DM, HTN
Mother: 84, alive, osteoporosis
Sister: 60, alive, pancreatic cancer
Brother: 66, alive, HTN

Cultures 12/5/09

Stool for ova and parasites: negative
Clostridium difficile toxin: negative

ASHP CLINICAL SKILLS COMPETITION
PHARMACIST'S PATIENT DATA BASE FORM (Cont.)

Social History
Tobacco: 1 ppd x 35 years, has not smoked in 2 years ETOH: 1-2 drinks/month Illicit Drugs – None Caffeine: 1-2 cups of coffee/day Occupation: Investment banker Status: Married Children: 2 (1 male 40, 1 female 37) Physical Activity: No regular exercise, limited ADLs Diet: No specifics
Imaging 12/5/09
Chest X-ray Radiologist preliminary report: Bilateral fluid in bases of lungs, inconsistent with pneumonia. MUGA Cardiologist preliminary report: EF of 35% (most recent MUGA reported 55% on 5/1/09)

Physical Exam (12-5-09)
General – Pleasant, slightly obese woman with slight shortness of breath
Skin – Warm, left mastectomy scar present; acneiform rash on face and back
Neck/LN - Neck supple; no lymphadenopathy, thyromegaly, or masses. No supraclavicular or infraclavicular adenopathy
HEENT – PERRLA, EOMI, pink conjunctivae, TMs intact
Chest – crackles at both bases
CV – RRR, S1, S1 normal; (+) S3; (–) S4; normal carotid pulses without bruits
Abdomen - Soft, obese; hyperactive bowel sounds with diarrhea; no rebound tenderness or guarding; no hepatosplenomegaly
Genit/Rect: Deferred
MS/Ext: 1+ edema in both lower extremities; no clubbing or cyanosis
Neuro: A&O x 3; CN II-XII intact; DTRs 2+ throughout; (–) Babinski, Severe allodynia centered in L axillary region extending from the left mid-clavicular line to the left mid-scapular line between the 2nd and 5th ICS

ASHP CLINICAL SKILLS COMPETITION
PHARMACIST'S PATIENT DATA BASE FORM (Cont.)

Allergies/Intolerances	**Prescription Coverage**
Cephalexin – Rash	Insurance: Big Company Insurance
	Copay: $30/brand $15/generic
	Cost per month: $400
	Annual Income: $75,000

Current Drug Therapy

Drug Name/Dose/Strength/Route	Prescribed Schedule	Duration Start–Stop Dates	Compliance/Dosing Issue
1. Wheat Germ Extract (Avemar)	9 g po daily	7/22/09-present	
2. Clarithromycin	500 mg po BID	12/3/09-present	
3. Duloxetine	30 mg po daily	5/5/09-present	
4. Pregabalin	50 mg po tid	6/1/09-present	
5. Oxycodone CR	40 mg po bid	6/1/09-present	No fills in the last 15 days
6. Oxycodone IR	10 mg po q3h prn pain	6/1/09-present	
7. Senna	8.6 mg po bid	6/20/09-present	
8. Rosiglitazone	4 mg po bid	2/08-present	
9. Pamidronate (Aredia)	90mg IV q month	10/7/09-present	
10. Paclitaxel (Taxol)	175 mg/m^2 IV q3 wks	6/15/09-present	
11. Lapatinib (Tykerb)	1250 mg po daily	6/15/09-present	

Medication History

The patient has not missed any doses of paclitaxel in the clinic and has had consistent refills of lapatinib. All pain medications have been filled regularly, except the controlled release oxycodone has not been filled in the last 2 weeks. The herbal product (Avemar) compliance cannot be confirmed, since the patient's pharmacy does not stock this product. There is no compliance history for the over the counter medication(s).

The patient reports that she takes all her medications regularly. She continues to take the oxycodone CR, although she does not take the oxycodone IR since it does not seem to help the pain much. She is not currently comfortable on her current pain regimen. Prior to this clinic visit she was having bowel movements regularly every other day.

Patient Case Narrative

The attending physician will admit the patient to the inpatient hospital ward for treatment. As the clinical pharmacist, you are seeing the patient for the first time with the attending physician at this time. **The attending has stated that she is not considering adding any new therapy for DP's cancer treatment,** but would entertain any recommendations you may have on her current regimen.

The attending considerers DP's diarrhea as grade II, which is defined as an increase of 4-6 stools/day over baseline, not interfering with activities of daily living.

Evaluated for competition

ASHP Clinical Skills Competition - Pharmacist's Care Plan

Problem Identification and Prioritization with Pharmacist's Care Plan

Team # _____

A. List all health care problems that need to be addressed in this patient using the table below.
B. Prioritize the problems by indicating the appropriate number in the "Priority" column below:
   1 = Most urgent problem (Note: There can only be one most urgent problem)
   2 = Other problems that must be addressed immediately or during this clinical encounter; **OR**
   3 = Problems that can be addressed later (e.g. a week or more later**)**

**Please note, there should be only a "1", " 2", or "3" listed in the priority column, and the number "1" should only be used once.*

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
Shortness of breath/CHF	1	Decrease CHF-related mortality, decrease shortness of breath, improve ADLs	D/C lapatinib (for cardiotoxicity) D/C clarithromycin (drug interaction with lapatinib) D/C rosiglitazone (d/t CHF) – also in diabetes section Start captopril 6.25 mg po bid and titrate to 50 mg tid OR Start enalapril 2.5 mg po daily to bid and titrate to 20 mg bid (or equivalent) *short term with increased SCr and NOT IV Morphine 2 to 5 mg IV x1 (repeat doses if necessary q5 min prn x3) Ok to start furosemide (NMT than 20 mg IV x1) Do not start metoprolol (or other beta blocker) since patient's blood pressure is low and patient is euvolemic Consider decreasing alcohol intake	Monitor LVEF, HR, SCr, BP, glucose, electrolytes, urine output. Endpoint: no further decrease in LVEF, symptom control of CHF, no hospitalizations

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
Diarrhea	2	Resolution of diarrhea	Hold senna d/c Avemar (also in the breast cancer section) D/C clarithromycin (drug interaction with lapatinib) Use loperamide 4 mg po x1, then 2 mg po q4 hrs, until ,4 bowel movements per day or no diarrhea (increase to 2 mg po q2 hrs if diarrhea does not decrease, or worsens within 24 hours), In another 24 hours if diarrhea does not decrease or worsens, then start octreotide 100-150 mcg sq tid), If no resolution, continue supportive care and increase doses of octreotide Stop caffeine intake Counsel on avoiding high-fiber diet, high-osmolar dietary supplements, laxatives, milk or milk products Restart oxycodone IR (or equivalent) for pain (ADR effect for diarrhea)	Monitor bowel movement frequency and electrolytes Endpoint: No diarrhea (formed stools and < and no electrolyte abnormalities

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
Pain	2	Patient has relative comfort or "no pain" if possible	Counsel patient on appropriate use of pain medications Use lidocaine 5% patches on 12 hours and off 12 hours for immediate relief of neuropathic pain *Do not start gabapentin (since patient has been on pregabalin and has increased SCr) Continue oxycodone long acting and immediate release Continue bisphosphonate once SCr WNL (to prevent bone pain) If adding TCA, d/c duloxetine. (*NB* The TCA is controversial and should be taken in context of the larger case)	Pain scores, prn oxycodone use, ADLs, serotonin syndrome (e.g. fever, rigidity, tachycardia, altered mental status) Endpoint: Decreased pain scores for axillary neuropathic pain (no pain if possible), PRN immediate release usage as low as possible, regular bowel movements (at least 1 qod)
Breast Cancer	3	Optimize efficacy and side effects to improve quality of life	d/c Avemar D/C lapatinib secondary to CHF *Not just hold secondary to diarrhea and rash (*NB* given the admonition from the attending physician, the student should not be recommending alternate agents at this time, this case takes place on day one of inpatient stay)	Monitor diarrhea and rash (patient report and examination) Monitor signs of disease progression (bone pain, increased LFTs) Endpoint: Resolution of rash and diarrhea, stable disease or regression breast cancer (including metasteses) when therapy restarted

Health Care Problem	Priority	Therapeutic Goals	Recommendations for Therapy	Monitoring Parameters and Endpoints
Increased creatinine	2	Adjust or hold medications which are eliminated by the kidneys	ClCr – 29.7 mL/min (or 15-30 mL/min) Hold pamidronate Hold duloxetine Decrease pregabalin to 50 mg po daily or 25mg po bid	BUN/SCr, urine output Endpoint: Normalization of serum creatinine and BUN to baseline
Rash	2	Resolution of rash	At least hold lapatinib until rash resolves BP + Clindamycin 1% gel apply twice daily Hydrocortisone 1-2.5% cream 2-4 times daily (can mention pimecrolimus 1% cream twice daily or minocycline 100 mg bid if added to the above, but NOT doxycycline 100 mg po bid)	Monitor rash Endpoint: Grade 0 rash (or resolution of rash)
Diabetes	3	HbA1C <7% (per ADA)	Insulin sliding scale acutely, student may mention oral agents as the patient stabilizes D/C rosiglitizone (CHF risks) Change to glipizide 2.5 mg po daily (or other Sulfonylurea) No metformin currently (since serum creatinine is elevated)	Monitor HbA1C Endpoint: Maintain HbA1C below 6-7%
Bowel function (if not mentioned in diarrhea and pain sections above)	3	Regular bowel movements with chronic pain management	Continue senna once diarrhea resolves	Bowel movement frequency Endpoint: Daily BM or every other day