

1 A 24 year -old man faith type diaf›etes mellitus ›s brougnt to the emergency depar0nenl because of a J-day history of nausea, vc<riitirq. and abdominal pawn He  3 day tiistor y of dlerrNge or›d decreased appetite He has not been insulin in the past 1 ' › deys His tempera\ur e is 3T"C (90 6" F ), pulse is \ 20.’min end Dlood pressure is 100.’70 mrrl Hg Abdom nal examinat on shows m Id diffuse tenderness Bowel saunas are dwreased Has serum glucose concentration ›s 650 rng dL Urine studies show the presence of ketones Whah of the following raspiralory patterns is most likely in this patient†

O A ) Deep and rapt

B ) Deep and slow

C ) Shallow end rapid

D › Shallow end slow

E › Tachypneu ulterna\ing aft epr›ea



man is found \o have a MonoCytes from his bled are cultured with T bo ag Eom W The cultured macrophages are





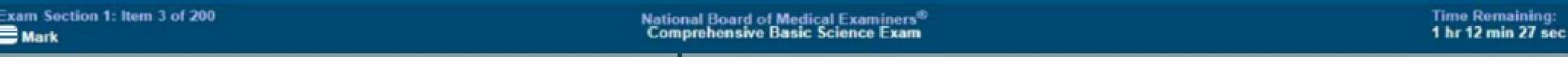
‹esponsibIe for this difference in cytotoxiCity\*

e B ) Interleukin-8 ‹IL-8›

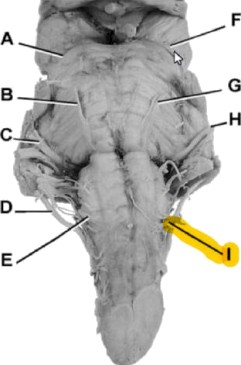
C ) Nitric oxide

D › Platelet-derived growth factoi

L fumor necrosis factor-a



3 A 23-yeer -old men hes mmess atrophy ad fasc icuTet s oT Th wh of The ToTIow›y crenal mrnas labeled on t& pN&oqtaqh oT the ventral surface of The hon seem is most filly To be &m eds



D .i Cl D) ET  G) I-‹ › 



R’ A 30-year-old man c] mes to the oftice because cf a 6- year history ot progress›ve ta\igue that has oecome increasingly se e e dunrtg the past 4 months be also has had  pain. and dilficu ty falling asleep during tnis iecent period He can an ecute episode oi b: i ry vis on increased se vat on. and di6frhea =h4e sew ng in the Po s an Cult region 10 years ago be curren\iy takes no med›cat:ons appears exhausted Vital signs are within norrr\al lim›ts Physical examination shows a meII-healed scar on the lower iefl extrem \y from a miiilary service. related in|ury Neurologic exam nation shavs no abr›orma lies Tile most i keiy cause of these f›r›dings is previous exposure to a toxic agent

ac l›vated by which of the following enzyrnes+

A \ Caspase C

B › cytochrome P45£'

C › Endonuctease

D › Na-=K - ATPase

E Tnose-phosphate isomorase



5 A 32-yeayold man who was recently diagnoseo with nonobstwctive azcosperm›a corns to the physic an for a follow-up examination He is a candidate lor intracytop'asmic sperm

‹njecton SCSI› This pal›ent”s garr›etes must have completed which of the folio›v!ng moc•tic phases before ICSI?

A › Anaphase I

B › Anaphase ii

ñ › 5\etaphase

D › X\etapnase i

E ) Prophase \

F › Prophase iI

G I lelophase \



 'A 39-year-o1d woman gravda 1 para 1 comos to tho physician because of a 1-month history o ” She delivered a healthy f 'maiE\* now0otn 3 months ago @regnanc y and delivery we'e unco‹npIic ated He• pulse ‹s 72.min and blood pressufe ›s 110•70 mm’f1§ nationshows jugular venoms pulsations io the angie of the law There is 1+ ankle edema Bilate al trackles are heard halhvay up the lung Reids Cardiac examination shows a d›ffuse point ol maximal impulse and an audible St there are no murmurs \Vhicri of the foiio«ing is the most I:ke\y diagnosis\*

A :' Cardiomy&athy

B ; Hypothyroid›sm

C .› Iron de5cienc y anemia

1. Nephiol c sy d o‹ne

E /' Venous thromooemboiism



1. An 84 -year-old roman comes to the phySic›an becauS8 Of d 1 month h story of prcxgessn/a sb0+mess of breath w th mild exeri:on fatigue and intolerance to coid S1e has been

Sleeping in a ‹ecker to avoid feeling as if she weie drain ng She was healed with: \o‹ breast cancer 10 years ago Iher pulag lgQ $!g ressure is

130.60 mm Hq Physical axan›ination snows moderate pret›biai eclema A chest x ay sr a xs mo‹Je ate congestion In all lung Jiei0s In j{¥B Alex the JDBC

treatment of lh›s patient ‹vnulrl have 4s pi imary lnr us nf arlion in which ref lhe following rqgir›os of lhe nephron 8 ” ” ”

B \ Co-iect›ng ducts

C i Oescending look of H0nIe

D i Distal convoluted lubuie

E i Proxima’ ronvr›IuIert Iubii‹e '



1. A 26-year-old woman wñh sevei es to the olfica for s follow-up examination five days ago sha begen treatment witn ora er temperalute is

37 0•C (98 G•F) pulse is 70’rnin, resp ons ere 16 min 8nd biood p+essure is 110/80 mm Hg PhyS›ca1 exeminelion shpws scent scattered wheeZeS on inSpiret›on in botr› bases Which of Ihe folk›wing sets of findings is most #keIy in this patient today

**Arachidonic Acid** ProaMglandin Et **Prostaglandin Hi**

* 1. Increased increased Increased
  2. Increased increased Oecreesed

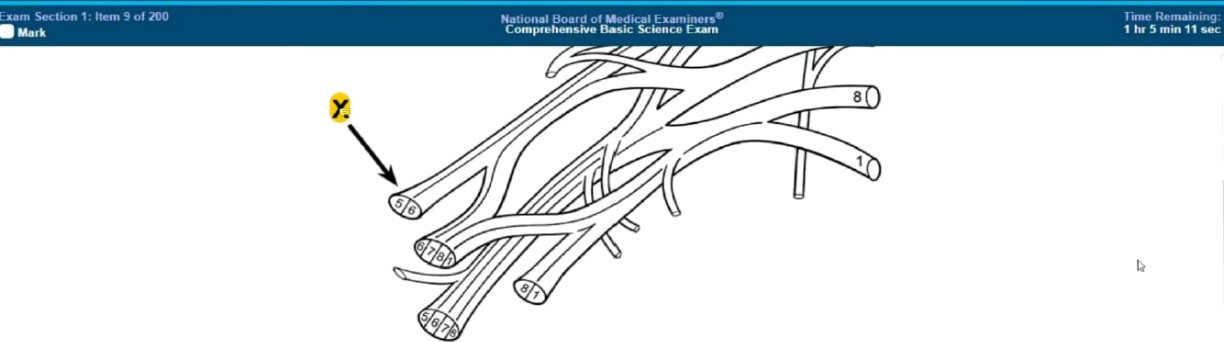
C› lr<reased decreased decreased

1. Decreased ›ncreasad increased
2. Decreased increased increased!
3. 

LeuBo$denwC,

dacreased increased increased increased decreased





1. A 19-year-old men is br‹x›gh} }o the emergency depertmerit 20 m›nu\es after he susteined e s\eb woun0 to the right upper arm dunng e bar fight Physical exarninetipn shows a 2-cm steb wound over the an\er›or aspect of the shoulder just medial to The coraco›d pr‹xess Sensation to p›nprick is absent over tho lateral aspect of the right forearm The physician suspects en inyury \o the wrve na›ceted by the X in the diagrem shown As a result of lhis injury. whlch of the following moverngnls will most likely be impaired in this paI›ent\*



B ) Shoulder 8ddwt on

C ) Shoulder external rotation

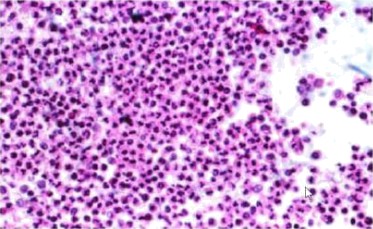
D › ShOU i6r **nlern8l** rOt8 ion

E › Forearm pronation

F) Forearmsupnanon



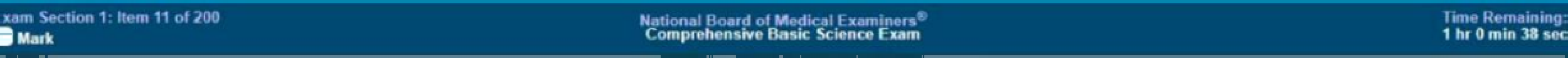


J0 A 75-year-old man copies to the physicten because of a 2 -week history of fever ntermitten\ chills and a cough prod•chve of th<L gi4en sputum his te‹npeietuie s 39 4‘C f1O3’F) Prays cal exammai on snows dacreeseo b earn› sounds arid dullness to percussion in the ngh\ lower lobe of the lung A chest x-rap shows consoloation in the right lower love and a 3-cm round cev ta lesion containing an em-Quid Ieyel and nan ng a thick. shaggy modular well A photomicrograph of the center of the lesion is shown Which of lhe following mechanisms is tea most likely cause of the process in th s pet end

A I Abnormal proliferation of cells tnat oxcoeds vascular supply

B ) Aggregation of cells involved in fype tdelayed)hypersensTvity reaction C › lnfiltraiion oi cells involved in type I «mit›ediate) hypeisensi\iv‹ty iaaclion U \ Infio of cells that release protease enzymes and free radicals

E › ng‹o›vth of cells ‹espond›ng to fbroblast growth factor



1. A 59-year-old man cms @ the physman for a routine exemina\iori Rectal exerninatio n shows e 4-mm nipple-like s»ooth round mass on lop of a mucosal fold Histologic examination of the resented mass st›ows weli formed glands and crypls lined by non neoplastic mature goblet and absorptive cells. Siurfaca cells are holded into e serrated epithefiel appearance Which pf the following is the mps! IikeIy 0iegnosis0

a › Calc noma

B ) Hamartoma

C › Hyrernlas•c Wn

D PeutZ-Jaghers syndrome

E ) Tubular aden‹xna

F ) Villous aden¢›ma \*



1. A 27 old woman w:th a 3-rrionth history of headaches and blurred vision is brought to the phys<ian for a fa-lIow-up examination She does not smoke. drink or use illegal

drug Her temperature is 37'C ‹98 6“F›, and blood pressure is 106.'142 mm Hg One week ago, he‹ bIo‹x1 pressure was 185.’132 mm Hg Phys<al examination shows papilledema

end abdominal br ules Which of the following processes is {he most likely cause of **th hypor1ens›on+**

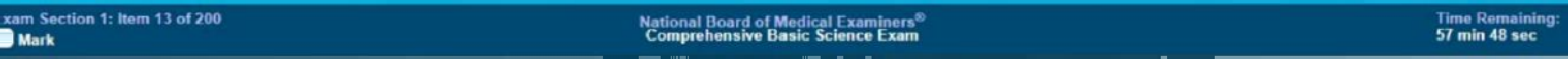
* 1. Abdominal aortic eneurysm
  2. Abdominal aortic occluson

C › Atheroscierosñ of the renal artery

O D \ Fibromusculat hyperplasia of Itie renew artery

1. 5ter›osis of the fanal vein

P- ) Thrombosis of the renal vein



1. A 40-year old rr›an develops n **eiee, ¥0m0slg,** f¥$ 2 days after undergoing en oiitpa\ar¥ surgmal procedure Ha appears very ill and confused He temperature is 39 5•C f103 1•F). pulse iS 110’min and regular end blood pressure is 130.'78 mm Hg Physical examinaflon shows warm extremities Bk›od cultured gFOW B QFBW- BtJVB bacterium Wh ch of the following mechanlsrrjs best expains this patienl's relatively normal blood pras sure\*

A) Cered‹ai vasoconstriction

B} Coronary vasodila\ion

c › Cutawous vesod lation

D l Reabsorpt›on of interstitial Ouid

O E i Splanchn‹c va ons cton

