

Best Practices for Online Tutoring



ELITE MEDICAL PREP

Top Tips for Organizing and Managing
Online Medical Tutoring
Learning Specialists & Deans

Presenters
Marcel Brus-Ramer MD PhD
&
Kenneth Rubin MD

Delivered: April 30th, 2020

Outline

- **Introduce Elite Medical Prep's best practices for online medical tutoring.**
- **Discuss adaptations from 1-on-1 to small group tutoring**
- **Open discussion and Q&A**



USMLE Goals: Schools vs Students



Soccer



Basketball



ELITE
MEDICAL
PREP

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Soccer



Basketball



Disclosures & Our Background

Elite Medical Prep Founders



Marcel Brus-Ramer, MD/PhD

Co-founder and President

Board Certified Radiologist
Columbia P&S Online Lecturer

Columbia University | UCSF |
Rutgers | Paris Diderot

Kenneth Rubin, MD

Co-founder and CEO

Mt Sinai USMLE Step 1
and Step 2 CK Course
Director

Mt. Sinai | Columbia University



TE
MEDICAL
EP

Individual & Group Based Medical Education



1-on-1 Tutoring

Elite Medical Prep tutors have been providing the highest level of medical tutoring since 2009.

We have developed a 'Structured Personalization' system that ensures consistently high impact tutoring sessions.



Small Group Tutoring

Elite Medical Prep runs an integrated small group tutoring program for institutions that has produced outstanding results at ***Technion Medical School.***



Seminar Presentations

Elite Medical Prep delivers highly interactive seminars across different high-yield USMLE topics. Integrated material is presented in the same interactive format used in our board review courses at ***Mt. Sinai Medical School.***



Faculty Development

Elite Medical Prep has developed a unique intensive system for training its tutors. Our team works directly with medical schools to train their faculty & top students in the best methods for peer tutoring.

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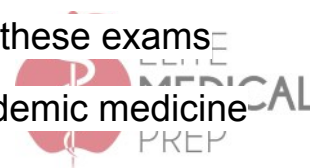
Core services in 1:1 tutoring

- Developed as a natural outgrowth of work in pre-college & pre-medical tutoring
- Small group tutoring aims to take the best of 1:1 and make it more affordable

Our Tutoring Team



- Current & former medical students
- Recently taken these exams
- High scorers: all tutors scored >245
- Tutored professionally for these exams
- Active in education & academic medicine
- Some practicing physicians



SAT to USMLE: Experiences with tutoring

- > 20 years of 1-on-1 tutoring experience across high stakes standardized testing
 - **Pre-college** SAT, ACT, SAT II
 - **College** MCAT, GRE
 - **Medical** USMLE Step 1, 2 CK, 3. Shelf Exams, ABIM
- High stakes MCQ exams have growing importance
- Many tests require separate skills for student to master.
 - ◆ Content Expert \neq Test Expert
- **Tutors for these exams also may need to develop new skills & tools**



1-on-1 Tutoring Best Practices



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ON-BOARDING



TRACKING



TUTORING/TEACHING CONTENT



1-on-1 Tutoring Best Practices



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- Detailed consultation prior to tutoring
- Efficient student-tutor pairing process
- Trial session
- Student feedback early & late

TRIAL SESSION



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1-on-1 Tutoring Best Practices



Summary of Training Components

- **CASE STARTS**--45min
- **MOCK INTERVIEW**--1-2hr
- **SETTING UP STUDENT FOR SUCCESS**--1hr
- **ANKI & CALENDAR REVIEW**--1hr
- **TUTOR SHADOWING**--1-2hr
- **SIMULATED SESSION**--1-2hr
- **POLICIES**--Quiz Format

What to expect from Tutor Training

HIRING AND TRAINING

- ▶ Spread out over multiple sessions with different objectives for each session.
- ▶ Designed to give tutor candidates the opportunity to practice their teaching skills in a controlled setting. Detailed feedback is provided.
- ▶ Should take 8-10 hours.
- ▶ Tutors are paid a \$350 training bonus for successful completion of training. The bonus will be paid after the tutor works successfully with one student, approximately 30 hours or 3 months--whichever comes first.
- ▶ Formal and informal training will continue throughout a tutor's tenure with the organization.

1. **Phone Call** - 15-30 minute conversation with EMP administrator to assess interest and communication skills.
2. **Tutor Interview**
 - i. **Case Starts** - 1.0 hour session. Run through 4-6 case vignettes. Deliver top three learning points for students. Assess how well the tutor structures the teaching and hits high-yield points. Delivered by senior instructor.
 - ii. **Mock Teaching** - 1.0 hour session. Work through mock teaching question. Assess tutoring ability and temperament. Debrief after the session.

Qualified tutors are invited to formal training and onboarding with senior company personnel--all work is individualized and done online. Tutor candidates must sign the employee covenants to continue with training.
3. **Setting Students Up for Success** - 1.0 hour session to review new student best tutoring practices to maximize success. Delivered by senior instructor.
4. **Anki and Calendar** - 1.0 hour session to review best practices for flash card and study schedule creation. Delivered by senior instructor.
5. **Tutor Session Shadowing** - 1.5-2.0 hour session. Sit in on live tutoring session delivered by a senior instructor. Debrief after the session.
6. **Simulated Tutor Session** - 1.5-2.5 hour session to work through a multi-part challenge case with feedback and revision.
7. **Tutor Policies and Conduct** - 1.0-1.5 hour session to review the highest yield points of tutoring policies. Tutor candidates must read and sign the tutoring policies and conduct agreement to successfully complete training.

Additional training sessions will be scheduled as needed on an individual basis.

EVALUATION

Once hired, a tutor's status with the company will be determined by several factors:

- Student feedback and results
- Demonstration of devotion to student success and satisfaction
- Reliability of communication and collaboration with management
- Openness to feedback and mentorship from company leaders
- Adherence to company processes and procedures
- Overall contribution to the Elite Medical Prep team

1-on-1 Tutoring Best Practices



1-on-1 Tutoring

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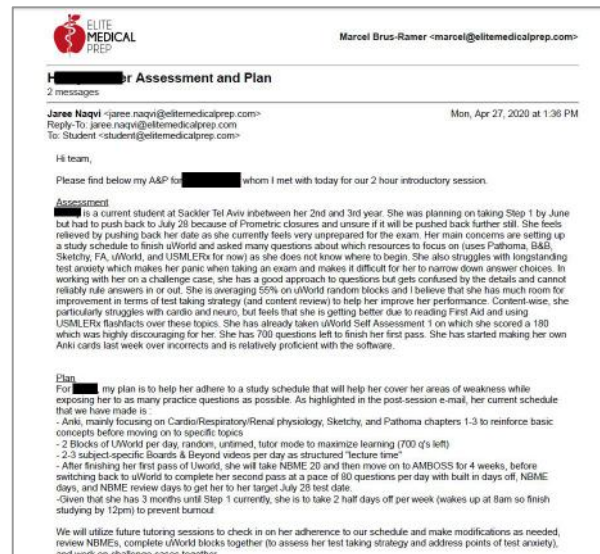
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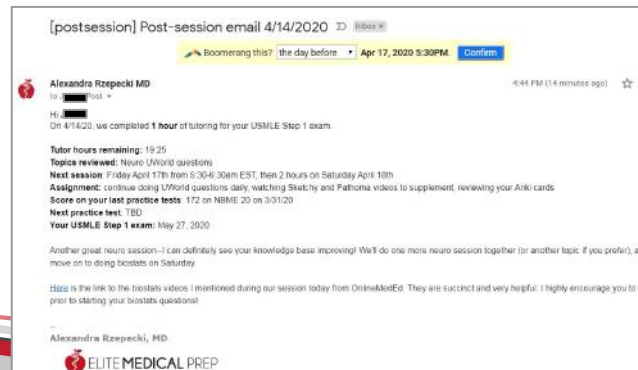
TRACKING

- Detailed tutor evaluation (initial)
- Post-session emails for every session
- Documents material coverage, HW, emerging issues

H&P



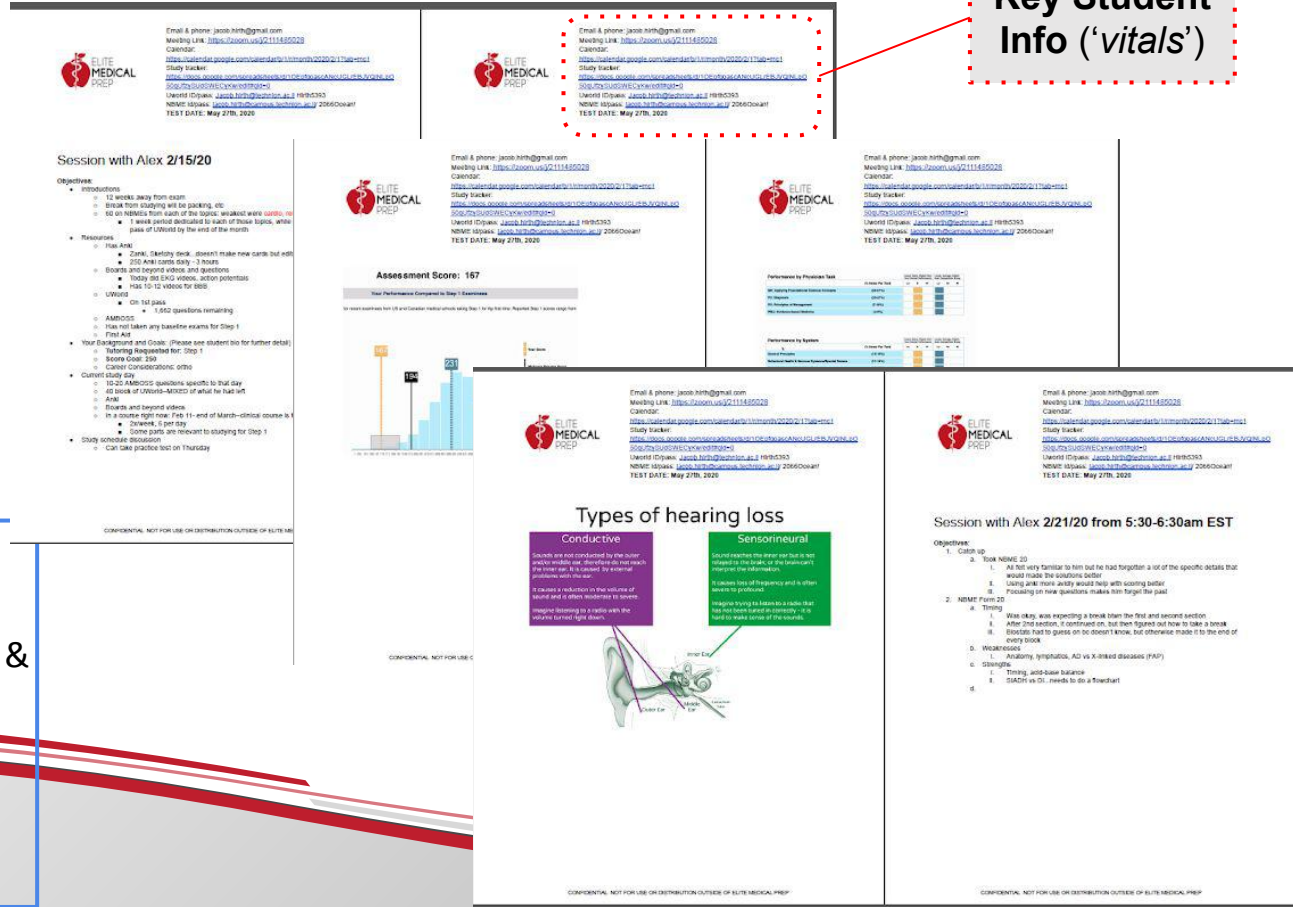
S-O-A-P Note Format



Key Student Info ('vitals')

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- Online notes & worksheet
 - Available to student, tutor & quality control
- High quality materials specialized for tutoring



1-on-1 Tutoring Best Practices



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TUTORING/TEACHING CONTENT

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Session with Alex 2/15/20

Objectives:

- **Introductions**
 - 12 weeks away from exam
 - Break from studying and no parking, etc.
 - Set on timeline from start of the topic, what was covered, etc.
 - 1 week period dedicated to each of those topics, when pass of USMLE by the end of the month
- **Resources**
 - Has AHA
 - Core: Cardiology deck, doesn't make new cards but will
 - 200 AHA cards daily - 3 hours
 - Books and legend videos, and questions
 - Today the EKG videos, action potentials
 - Has 10-12 videos for EKG
 - USMLE
 - 1,562 questions remaining
 - Has not taken any baseline exams for Step 1
 - First AHA
- **Your Background and Goals** (Please see student bio for further detail)
 - Tutoring Requested
 - Score Goal: 250
 - Current study day
 - 10-20 minutes
 - 40 block of USMLE
 - Are
 - Books and legend
 - Is a course right
 - To week, 1
 - Study schedule discussion
 - Can see practice

Assessment Score: 157

For recent exam only from USMLE and Question Medical content only. Step 1: 157, Step 2: 157, Step 3: 157, Step 4: 157, Step 5: 157

Performance by Provision Test

Test	Score	Target
Step 1	157	250
Step 2	157	250
Step 3	157	250
Step 4	157	250
Step 5	157	250

Performance by System

System	Score	Target
Step 1	157	250
Step 2	157	250
Step 3	157	250
Step 4	157	250
Step 5	157	250

USMLE Practice Question

A 26 year old woman is brought to the emergency department by her roommate because of vomiting for 4 hours. She also has a 2 day history of fatigue and dizziness on standing. She has had pain with eating for 3 months; treatment with over-the-counter antacids has provided some relief. The vital signs of the patient are T 35.6C (96F), pulse 110/min, and blood pressure 80/55 mm Hg. Physical examination shows marked pallor. Laboratory studies show a hemoglobin concentration of 6 g/dL and hematocrit of 18%. A chest x-ray is obtained (shown) and a pulmonary catheter is inserted and laboratory values are measured. Which of the following sets of findings is most consistent with the patient's condition?

	Cardiac Output	Pulmonary capillary wedge pressure	Systemic vascular resistance
A)	↑	↓	↓
B)	↓	no change	↑
C)	↓	↑	↑
D)	↓	↓	↑
E)	no change	no change	↑
F)	↑	↑	↓

AP ERECT

20 from 5:30-6:30am EST

In but he had forgotten a lot of the specific details that would help with coding better. This makes him forget the past.

Is a break from the first and second section. Trust on, but then figured out how to take a break. It doesn't know, but otherwise made it to the end of the first part.

2 vs X-ray disease (PAP)

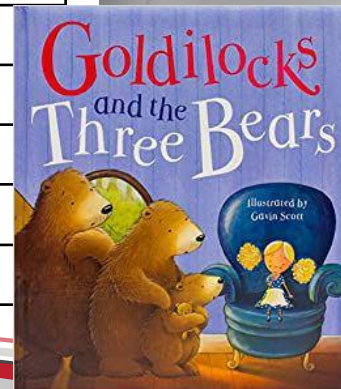
On a first part

USMLE Practice Question

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Which of the following sets of findings is most consistent with the patient's condition?

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ON-BOARDING

- Detailed consultation prior to tutoring
- Efficient student-tutor pairing process
- Trial session
- Student feedback early & late

TRACKING

- Post-session emails to document
- Detailed tutor evaluation (initial)

TUTORING/TEACHING CONTENT

- Online notes & worksheet
- High quality materials specialized for tutoring
- Session length 1.5 hr - 2.5 hr



Small Group Based Medical Education



Small Group Tutoring

Elite Medical Prep runs an integrated small group tutoring program for institutions that has produced outstanding results at *Technion Medical School*.



Small group tutoring is effective

- Currently completed 3rd year of structured small group tutoring
- Improved on-time test taking. Increased average score
- Adaptations: Started small groups earlier
 - beginning of 2nd year
 - utilized flipped classroom concept

amee 2019
10th Annual Meeting, April 10-12, 2019, San Francisco, CA

ABSTRACT BOOK

#10JJ Poster - Teaching and Learning 2

10JJ12 (89)

Date of Presentation: Wednesday, 28 August 2019

Time of Session: 08:30-10:15

Location of Presentation: Hall/Foyer F, Level 0

Importance of Small-Group Tutoring for Improved Step 1 Performance

AUTHOR(S):

- Marcel Brus-Ramer, Tel Aviv University, Israel (Presenter)
- Kenneth Rubin, Elite Medical Prep, USA
- Nina Kagan, Tel Aviv University, Israel

ABSTRACT

Background: Preparing graduating students for Step 1 of the USMLE is an area of increasing interest for medical schools. A significant concern is the percentage of students not taking Step 1 on time, passing with weak scores, or failing. We decided to research the effectiveness of small-group online tutoring by experienced, trained USMLE tutors.

Summary of Work: In 2017-18, Elite Medical Prep LLC (EMP, www.elitemedicalprep.com) created an integrated Step 1 program, taught at the Technion - Israel Institute of Technology. An optional small group component was offered so students could work online with an experienced USMLE tutor. These were 5 two-hour sessions over a 2-3 month period. Small group tutors employed a structured methodology based on the following:



Small Group Best Practices

- Technically more challenging for the tutor
 - Consider starting tutors w/1-on-1 tutoring
- Use of structured materials is strongly recommended
- Optimal group size is between 3 to 5 students
- Small group meeting time:
 - 2 to 2.5 hr in length per session
 - Better used **BEFORE** start of dedicated USMLE study
 - Recommend **10 to 20 hr** of total group tutoring time



Technion: Experiences with Lectures & Small Group



- Technion American Medical School
 - ◆ Small US style med school (~35 students/year) embedded w/in a major Israeli medical school & university
 - ◆ Many students w/background of weak MCAT scores
 - ◆ **Problems:** students delaying Step 1; some failing Step 1
- EMP Intervention was small group w/linked introductory lectures
 - ◆ Small groups run by experienced tutors
- Subsequent years: earlier start of small group intervention was requested.



Q&A and Open Discussion

- Challenges encountered with tutor management/training
 - Uneven tutor performance
 - Tutor turnover
 -
- Challenges with student management
 - Students needing/wanting more tutoring
 - Student under-utilizing tutoring

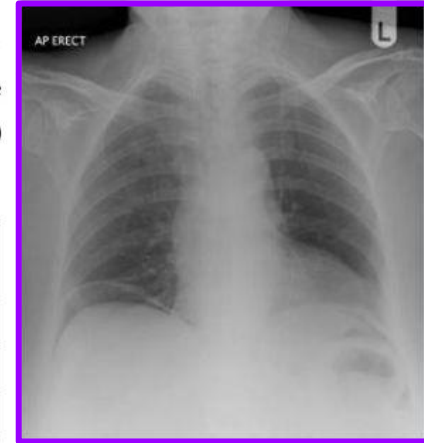
Multiple Challenges in One Question

Multi-step question that assumes understanding of the diagnosis

Clinical vignette with multiple lines of clinical history and data

Radiographic imaging

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Testing application of core physiology concepts

	Cardiac Output	Pulmonary capillary wedge pressure	Systemic vascular resistance
A)	↑	↓	↓
B)	↓	no change	↑
C)	↓	↑	↑
D)	↓	↓	↑
E)	no change	no change	↑
F)	↑	↑	↓

Answers in table format with up/down answer choices

Live Polling

Live Polling at:

www.pollev.com/smartland010

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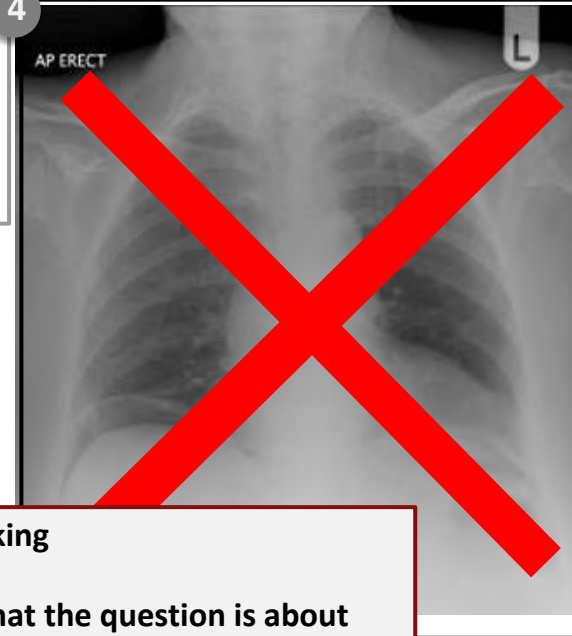
USMLE Style Questions:

From great challenges come stronger learning

- Good use of USMLE Questions can lead to better retention of material and lead to great lessons
- USMLE Step 1 questions pose significant cognitive challenges to students but also can help set learning expectations
- Questions can also demonstrate the context and application of the material students are learning
 - Lectures and small groups/PBL, etc.
- Integrating USMLE Questions into teaching helps maintain student engagement.

USMLE Practice Question Breakdown

- 3 A 26 year old woman is brought to the emergency department by her roommate because of vomiting for 4 hours. She also has a 2 day history of fatigue and dizziness on standing. She has had pain with eating for 3 months; treatment with over-the-counter antacids has provided some relief. The vital signs of the patient are T 35.6C (96F), pulse 110/min, and blood pressure 80/55 mm Hg. Physical examination shows marked pallor. Laboratory studies show a hemoglobin concentration of 6 g/dL and hematocrit of 18%. A chest x-ray is obtained (shown) and a pulmonary catheter is inserted and laboratory values are measured.
- 4 Which of the following sets of findings is most consistent with the patient's condition?



2

	Cardiac Output	Pulmonary capillary wedge pressure	Systemic vascular resistance
A)	↑	↓	↓
B)	↓		
C)	↓		
D)	↓		
E)	no change		

- 1 The question stem – tells you what the question is asking
- 2 The answer choices – gives you some context as to what the question is about
- 3 The prompt – highlight three important pieces of information; summarize in your own words the key information as it's given; ensure that the answer matches ALL of the information given, not just some
- 4 Labs and images – EVAL the labs. IGNORE the images.

EMP's SUGGESTED ORDER.
There is no one right way to do this.

Part B

A patient in the early stages of hemorrhagic shock is most likely to have which of the following?

- A) Decreased myocardial contractility
- B) Decreased renal sympathetic nerve activity
- C) Flushing due to cutaneous vasodilation
- D) Increased delivery of sodium to the macula densa
- E) Increased renal blood flow due to sympathetic activation
- F) Increased ventilatory rate due to tissue ischemia**
- G) Sweating due to parasympathetic stimulation of sweat glands

Part C

In a patient who is hemorrhaging, which of the following is an adaptive response that helps to maintain mean arterial pressure?

- A) Decreased end-diastolic volume
- B) Increased end-systolic volume
- C) Increased venous compliance
- D) Inhibition of secretion of ADH (vasopressin)
- E) A fluid shift from interstitial to vascular compartments
- F) Release of atrial natriuretic peptide

Part D

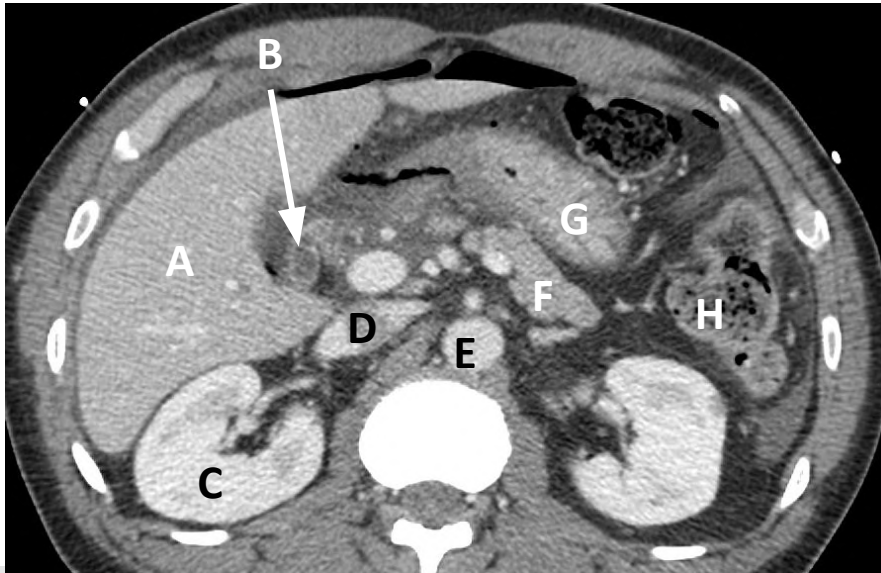
In a patient who is hemorrhaging, which of the following changes in body fluid volume or osmolality is most likely seen?

	Intracellular		Extracellular	
	Volume	Osmolality	Volume	Osmolality
A)	No change	No change	↓	No change
B)	↓	↑	↓	↑
C)	↑	↓	↓	↓
D)	No change	No change	↑	No change
E)	↓	↑	↑	↑
F)	↓	↓	↑	↓

Part E

After the patient's blood pressure and volume status are stabilized, she is scheduled to undergo surgery to treat the likely source of hypovolemia and free intra-abdominal air. Immediately prior to going to the operating room, a CT of the abdomen and pelvis is performed to assist with surgical planning. Which of the following structures on the axial CT image through the abdomen is the likely source of the free air and associated hypovolemia?

- A.
- B.
- C.
- D.
- E.
- F.
- G.



RECALL

A 26 year old woman is brought to the emergency department by her roommate because of vomiting for 4 hours. She also has a 2 day history of fatigue and dizziness on standing. She has had severe heartburn for 3 months; treatment with over-the-counter antacids has provided some relief.

Thank you

Questions?

marcel@elitemedicalprep.com

ken@elitemedicalprep.com



Amy Petty, PhD, MD Candidate; \$235/hr

- Phi Beta Kappa from Winthrop University, B.S. with Honors, Chemistry and Biology Double-Major, 2012
- Matriculated in Duke Medical Scientist Training Program 2012; Recently defended PhD in molecular cancer biology/immunology
- Scored: 264 on USMLE Step 1
- Achieved honors in all clinical rotations
- Years of experience as TA, mentor, and tutor in premedical and medical settings
- Published academic author

