Appendix 1: Sample cases

Sample Easy Case: Colon cancer

Chief Complaints: This patient is a 60-year-old white male who presented with a three-week history of crampy lower abdominal pain and severe anemia.

History of Present Illness: He was in his usual state of health until 2-3 weeks prior to admission when he developed crampy lower abdominal pain which was intermittent and bilateral and not clearly related to eating, bowel movements or position. On the day prior to admission, the pain worsened. He was awakened the morning of admission with pain which increased throughout the day. He presented to an urgent care facility where his hematocrit was found to be 19.3. He denied bright red blood per rectum or melena. He has had increased fatigue and denied any other symptoms, such as vomiting, hematemesis, hematuria, change in urine color, or change in bowel habits or stool. His appetite has been normal. He believed he had lost some weight but could not quantify the amount.

Past Medical History was significant for coronary artery disease, S/P bypass grafting, asthma, and eczema.

Medications included only acetaminophen. He denied medication allergies.

Social/Family History: He was a technical illustrator who has 3-4 beers each week. Family history was unremarkable.

Physical examination revealed a pale man. He was a febrile and his pulse was 78, with a respiratory rate of 18 and a blood pressure of 132/68. He did not have orthostatic hypotension. The skin had no bruises, petechiae, or jaundice. The HEENT exam was unremarkable other than pale conjunctivae. The pulmonary examination was within normal limits. The cardiac exam revealed a II/VI systolic murmur at the left upper sternal border without radiation, but no extra heart sounds or rubs. There was mild tenderness to palpation in the lower abdominal quadrants, without rebound or guarding. The liver edge was palpable 2 cm below the right costal margin and was 10 cm by percussion in the mid-clavicular line. There was no splenomegaly, nor any masses. Stool was guaiac-positive and brown. The extremities were unremarkable and no neurologic deficits were noted.

Laboratory Data

			Normal	
CBC	Hct	17.3	42-52	%
	Hgb	50	140-180	g/L
	MCV	55.4	80-100	fl
	WBC	5.2	4-10.0	X 10^9/l
	platelet count	273	200-400	X 10^9/l
Chemistries	electrolytes	within normal limits		
	creatinine	71	80-115	µmol/L
	BUN	13	8-20	mg/dl

Laboratory Data

calcium	2.20	2.15-2.55	mmol/L
phosphorus	1.1	0.8-1.6	mmol/L
protein, total	72	60-83	g/L
albumin	39	35-49	g/L
bilirubin, total	9	2-19	µmol/L
transaminases	within normal limits		
LDH	87	60-200	U/L
ALP	60	30-130	U/L
PT, PTT	normal		

Urinalysis: unremarkable

Chest X-ray: unremarkable

Sample hard case: Syphilitic meningitis

Chief Complaint: This 25-year-old woman presented with a chief complaint of headaches and tinnitus.

History of Present Illness: The patient first sought medical attention in the fall of last year. She complained of a headache that had been constant for three weeks, ringing in her ears and dizziness. The headache was severe enough that it awoke her from her sleep at times. It was not relieved by Tylenol or an over-the-counter analgesic containing aspirin, salicylamide, and caffeine. Three months previously she had been kicked in the head with a cowboy boot though did not lose consciousness. The subject of spouse abuse, she had had multiple episodes of head trauma in the past and had been struck with a baseball bat in the head two years previously. On examination she had some tenderness in the left anterior parietal skull. She underwent a head CT that showed no evidence of a subdural hematoma but questioned the presence of a nondisplaced left posterior frontal skull fracture versus a vascular groove. The patient was advised of community resources for abused women and left home for three weeks.

Two weeks later she returned because of continued tinnitus. She described it as constant though fluctuating in intensity. Voices were muffled at times. Her headache was not quite as bad. On exam she had fluid and air bubbles behind both tympanic membranes. There was slight erythema of the left TM. She was started on amoxicillin 500 mg tid, Otrivin nose drops and Dimetapp for otitis media. She took one amoxicillin capsule and developed a rash with hives, itching and a low-grade fever. She had never experienced a penicillin allergy in the past. The amoxicillin was stopped and she was started instead on Keflex.

Five days later she still complained of tinnitus and had a faint macular rash over the flexural creases of her arms. She was sent for an audiogram which showed bilateral, high frequency hearing loss. Blood work revealed a sed rate of 77 mm/hr. She was referred to this hospital for further evaluation. On admission the patient complained of continued tinnitus. She experienced occasional vertigo and flashing lights. She still had a faint rash. She denied fevers, chills, nausea, vomiting and weight loss.

Past Medical History: She had a past history of genital herpes and chlamydia infection. She had been pregnant five times, the first two ending in spontaneous abortions. The third pregnancy required a C-section at delivery because of the active herpetic lesions. From her fourth and fifth pregnancies, she delivered 36-week gestation twins by C-section 6 years ago and had a repeat C-section of a term infant 3 years ago. She denied previous drug allergies. She had a norplant for contraception.

Social History: She smokes a pack a day. She does not drink. She denied exposure to pets. She had not traveled.

Physical Exam: Her temperature was 98.7 F (37.1 C). The blood pressure was 108/64 with a pulse of 81 and respiratory rate of 18. She was well developed and well nourished. Her pupils were equal, round, reactive to light and accommodation. The fundi were normal. The TM's were normal. The oral pharynx appeared normal. She had no jugular venous distention and no adenopathy. The neck was supple. The heart sounds were normal. The lungs were clear to auscultation. The abdomen was soft and non-tender without organomegaly. She had a vertical midline scar up to the umbilicus. The pelvic exam showed no discharge, no cervical motion tenderness and no masses. She had a faint erythematous macular rash on her forearms that did not involve the palms. The neurologic exam was non-focal.

Laboratory Data

Laboratory Data

			Normal	
CBC	Hct	38	38-47	%
	Hgb	131	123-157	g/L
	WBC	8.8	4-12	X 10^9/l
	Neut	70	40-70	%
	lymph's	19	20-50	%
	mono	6	2-10	%
	eos	1	2-5	%
Chemistries	sodium	141	135-145	mmol/l
	potassium	3.3	3.5-5.0	mmol/l
	chloride	104	100-111	mmol/l
	CO2	26	24-30	mmol/l
	creatinine	106	53-106	µmol/L
	BUN	7	8-20	mg/dl
	bilirubin, total	14	0-21	µmol/L
	albumin	42	35-50	g/L
	protein, total	74	68-83	g/L
	AST (SGOT)	18	9-26	U/L
	ALT (SGPT)	13	7-30	U/L
	LDH	146	108-215	U/L
	ALP	170	39-117	U/L

Urine dip stick: negative, 3-10 WBC's, >50 epithelial cells.

Cervical cultures: negative for chlamydia and gonorrhea.

Chest X-ray: clear lung fields and normal cardiac silhouette.