

2025 - 2D - MDT4043 - Eksamen 1
Eksamensdato: 2025-05-15

1

You are visited at the doctor's surgery by a 43-year-old woman. Six weeks ago, she gave birth to a child who has transposition of the great arteries in the heart. At a pregnancy length of 13+0 (based on the ultrasound due date), she took three to four ibuprofen tablets daily for about a week to relieve joint pain. She has read that ibuprofen has been linked to heart defects in children and is now very worried that the child's condition might be caused by the medication intake. She wants to find out if this is the case.

What is the most correct response to give this woman?

- A It is likely that the child's condition is caused by ibuprofen.
 - B You are unable to provide her with an answer.
 - C It is conceivable that the child's condition is caused by ibuprofen.
 - D It is very unlikely that the child's condition is caused by ibuprofen.
-

000016825e0095e575

2

A previously healthy 48-year-old woman visits you at the doctor's surgery complaining of up to 10–15 bothersome hot flashes per day over the past year. She is seeking treatment for this. Three years ago, she had a hormonal IUD inserted due to irregular and heavy menstrual bleeding. That problem has since been resolved and her last period occurred one year ago.

What is the most appropriate treatment to offer her?

- A Systemic progesterone
 - B Local vaginal treatment with oestrogen
 - C Systemic oestrogen
 - D Systemic oestrogen and progesterone
-

000016825e0095e575

3

A 25-year-old woman visits you at the GP's surgery because she needs contraception. She states that she absolutely does not want children at this time. She previously had a broken ankle and subsequently developed a deep vein thrombosis. She is otherwise healthy.

What would be the best contraceptive method to recommend to her?

- A Condoms
 - B Hormonal intrauterine device
 - C Combined contraceptive pill
 - D Contraceptive patch
-

000016825e0095e575

4

A patient who has recently had a heart attack has been started on medication for secondary prevention, including acetylsalicylic acid, clopidogrel, a beta-blocker, an ACE inhibitor, and a statin. At a follow-up appointment a few weeks later, you notice from blood tests that serum creatinine has increased by approximately 25% compared to previous levels, and the GFR has decreased correspondingly.

Which medication is most likely related to the change in creatinine and GFR?

- A ACE inhibitor
 - B Statin
 - C Beta-blocker
 - D Acetylsalicylic acid
-

000016825e0095e575

5

Glucocorticoids are commonly used medications for a variety of conditions. What is the most accurate statement about this drug group?

- A They primarily have an anti-inflammatory effect by inhibiting the synthesis of prostaglandins through inhibition of the COX-1 enzyme
 - B They primarily work by binding to α -adrenergic receptors in target organs, thus having a primary effect on the cardiovascular system
 - C They increase insulin production in the pancreas and increase the risk of hypoglycemia
 - D Long-term use can lead to reduced bone mineral density and an increased risk of osteoporosis
-

000016825e0095e575

6

Morphine is normally the first choice for patients with pain requiring opioid treatment. In patients with renal failure however, use of morphine can pose a problem.

What is the most important cause of this?

- A** Morphine is nephrotoxic and can worsen kidney failure
 - B** Morphine metabolism is reduced in renal failure
 - C** The active morphine metabolite morphine-6-glucuronide can accumulate in renal failure
 - D** Secretion of morphine in the kidneys is reduced in renal failure
-

000016825e0095e575

7

You are attending to a 45-year-old man in A&E who was admitted with a suspected respiratory tract infection. He has rheumatoid arthritis and was started on a tumour necrosis factor (TNF) inhibitor six months ago. Over the last 5 days, he has had shortness of breath, a cough and a fever. A chest X-ray shows no infiltrates.

What type of examination is the most important to perform now?

- A** CT of the pulmonary arteries to check for pulmonary embolism
 - B** Ultrasound of the urinary system to check for a urinary tract infection
 - C** High resolution CT (HRCT) of the chest to check for lung infections
 - D** A bronchoscopy to detect opportunistic microbes
-

000016825e0095e575

8

What type of vaccine is usually recommended for immunosuppressed patients?

- A** Live vaccines.
 - B** Inactivated or killed vaccines.
 - C** Vaccines that only protect against bacterial infections.
 - D** Vaccines that are administered only once during a lifetime.
-

000016825e0095e575

9

What is a HIV combo test?

- A** A test that detects the presence of both HIV and hepatitis B virus.
 - B** A test used to diagnose AIDS.
 - C** A test that measures the number of copies of HIV in the blood.
 - D** A test that detects both HIV-1 and HIV-2 antibodies, as well as the HIV antigen p24.
-

000016825e0095e575

10

What is post-exposure prophylaxis (PEP) in relation to HIV?

- A** A long-term treatment to reduce the risk of becoming infected with HIV later in life.
 - B** A treatment given after a person may have been exposed to HIV, to prevent infection.
 - C** A treatment given to individuals with symptoms of acute HIV infection.
 - D** A vaccine given after a possible exposure to HIV.
-

000016825e0095e575

11

When should HIV testing be performed on a patient?

- A** Only when the patient discloses having purchased sexual services
 - B** Only when the patient requests it.
 - C** Only if the patient has severe symptoms of opportunistic infections (AIDS).
 - D** When the patient belongs to a high-risk group, or when symptoms suggestive of HIV infection are present.
-

000016825e0095e575

12

What is the most common treatment for infections caused by Rickettsia?

- A Antifungal agents such as voriconazole.
 - B Anti-inflammatory drugs such as ibuprofen.
 - C Antiviral drugs such as oseltamivir.
 - D Antibiotic agents such as tetracycline or doxycycline.
-

000016825e0095e575

13

What is the first-line treatment for schistosomiasis (which can cause Katayama fever)?

- A Antiparasitic drugs such as praziquantel
 - B Antiviral medication such as acyclovir.
 - C Antibiotics such as penicillin.
 - D Corticosteroids to reduce inflammation.
-

000016825e0095e575

14

What is the standard treatment for typhoid fever?

- A Antibiotics such as ceftriaxone or azithromycin.
 - B Antipyretics and intravenous fluids without further measures.
 - C Surgical removal of infected tissue.
 - D Antiviral medication such as oseltamivir.
-

000016825e0095e575

15

What are the most common symptoms of dengue fever?

- A Vomiting and bloody diarrhoea.
 - B Lower back pain and frequent urination.
 - C Wheezing and coughing.
 - D Skin rash and high temperature.
-

000016825e0095e575

16

A 69-year-old woman visits you as a resident doctor to take a routine cervical cytology test as part of the screening programme. You find a smooth polyp in the cervical os. You perform the cytology test and submit for analysis.

What is it preferable to do now?

- A You refer the patient for a cone biopsy/cervical amputation
 - B You reassure the patient and tell her that the cervix appears normal upon examination
 - C You refer the patient to the cancer care pathway for gynecological malignancies
 - D You refer the patient to a general gynaecologist for removal
-

000016825e0095e575

17

An 18-year-old woman wants genital labiaplasty, she says that it is uncomfortable when she is doing spinning exercise. In addition, she has seen that the left labium minus is slightly longer than the right (1.5 versus 2 cm). She thinks this is embarrassing in relation to her boyfriend.

You are her GP. What is the best thing to do here?

- A Refer to gynaecologist for labiaplasty
 - B You advise her to stop spinning exercise, but no labiaplasty
 - C Explain that this is normal anatomy and do not recommend a labiaplasty
 - D Remove a bit of the left labium minus yourself
-

000016825e0095e575

18

How is it possible for women with Turner syndrome to become pregnant?

- A Women with Turner syndrome can become pregnant through egg donation
 - B Women with Turner syndrome can become pregnant through uterine transplantation
 - C Women with Turner syndrome can become pregnant with hormone therapy (oestrogen)
 - D Women with Turner syndrome cannot become pregnant
-

000016825e0095e575

19

A 59-year-old woman, previously healthy, comes to you as her general practitioner because she has experienced vaginal bleeding for a few weeks. You measure her haemoglobin (Hb) to be around 8. She underwent a cervical screening test a year ago, which was normal.

She does not take any regular medications.

What is the most correct course of action now?

- A Perform a gynaecological examination and refer to a gynaecologist for a vaginal ultrasound
 - B Perform a gynaecological examination and write a prescription for estradiol vaginal suppositories (Vagifem®)
 - C Perform a gynaecological examination with a cervical cytology
 - D Refer the patient to the gynaecology department, pathway for gynaecological cancer
-

000016825e0095e575

20

You are a GP and has a woman in for a check-up who is 32 weeks pregnant and on her third pregnancy. You finds a large SF measurement that deviates from previous measurements. You refer her for an ultrasound for foetal measurements, and are informed that the foetus has an estimated growth deviation of +30% and there is polyhydramnios. The ultrasound department asks you to perform an oral glucose tolerance test.

The results are: Fasting glucose: 5.5 mmol/L (ref: <5.3 mmol/L), 2-hour glucose value: 11.1 mmol/L (ref: <9.0 mmol/L)

What is the most correct way of managing this situation?

- A Take daily measurements of blood sugar for the next few weeks.
 - B Refer to a delivery consultation
 - C Refer to an endocrinologist for initiation of insulin
 - D Provide diet and lifestyle guidance
-

000016825e0095e575

21

Groups of specialists in Norway have recently changed the procedures for determining pregnancy due dates (May 2024).

How is the due date determined in Norway as of now?

- A Women with a normal BMI get their due date determined by ultrasound in weeks 11-14. Women with a high BMI (poorer imaging on ultrasound) receive their due date determined by ultrasound in week 19
 - B All women get their due date determined by ultrasound between weeks 11-14
 - C Women with assisted fertilization use the due date based on in vitro fertilisation (IVF). All others receive a due date based on ultrasound between weeks 11-14
 - D Women with a confirmed last menstrual period receive a due date determined by ultrasound in weeks 11-14. Women with an uncertain last menstrual period receive a due date at week 19, depending on the growth of the foetus between weeks 11-14 and week 19.
-

000016825e0095e575

22

"The cause" of preeclampsia is placental dysfunction, which leads to secondary maternal consequences such as hypertension, proteinuria, low platelet count, etc. Biomarkers (such as placental growth factor = PIGF) and blood flow in the uterine arteries (UtA) reflect placental dysfunction and can be measured in the first trimester.

What is the most typical finding in the first trimester in women at high risk for preeclampsia?

- A** High PIGF and low UtA resistance
 - B** High PIGF and high UtA resistance
 - C** Low PIGF and high UtA resistance
 - D** Low PIGF and low UtA resistance
-

000016825e0095e575

23

Which cells cover the inner surface of the spiral arteries?

- A** Trophoblasts
 - B** Endothelial cells
 - C** Syncytiotrophoblasts
 - D** Chorion cells
-

000016825e0095e575

24

What physiological process occurs in the pancreas during a normal pregnancy?

- A** The β -cells increase both in size and number
 - B** The β -cells increase in number
 - C** The β -cells increase in size
 - D** The β -cells increase in size, but produce less insulin
-

000016825e0095e575

25

Intrauterine growth restriction (IUGR) refers to inadequate growth of a fetus during pregnancy. Small for gestational age (SGA) is defined as growth below the 10th percentile compared to all fetuses at the same gestational age.

Which statement is correct about SGA and IUGR babies?

- A** IUGR babies can be smaller, larger, or the same size as average-sized babies at term
 - B** IUGR and SGA are two different ways of describing a baby that weighs below average at term
 - C** SGA babies are most often characterised by a low abdominal measurement
 - D** IUGR babies are usually smaller than SGA babies at term
-

000016825e0095e575

26

Infections during pregnancy can cause complications for both the mother and the fetus.

What is most correct about infection control advice for pregnant women?

- A** Recommend good hand and coughing hygiene to reduce the risk of toxoplasmosis
 - B** Recommend post-exposure prophylaxis for 3-5 days after exposure to parvovirus B19 infection for pregnant women close to their term date
 - C** Recommend good kitchen hygiene and the use of gloves during gardening to reduce the risk of listeriosis
 - D** Avoid unpasteurised milk, cured fish, and raw meat products to reduce the risk of listeriosis
-

000016825e0095e575

27

Postpartum hemorrhage is a serious childbirth complication.
Which of the following factors increases the risk of postpartum hemorrhage the most?

- A** Primiparous mothers and previous ectopic pregnancy
 - B** Multiple pregnancy and oligohydramnios
 - C** Uterine fibroids and prolonged labor
 - D** Rapid labor and anemia
-

000016825e0095e575

28

Changes in hormone levels are associated with various pregnancy symptoms and ailments.
Which statement is most correct about hormones during pregnancy?

- A** Melanocyte-stimulating hormone decreases during pregnancy
 - B** Increased progesterone levels cause contraction of smooth muscle, leading to constipation and acid reflux, among other symptoms
 - C** Increased estrogen levels can stimulate growth of fibroids
 - D** Low levels of beta-HCG are associated with hyperemesis gravidarum
-

000016825e0095e575

29

A 26-year-old woman who is pregnant for the first time visits you as a substitute GP. She is 8 weeks pregnant and is experiencing increasing nausea and vomiting. You assess the PUQE (Pregnancy-Unique Quantification of Emesis and Nausea) score, which is 10 (indicating moderate pregnancy nausea) (score range 1 - 15).
What is the most appropriate action in this case?

- A** Start with an antihistamine and vitamin B6 (pyridoxine)
 - B** Refer to the hospital for intravenous fluid therapy
 - C** Start with ondansetron (5HT3 antagonist) and vitamin B1 (thiamine).
 - D** Initially recommend small, frequent meals and wait to start antiemetic treatment until the next check-up appointment
-

000016825e0095e575

30

You are the GP for a 29-year old woman who has been for a routine cervical cytology test. You have found only normal findings at the gynaecological examination. You have now got the results of the cervical cytology test which reveal "high grade squamous intraepithelial lesion" (HSIL).
What is the most correct next step?

- A** Make an appointment for follow up with cervical cytology in 3 years
 - B** Make an appointment for follow up cervical cytology in 6 months
 - C** Refer for histological sampling from the cervix
 - D** Make an appointment for follow up with HPV test within 1 month
-

000016825e0095e575

31

You request a semen sample from the man in a couple being evaluated for persistent infertility.
Which three essential parameters in the laboratory report are the most important?

- A** Sperm concentration, proportion of progressively motile sperm, and proportion of sperm with DNA damage
 - B** Volume, sperm concentration, and proportion of sperm with DNA damage
 - C** Sperm concentration, total sperm motility, and proportion of sperm with DNA damage
 - D** Volume, sperm concentration, and proportion of progressively motile sperm
-

000016825e0095e575

32

A 38-year-old woman visits you as her GP due to gradually developing irregular and prolonged bleeding as well as frequent urination over the past six months. She feels tired and dizzy. She has given birth to three children, the youngest of whom is 10 years old, and she is not using any contraception.

On gynaecological examination, you find a large pelvic mass. On inspection, the cervix appears normal.

Hemoglobin is 9.9 (ref 11.7–15.3). MCV and MCH are low. Urine pregnancy test is negative.

What is the most appropriate investigation to perform here?

- A** CT scan of the abdomen/pelvis
 - B** Refer to a urologist for cystoscopy
 - C** Refer to a gynaecologist
 - D** MRI of the female genitalia
-

000016825e0095e575

33

A 45-year-old woman comes to you for advice on when she can expect to enter menopause. She is Para 3, uses the desogestrel (Cerazette) pill, has a BMI of 22 and smokes about 10 cigarettes daily. Can you explain to her what might most influence the timing of her menopause?

- A** You explain to her that the fact that she smokes affects when she reaches menopause
 - B** You explain to her that her BMI affects when she enters menopause
 - C** You explain to her that the number of children she has given birth affects when she reaches menopause
 - D** You explain to her that the use of hormonal contraception affects when she reaches menopause
-

000016825e0095e575

34

What is the most important reason for the decrease in the incidence of cervical cancer in Norway over the last 40-50 years?

- A** Increasing use of contraceptive pills
 - B** HPV screening
 - C** Cervical cytology screening
 - D** HPV vaccination
-

000016825e0095e575

35

A 29-year old woman is pregnant in week 19. Routine ultrasound reveals a 6 cm tumour in one of her ovaries which most probably represents a fibroma. What is the most common complication she can get?

- A** Degeneration
 - B** Rupture
 - C** Torsion
 - D** Bleeding
-

000016825e0095e575

36

A 28-year old woman attends your GP practice because of bleeding during her pregnancy. She has taken two positive pregnancy tests at home. She says that she has a definite date for her last period, and using the "Snurra" you determine that she is pregnant in week 7+2. She is G2 P0. One previous miscarriage after 8 weeks' of amenorrhoea. The bleeding that occurred the previous evening was fresh and comparable to that on the first day of a period. Now it is only a brownish discharge. The bleeding was accompanied by menstruation-like pain. Now, as the bleeding has stopped she has a stinging pain in the right iliac fossa. She has never had a cytology test (PAP smear) taken from her cervix. How would you investigate/treat this patient?

- A** Measure the blood concentration of HCG twice at a 3-7 day interval to determine whether the pregnancy is developing normally or not. Give her an appointment for a cervical cytology test (PAP smear) when the last HCG result is available.
- B** Do not perform a gynaecological examination because she has just had a bleeding, and there is anyway no point in taking a cervical smear because the blood will interfere with the sample. Taking a sample will also provoke a new bleeding. Refer her directly to the Gynaecology department for ultrasound and assessment of the cervix since she is 28 years old and has never had a cervical cytology test (PAP smear).
- C** Perform a gynaecological examination to assess the cervix, uterus and adnexae. Take a cytology sample from the uterine cervix. Refer the patient to a gynaecologist for ultrasound querying an ectopic pregnancy.
- D** Perform a gynaecological examination and listen for fetal heart beat (using a fetal doppler monitor for regular pregnancy check ups). If you can hear fetal heart beats to one of the sides, this could indicate an ectopic pregnancy and the patient should be referred to the Gynaecology department as an emergency.

000016825e0095e575

37

How does the average baseline heart rate of the embryo/fetus change with increasing gestational age?

- A** The baseline heart rate increases
- B** The baseline heart rate does not change
- C** The baseline heart rate is U-shaped (is higher in first trimester, stable in second trimester, and increases in third trimester)
- D** The baseline heart rate decreases

000016825e0095e575

38

What is the treatment principle in ovarian cancer with metastases outside the ovaries?

- A** Anti-estrogen therapy
- B** Surgery + radiotherapy
- C** Primary radiotherapy
- D** Surgery + chemotherapy

000016825e0095e575

39

A 34-year old woman attends your GP surgery. She has had problems with obesity all her life. As part of her programme to lose weight she has started to exercise. But exercising is limited because she leaks urine and her underwear gets wet.

She has just been to see a private gynaecologist who has not found anything wrong at examination, and who strongly recommends that she loses weight before any further investigations for the urine leakage. The patient feels she is in a vicious circle. What is the most correct treatment to prescribe?

- A** Antidiuretic hormone prior to exercise
- B** Incontinence pads on a reimbursed prescription
- C** Anticholinergics on a reimbursed prescription
- D** Local oestrogens

000016825e0095e575

40

A 24-year old woman who is pregnant for the first time comes to you in a general practice in town. She cohabits with her partner, and has a planned pregnancy, her last period was 5 weeks ago. Over the last two days she has had some slight vaginal bleeding, but no pain. She is very worried that there is something wrong with the pregnancy. Urinary HCG (human chorionic gonadotropin) test is positive. As a GP in the town, what should you do?

- A** Refer the patient to a fetal medicine clinic for an early ultrasound examination (about week 12).
 - B** Perform a gynaecological examination with chlamydia testing and cytology from the cervix.
 - C** Take quantitative HCG tests in serum with a 2-day interval.
 - D** Refer her to a gynaecology specialist for ultrasound as an emergency examination.
-

000016825e0095e575

41

You are a general practitioner and a woman who is pregnant for the first time comes to you for a routine antenatal check-up at 34 weeks. She works full-time as a nurse in the A&E department. She feels tired and sleeps poorly. She has a headache. She feels foetal movements daily. Findings: BP 154/97, urine dipstick test 2+ for protein.

What is the most appropriate way to manage this case?

- A** Refer her for fetometry and Doppler exam within a few days
 - B** Refer her to the maternity outpatient clinic on the same day
 - C** Put her on sick leave and schedule a follow-up BP check-up in one week
 - D** Put her on sick leave since she is tired and not sleeping well, which will likely also help alleviate the headache
-

000016825e0095e575

42

During labor, the presenting part of the fetus will make movements to facilitate birth. These are called cardinal movements.

When in the labor process do these primarily occur?

- A** In the latent phase of labor
 - B** In stage 2 of labor
 - C** In stage 1 of labor
 - D** In stage 3 of labor
-

000016825e0095e575

43

You are a general practitioner and a 26-month-old girl comes to you with her father. He is tired and complains that the child is always sick; she coughs both day and night and wakes up at night with coughing fits. She has had a persistent dry cough for 6 weeks after being diagnosed with Rhinovirus last month, but has also had similar periods before. She does not have eczema or allergies. She does not snore and has not had any ear infections.

What is the correct management of this case?

- A** This is most likely toddler asthma. You start low-dose inhaled steroids and Ventoline as required. Evaluate the effectiveness before considering referral to a paediatrician.
 - B** This is most likely non-atopic childhood asthma. You should start salbutamol (Ventoline) aerosol as required and assess its effectiveness before considering a referral to a paediatrician.
 - C** This is likely protracted bacterial bronchitis. You should take a sample and start antibiotic treatment.
 - D** This is likely a case of protracted bacterial bronchitis, but it is difficult to differentiate from asthma, and you should refer her to a paediatrician for evaluation and testing.
-

000016825e0095e575

44

A 6-year-old child has been diagnosed with a malignant brain tumour and it has been decided that the child will receive radiation therapy covering the entire neuroaxis (CSI) with a boost to the primary tumour. The parents are concerned because they have heard that radiation therapy can cause serious long-term effects. They have also heard that there are different types of radiation therapy. Which of the following answers is most relevant for this patient?

- A** Proton radiation therapy delivers a lower radiation dose to surrounding tissue compared to photon radiation therapy
 - B** Photon and proton radiation therapy are comparable when it comes to late side effects
 - C** Photon radiation therapy is more effective than proton radiation therapy for CSI
 - D** Proton radiation therapy is more effective than photon radiation therapy
-

000016825e0095e575

45

A 5-year-old girl has recently been diagnosed with juvenile arthritis. Upon examination by a paediatrician, she had swelling in both knees that had lasted for over 2 months, as well as limited mobility in both elbows and a clearly swollen index finger. She has not had fever or rashes and has no eye symptoms. She is HLA-B27 and rheumatoid factor (RF) negative. There is no autoimmune disease in the immediate family.

What type of juvenile arthritis is most likely?

- A** She has enthesitis-related juvenile idiopathic arthritis
 - B** She has systemic juvenile idiopathic arthritis.
 - C** She has oligoarticular juvenile idiopathic arthritis.
 - D** She has polyarticular juvenile idiopathic arthritis.
-

000016825e0095e575

46

Which statement about a large secundum ASD (atrial septal defect) is most correct?

- A** Children with a secundum ASD develop Eisenmenger syndrome if surgery is not performed in the first year of life.
 - B** Children with a secundum ASD are usually asymptomatic during childhood
 - C** Children with a secundum ASD typically develop heart failure at 4-6 weeks of age.
 - D** A loud heart murmur is often heard when auscultating a child with a secundum ASD
-

000016825e0095e575

47

You are a doctor working at the out-of-hours medical service and are called to a 1.5-year-old girl who is having ongoing generalised seizures in connection with an infection and rising temperature. The parents are very scared and unsure of how long the seizure has been going on, but it has lasted at least 15 minutes.

What acute measures would you take?

- A** Call an ambulance and send the child to the hospital as soon as possible
 - B** Administer acute treatment with midazolam IV as quickly as possible and send the child to the hospital
 - C** Calm the parents and wait. It is likely a febrile seizure that will resolve itself
 - D** Undress the child to cool it down and give diazepam rectally as quickly as possible
-

000016825e0095e575

48

What are the most common brain injuries seen on MRI (magnetic resonance imaging) in children with cerebral palsy (CP)?

- A** Damage to the gray matter in the basal ganglia and thalamus
 - B** Malformations of cortical development
 - C** Lesions in the periventricular white matter
 - D** Focal cortical infarctions
-

000016825e0095e575

49

Daniel, 4 years old, has been on holiday in Greece with his parents. He is otherwise healthy and has followed the national vaccination programme in Norway. After a few days, he developed abdominal pain and eventually watery diarrhoea without any signs of blood. He felt nauseous and had some vomiting at the beginning. He did not have a fever and was able to drink extra fluids, which his parents encouraged him to do.

His parents are wondering if he needs any treatment and bring him to the doctor, who diagnoses acute gastroenteritis. Which microorganism does the doctor primarily suspect, and what treatment can be recommended?

- A *Salmonella typhi*; treatment with ciprofloxacin and adequate amounts of oral rehydration solution containing salt and sugar
- B Rotavirus infection; treatment with adequate amounts of oral rehydration solution containing salt and sugar
- C *Campylobacter jejuni*; treatment with oral rehydration solution containing salt and sugar, and erythromycin
- D *Salmonella enteritidis*; treatment with an adequate amount of oral rehydration solution containing salt and sugar

000016825e0095e575

50

What infections are seen in young children due to the Gram-negative rod *Kingella kingae*?

- A Acute cervical lymphadenitis with low fever and a tendency for spontaneous resolution
- B Joint and bone infections with fever and relatively poor general condition
- C Joint and bone infections without fever and relatively good general condition
- D Purulent otitis media without fever and with a tendency to perforation

000016825e0095e575

51

A child is born after 26 weeks of pregnancy. Despite treatment with CPAP (*continuous positive airway pressure*) immediately after birth, he requires 40% oxygen to maintain an oxygen saturation above 90%.

What kind of medication is appropriate to give the child in this situation?

- A No medication other than antibiotics and fluids.
- B The child should receive surfactant intratracheally.
- C The child should receive steroids intramuscularly.
- D The child should receive caffeine intravenously.

000016825e0095e575

52

You are on call in the paediatric department and are called to assess a 3-month-old girl who has been admitted to the ENT ward due to bleeding from her mouth. During the examination, you find a fresh tear in the upper lip frenulum as well as a bruise measuring 1 x 1 cm in the middle of the right cheek. You also note that her head circumference has increased from P25 at birth to P75 now, and the fontanelle seems a bit tense.

The mother tells you that she noticed the bleeding when she was about to breastfeed and immediately contacted the out-of-hours medical service. She is unsure how the tear and bruise occurred but mentions they have a 3-year-old older brother who can be a bit rough.

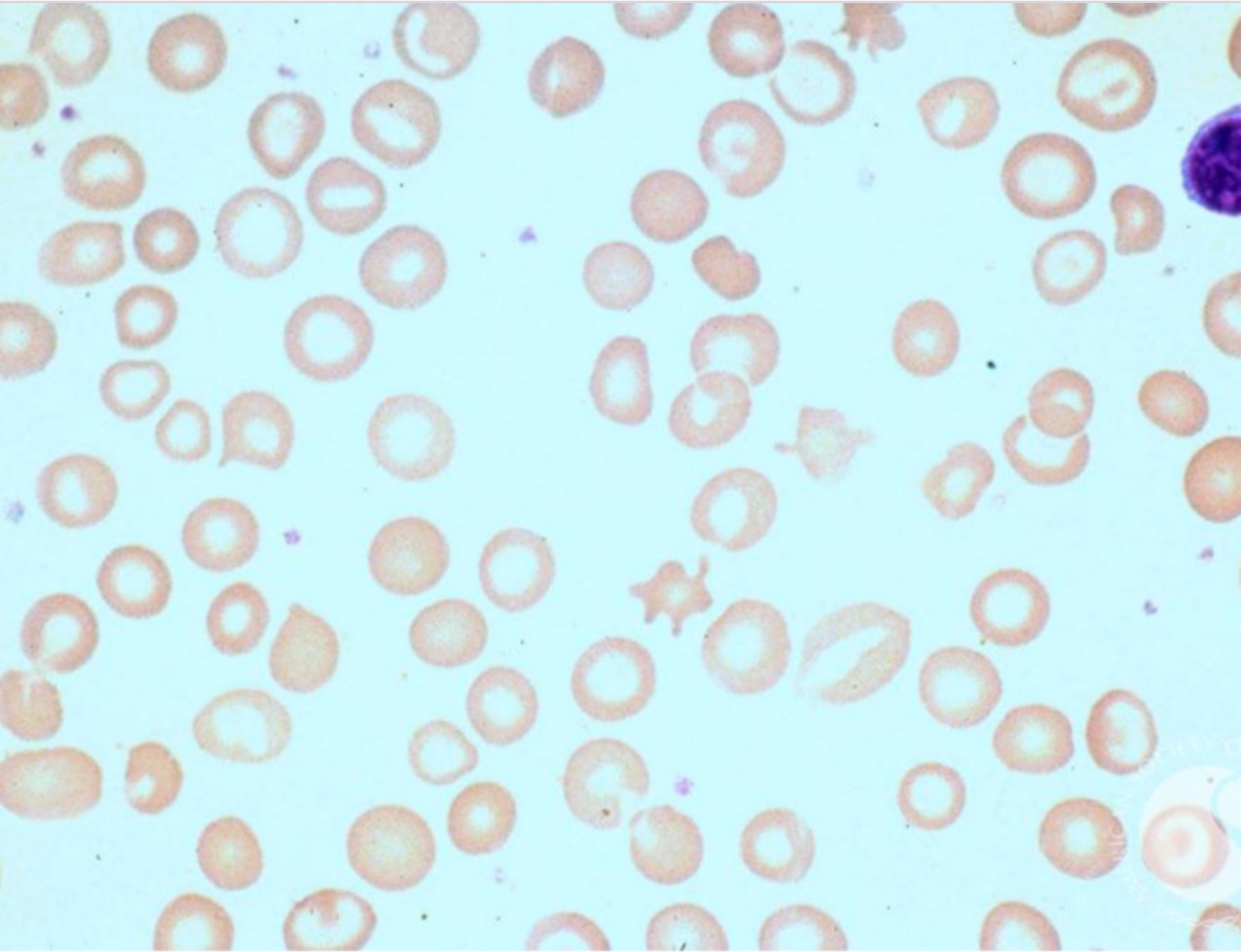
Apart from having the ENT department treat the injury, which of the following further investigations is most appropriate to prioritise?

- A Cerebral ultrasound to assess the intracerebral conditions
- B Cerebral CT as emergency assistance
- C Refer to the paediatric outpatient clinic for further investigation of the head circumference
- D No further investigation is necessary.

000016825e0095e575

53

A 12-month-old girl is admitted to the paediatric outpatient clinic due to pallor and severe anaemia with a haemoglobin level of 5.4 g/dl (normal range: 10.5-13.1 g/dl). The parents are originally from Southeast Asia, and they and two older siblings are completely healthy. The girl was born at term after a normal pregnancy. She was breastfed until the age of eight months and offered porridge from six months, but has mostly preferred cow's milk. Upon examination, she is pale with no jaundice or organomegaly. The peripheral blood smear is attached. What is the most likely diagnosis based on clinical information and the blood smear?



- A** Sickle cell anaemia
- B** Iron deficiency anaemia
- C** Spherocytosis
- D** Thalassemia

000016825e0095e575

54

The patient is a 4-week-old boy, born at term, previously healthy and fully breastfed. He has a 4-day history of nasal congestion, wheezing and increasing frequency of coughing. Over the last 24 hours, he has hardly breastfed, and his nappies have been nearly dry. During an examination at the out-of-hours medical service in a cabin area about 2 hours from the nearest hospital, you find: temperature 38.5°C, oxygen saturation 88-90%, respiratory rate 55, subcostal and intercostal retractions, dry and warm skin, slightly sunken fontanelle, capillary refill time of 2 seconds, and pulse of 166. There is currently an RSV epidemic and you suspect bronchiolitis.

What is the correct management for you as the out-of-hours medical service doctor?

- A Ensure an open airway and provide oxygen. Monitor during transport to the hospital
- B Attempt inhalations with racemic adrenaline (epinephrine), and then assess whether hospitalisation is necessary.
- C Take a CRP to assess if the infection is bacterial before deciding whether hospitalisation is necessary.
- D Inhalation with Ventolin (salbutamol) should be attempted, and then assess whether hospitalisation is necessary

000016825e0095e575

55

A 6-year-old previously healthy boy eats a peanut and his lips swell up and he has shortness of breath. What is the most appropriate dose of 1 mg/ml adrenaline to give him, and how would you administer the dose?

- A 0.2 ml subcutaneously.
- B 0.3 ml intramuscularly.
- C 0.3 ml subcutaneously.
- D 0.2 ml intramuscularly.

000016825e0095e575

56

What is the **least** common sign of classic headache caused by increased intracranial pressure?

- A The headache increases throughout the day
- B The headache wakes the patient from sleep at night or occurs upon waking up
- C The headache worsens with exertion, sneezing, or coughing
- D Vomiting without related nausea

000016825e0095e575

57

You are called to the delivery ward due to foetal bradycardia and impending asphyxia in a full-term delivery. The obstetricians are about to apply a vacuum extractor (ventouse), and they are preparing you for the possibility of a compromised baby. While you wait, you take the time to plan the necessary interventions that might be required.

What is the first action you should take, apart from initial stimulation, if the newborn is lifeless and not breathing?

- A Start full CPR with compressions and ventilations at a 3:1 ratio regardless of heart rate
- B Start heart compressions regardless of heart rate.
- C Start ventilation regardless of heart rate.
- D Start with ventilation if the heart rate is >60/min and with compressions if the heart rate is <60/min.

000016825e0095e575

58

A boy was born through a normal vaginal delivery at 37 weeks of pregnancy and had a normal birth weight. When he is about to go home from the maternity ward after two days, he has jaundiced skin and a weight that is approximately 8% below his birth weight.

What kind of blood tests are correct to take?

- A Conjugated and unconjugated bilirubin, TSH, free T4.
- B CRP, blood gas and unconjugated bilirubin.
- C Conjugated and unconjugated bilirubin, liver enzymes, and gamma-GT
- D Unconjugated bilirubin, blood type of mother and child.

000016825e0095e575

59

Per (8 years old) has been bothered by stomach pains for a while. He often has loose stools, but sometimes has hard and lumpy stools. There has been no mucus or blood in the stools. Upon examination: Height 135 cm (25th percentile), weight 38 kg (90th percentile relative to height). He is slightly pale but in good general condition. A non-tender mass is palpated in the lower left quadrant of the abdomen. Blood tests taken by the family's GP show:

Test	Measured Value	Reference Value
ESR	10	<10
Hb	10.9 g/L	10.5-13.5 g/L
White Blood Cells	12.4 x 10 ⁹ /L	4.0-14.0 x 10 ⁹ /L
Platelets	300 x 10 ⁹ /L	145-390 x 10 ⁹ /L
CRP	<5 mg/L	<5 mg/L
Ferritin	45 µg/L	29-389 µg/L

What is the most likely diagnosis?

- A Inflammatory bowel disease (IBD)
- B Irritable bowel syndrome (IBS)
- C Celiac disease
- D Chronic constipation

000016825e0095e575

60

You suspect that Gustav, 12 years old, has asthma and perform a spirometry test measuring vital capacity (VC) and forced expiratory volume in 1 second (FEV1).

What finding would be most typical for asthma?

- A Low VC, reduced FEV1
- B Normal VC, reduced FEV1
- C Reduced VC, normal FEV1
- D Reduced VC, high FEV1

000016825e0095e575

61

The patient is a girl who is almost 2 years old and has atopic eczema. She had RSV (respiratory syncytial virus)-induced bronchiolitis at 1 year old. Since then, she has had two hospitalisations due to virus-induced obstructive pulmonary episodes, which were treated with inhalation of a β_2 agonist. For most of the winter, she experiences periods of dry cough at night. Her mother has pollen allergies, and her father had asthma as a child.

What treatment should the girl receive?

- A Regular inhalations of a β_2 agonist along with a leukotriene receptor antagonist once daily
- B Regular inhalations of steroids and regular inhalations of short-acting β_2 agonist
- C Regular inhalations of a short-acting β_2 agonist four times a day
- D Regular inhalations of steroids together with inhalation of a β_2 agonist as required
- E Regular inhalations of a combination medication with a long-acting β_2 agonist and steroids

000016825e0095e575

62

During rehydration, an error was made when mixing the intravenous fluid. 70 mmol K⁺ and 20 mmol Na⁺ was added to the Plasmalyte rehydration fluid (instead of 20 mmol K⁺ and 70 mmol Na⁺). What is the risk of too much K⁺ in intravenous fluid during rehydration?

- A Venous thrombosis
 - B Arrhythmias (heart rhythm disturbances)
 - C Kidney failure
 - D Cerebral oedema
-

000016825e0095e575

63

You are a health clinic doctor and the public health nurse asks for an additional evaluation of an 8-month-old boy. He has developed normally but has been a bit more lethargic and irritable over the past week. His mother thinks he has become somewhat worse at sitting up. She also mentions that he has several daily episodes where he curls up and stretches his arms several times in a row, followed by crying. She thinks he might have a stomach ache because of the crying. He has also started to have reflux more recently.

What is the correct course of action?

- A Advise the mother to contact the family GP if the boy continues to have reflux
 - B Refer for an EEG to investigate possible seizures
 - C Make a phone call to the local paediatric department and discuss
 - D Refer for an abdominal ultrasound due to the stomach pain
-

000016825e0095e575

64

Calculation of iso-BMI is used to assess the weight status of children and adolescents. Which statement about iso-BMI is most accurate?

- A BMI < iso-BMI 25 corresponds to normal weight for children and adolescents
 - B The threshold for overweight in children is iso-BMI 25, which is 5 BMI units lower than for adults
 - C Iso-BMI is a gender-, age-, and puberty-adjusted value of Body Mass Index (BMI)
 - D Obesity is defined as a BMI > iso-BMI 30 for children and adolescents
-

000016825e0095e575

65

Ida, Tor and Toril are in Year 6 of school, and today they are supposed to receive the MMR vaccine. Ida has a stuffy nose and is coughing but is attending school and does not have a fever. Tor's parents have informed the school that they do not want him to receive the vaccine. Toril is on immunosuppressive medication, and the school nurse has been informed that she should not receive live vaccines.

Which of the three should receive the MMR vaccine today?

- A None of them will receive the vaccine since Ida has a cold, MMR is a live vaccine, and parental consent is required
 - B All three should receive the vaccine as the childhood vaccination programme is mandatory and there are no contraindications
 - C Ida and Toril will receive the vaccine since Ida does not have a fever and MMR is an inactivated vaccine, while Tor lacks parental consent
 - D Only Ida will receive the vaccine, as a cold without fever is not a contraindication, while the other two have contraindications
-

000016825e0095e575

66

An 8-day-old baby arrives at the emergency department. The baby is pale, poorly circulated, tachypneic with subcostal retractions. No abnormal lung sounds or heart murmurs are heard. The liver is palpated 4-5 cm below the costal margin. Radial pulses are weak, and femoral pulses are not palpable.

What are the two most important differential diagnoses that should be quickly investigated and treated?

- A** Ductus-dependent coarctation and RSV bronchiolitis
 - B** Congenital metabolic disease and RSV bronchiolitis
 - C** Ductus-dependent coarctation and neonatal sepsis
 - D** Congenital metabolic disease and neonatal sepsis
-

000016825e0095e575

67

You are on call and receive a call from a care facility about a 13-year-old boy with intellectual disability who uses an insulin pump for his type 1 diabetes. The staff discovered they made an input error and 15 units of rapid-acting insulin were given on the pump, instead of 1.5 units, which was intended for the evening sandwich. He weighs approximately 50 kg and has a normal insulin requirement for a teenager of about 1 unit/kg/day.

What would be the best advice here?

- A** He should be admitted to the hospital for observation
 - B** They can quickly administer a dose (1 mg) of glucagon injection and repeat once if needed. Nasal spray glucagon can also be used.
 - C** He should receive around 150 grams of carbohydrates, and they must monitor his blood sugar regularly
 - D** No measures are required right now, but they should check on him in about 2 hours and then again after 4 hours
-

000016825e0095e575

68

A 5.5-year-old boy and his mother comes to see you as their GP. The mother tells you that he has a tight foreskin. Upon examination, it is not possible to retract the foreskin over the glans. He does not have any problems with this on a daily basis, he has not had any infections, and the foreskin does not balloon when he urinates. The mother is concerned about hygiene. What is the correct course of action?

- A** Refer to surgery for tight foreskin (dorsal slit/circumcision)
 - B** Reassure the mother that the situation can just be monitored since he has no symptoms it is not causing him any discomfort or problems.
 - C** Treat with a corticosteroid ointment for a few weeks to soften the foreskin
-

000016825e0095e575

69

You are a general practitioner for a 24-year-old woman who has had previous good health. Over the course of a few weeks, she has developed an angry rash around her mouth, with some involvement around her eyes as well. She has been using a group 2 corticosteroid cream that her friend was prescribed for eczema. This treatment has not helped much, and she feels that it has actually worsened the condition. The patient describes a burning and stinging sensation on her skin. Upon examination, you find small erythematous grouped papules and pustules around the mouth, sparing the area immediately adjacent to the vermilion border.

What treatment should you offer the patient?

- A** A cream containing metronidazole or azelaic acid
 - B** A cream containing retinoids or benzoyl peroxide
 - C** A cream with a group 3 corticosteroid combined with an antiseptic ingredient
 - D** A cream containing both an antifungal agent and a corticosteroid
-

000016825e0095e575

70

You are a general practitioner. A 62-year-old man has developed a burning rash on his right forearm over the past 24 hours. The day before, he was working outside in the garden wearing a T-shirt and shorts. He has fair skin and has always been somewhat sensitive to the sun. He is otherwise healthy, except for having hypertension, which is treated with a calcium channel blocker. What is the most likely diagnosis?



- A** Sunburn
- B** Phototoxic dermatitis due to antihypertensive treatment
- C** Photoallergic dermatitis due to antihypertensive treatment
- D** Phytophotodermatitis due to plant contact

000016825e0095e575

71

You are on call and examining a 31-year-old man who has been suffering from recurring boils in the groin and both armpits for the last ten years. He currently has a tender lump in the right groin, approximately 3 cm in diameter, but otherwise, the condition is quite stable. CRP is 12. What is the best course of action?

- A** He has an abscess, likely part of hidradenitis suppurativa, and a microbiological culture sample must be obtained using a fine needle
- B** He has an abscess, likely part of hidradenitis suppurativa, and a small amount of corticosteroids should be injected into the lesion using a fine needle
- C** He has an abscess as part of a chronic carrier state of *S. aureus* and should be admitted for intravenous antibiotics
- D** He has an abscess, likely caused by *S. aureus*, and it should be drained with an incision before starting dicloxacillin treatment

000016825e0095e575

72

A woman who had unprotected sexual intercourse with an unknown man 10 days ago comes to the GP for testing. She tells you that she has increased discharge and that she feels itching and a burning sensation in her genital area. The symptoms have gotten worse over the past couple of days. What should you do?

- A** The patient has symptoms of a genital yeast infection. You ask her to purchase over-the-counter treatments at the pharmacy and return next week if the symptoms do not improve
- B** Perform a thorough gynaecological examination, take a sample for direct microscopy, test for chlamydia and gonorrhoea, and take a sample from any lesions.
- C** Ask the patient to take a chlamydia and gonorrhoea test from the vagina and provide a urine sample for a urinalysis, as the symptoms are consistent with a urinary tract infection
- D** Ask the patient to take a chlamydia and gonorrhoea test from the vagina and start treatment with Doxycycline, as the patient most likely has a sexually transmitted infection

000016825e0095e575

73

A 20-year-old man has just discovered growths on his penis. He has an appointment with you as his GP. He recently started a relationship with a girl, and he wants to get rid of the symptoms as quickly as possible. They have had unprotected sexual intercourse several times. You examine him and find that he has condylomas on the glans of his penis and the prepuce. What should you do to help him?

- A** Offer treatment with podophyllotoxin, but explain that the warts may reappear
- B** Refer him to a dermatologist for cryotherapy or laser treatment so that the warts are removed and he becomes non-contagious
- C** Inform him that there is no treatment that will make the warts disappear. He will have to wait for spontaneous regression
- D** Inform the patient that the virus will go away with local treatment and that he should not have unprotected sexual intercourse with the new partner because she may reinfect him

000016825e0095e575

74

A 43-year-old woman comes to see you as her GP. She has been previously healthy with regard to her skin. Over the past year, she has gradually developed increasing burning and itching sensations in the genital area, and it has become painful to have sexual intercourse with her husband. Upon examination, you find the following: whitish, scar-like streaks on the vulva with some erosions and ecchymoses. You take a 3mm punch biopsy, and the pathology report reveals degeneration of the basal layer and lymphocytic infiltrate at the junction between the epidermis and dermis. You also took a sample for fungal and bacterial cultures, which yielded negative results. What complications can the patient develop from this skin condition?

- A** Malignant melanoma.
- B** Squamous cell carcinoma
- C** Actinic keratosis
- D** Basal cell carcinoma

000016825e0095e575

75

A 56-year-old previously healthy man presents with a non-itchy skin rash on the right side of his torso, which has gradually increased in size over the past few weeks. He enjoys spending time outdoors in the forest and countryside but cannot recall a tick bite. He takes no regular medications and feels well. A clinical skin examination reveals a solitary, well-defined, pale red annular macule measuring 20x20 cm, located on the right side of the torso (see photo). What is the most appropriate action to take?



- A Take a diagnostic punch biopsy for histopathological examination
- B Initiate treatment with topical corticosteroids based on clinical suspicion of granuloma annulare
- C Initiate systemic treatment with Penicillin based on clinical suspicion of borreliosis
- D Take a diagnostic skin scraping for microbiological analysis

000016825e0095e575

76

A 26-year-old woman comes to you as her GP. She has epilepsy and regularly takes antiepileptic medication, with no other regular medications. She had atopic eczema as a child. Four weeks ago, she was switched to a new type of antiepileptic drug. Two days ago, a non-itchy maculopapular rash appeared, affecting the torso and proximal extremities. In the last 6 hours, oedema and painful mucous membranes have developed orally. She has felt somewhat unwell for the past 3-4 days. What is the most likely diagnosis?

- A Stevens-Johnson syndrome
- B Primary herpes simplex infection
- C Angioedema
- D Exanthematous drug eruption

000016825e0095e575

77

What surgical technique has been used here?



- A Transposition flap
- B Advancement flap
- C Regional skin flap
- D Rotation flap

000016825e0095e576

78

The wound healing process consists of several phases. What phases is the process usually divided into, and what is the correct order?

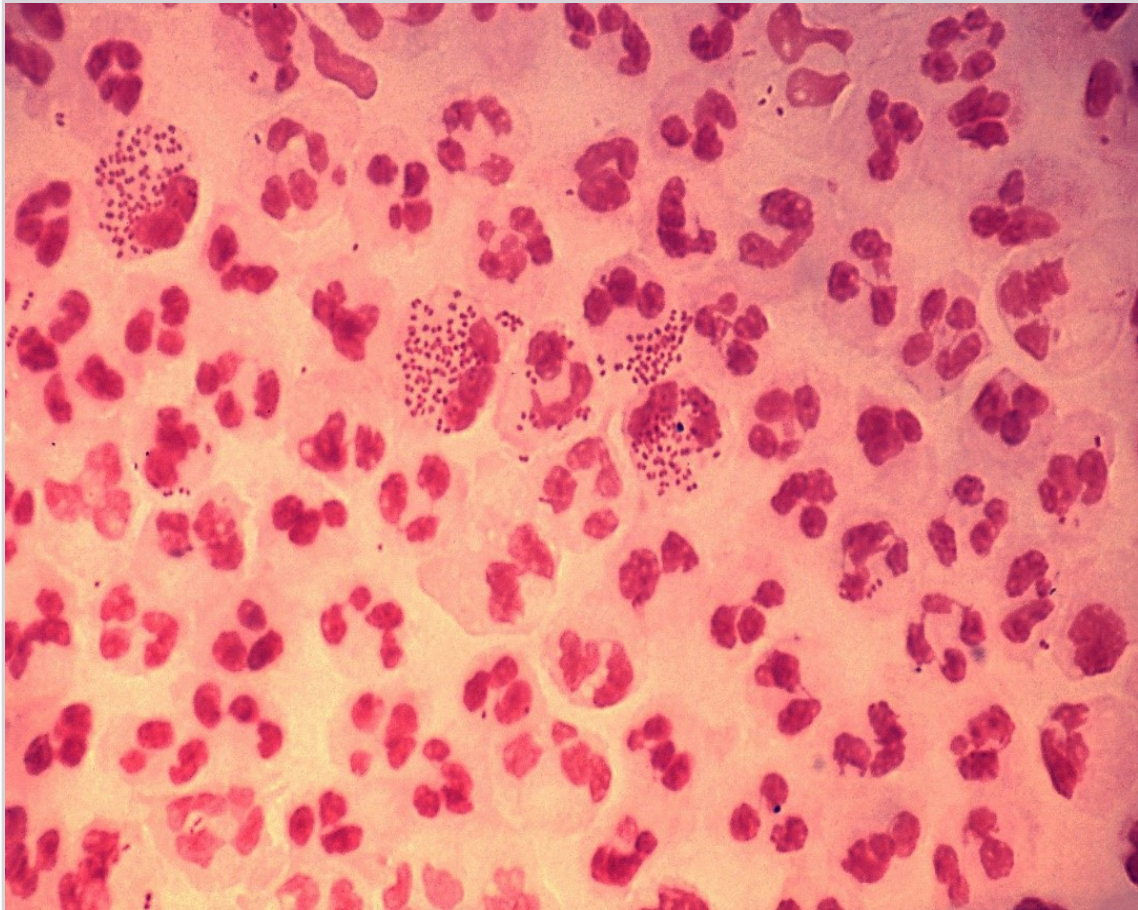
- A Inflammation phase – Angiogenesis phase – Epithelialisation phase – Remodelling phase
- B Coagulation phase – Granulation phase – Epithelialisation phase – Remodelling phase
- C Coagulation phase – Inflammation phase – Proliferation phase – Remodelling phase
- D Haemostasis phase – Angiogenesis phase – Granulation phase – Epithelialisation phase

000016825e0095e576

79

A 20-year-old man has contacted you due to discomfort with burning during urination. He is not in a steady relationship and has had unprotected sex with four women over the past six months, most recently one week ago. On examination, you find purulent discharge from the urethra. No ulcerations and no swollen lymph nodes in the groin. You smear some of the discharge onto a glass slide, and the specimen is Gram stained. This is what you see under the microscope:

What is the most appropriate action to take?



- A** Treat with Pivmecillinam (Selexid) for 3 days and follow up with a urine test after 2 weeks
- B** Treat with Doxycycline for one week
- C** Refer to a urologist due to the finding of dysplasia
- D** Refer to a venereologist for treatment

000016825e0095e576

80



A 21-year-old woman is using a TNF α inhibitor for juvenile arthritis. She is single and has recently developed a rash over the mons pubis, which has also spread to the lower abdomen. She is concerned about a sexually transmitted infection. The rash consists of scattered light pink papules, 1-2 mm in size, and looks like the image. What is the most likely diagnosis?

- A Basal cell carcinomas
- B Genital herpes
- C Molluscum contagiosum
- D Condyloma accuminata

000016825e0095e575

81

A 56-year-old previously healthy farmer has a wound on his left cheek that will not heal. A dermatologist has investigated the patient and found a dermatophyte. What is the most appropriate treatment to initiate?



- A Topical antifungal medication
- B Systemic antibiotic medication
- C Topical antiseptic medication
- D Systemic antifungal medication

000016825e0095e575

82

A 35-year-old man works in the military and over the past year has developed thick and cracked toenails on several toes on both feet. They are detaching, making it difficult for him to wear marching boots. He suspects a fungal infection and is requesting oral tablet treatment for it. You have taken a nail scraping for fungal culture and microscopy, which revealed no findings. Upon thorough examination, you find no skin rash on the body, but he has diffuse mild flaking on the scalp. His mother has psoriasis.

What is the most appropriate next step?

- A Take a new fungal scraping with suspicion of tinea unguium
- B Take a biopsy from the scalp with suspicion of psoriasis
- C Take a biopsy from the scalp with suspicion of lichen planus.
- D Take a new fungal scraping with suspicion of candida infection

000016825e0095e575

83



What is the most likely diagnosis based on the image?

- A Melanoma?
 - B Dermatofibroma?
 - C Basal cell carcinoma?
 - D Pyogenic granuloma?
-

000016825e0095e575

84

The patient is a 25-year-old female student. She is previously healthy and takes no regular medications, but occasionally uses NSAIDs for joint pain. She has had repeated episodes of well-defined and moderately erythematous rash on her left forearm. However, the rash has recently been increasing in extent with more lesions also appearing on the opposite arm. What is the most likely diagnosis?

- A Brachioradial pruritus
 - B Granuloma annulare
 - C Atopic eczema
 - D Fixed drug eruption
-

000016825e0095e575

85

A 16-year-old boy has had atopic dermatitis since early childhood. He experiences significant symptoms on his face, neck and upper extremities during the winter months. He feels the need to continuously use group 2 and 3 topical corticosteroids to control the symptoms. The patient uses moisturising cream daily. You find clear signs of eczema in the flexural areas of the extremities as well as on the neck and face. What do you choose to do as his general practitioner?

- A Start treatment with systemic steroids (Prednisolone)
 - B Take blood tests to determine potential allergies to dust mites or pet dander
 - C Switch to treatment with stronger topical corticosteroids, group 4
 - D Refer to a dermatologist for evaluation of additional treatment with UV treatment
-

000016825e0095e575

86

The patient is an 82-year-old man, previously healthy, who comes in for a consultation at his GPs office. For several months, he has been troubled by an itchy rash on his arms and legs, and in recent days, blisters have appeared in the rash. You find excoriations, erythematous plaques, and several tense blisters with a diameter of up to 5–6 cm. What diagnosis is most likely in this case?

- A Secondary infected eczema
 - B Pemphigus foliaceus
 - C Bullous pemphigoid
 - D Pustular psoriasis
-

000016825e0095e575

87

A 77-year-old woman with venous insufficiency and a chronic leg ulcer on her right leg visits you at the GPs office. She complains of itching and increased discharge from the wound. She uses compression bandages, but has had adherence issues recently. Upon examination, you find a 4 x 5 cm ulcer with a fibrin-covered base. The surrounding skin is erythematous and mildly scaly, and you observe linear excoriation marks. What treatment do you recommend in addition to an occlusive, absorbent wound dressing?

- A Start antibiotic treatment and remove the compression bandage for a few days
 - B Start local antiseptic treatment with ointment and continue with compression therapy
 - C Start topical treatment with group 3 corticosteroids and continue with compression therapy
 - D Refer to a dermatologist for further evaluation of possible eczema or an allergic reaction
-

000016825e0095e575

88

You are the GP for a 34-year-old woman who visits you due to increasing redness and a rash on her face. The rash is not itchy but she sometimes experiences burning sensations. It worsens in sunlight and with the consumption of hot drinks. She has not had similar rashes before and has not received any treatment. Below is a picture of the rash. What is the most likely diagnosis?



- A** Rosacea
- B** Acne vulgaris
- C** Seborrheic dermatitis
- D** Systemic lupus erythematosus (SLE)

000016825e0095e575

89

A 22-year-old man comes to you as his GP. He has had a scaly rash on his scalp for several years, but it has previously caused little discomfort. Over the past six months, it has gradually worsened, and he is now seeking treatment. Upon examination, you find significant, partly adherent scaling on an erythematous base over large parts of his scalp. You make a tentative diagnosis of psoriasis. What is the most appropriate next step for the GP?

- A** Prescribes a combination preparation of a topical group 3 steroid + salicylic acid (Diprosalic liniment)
- B** Prescribe a group 2 topical steroid in an appropriate formulation (Locoid Crelo)
- C** Refer to a dermatologist for a definitive diagnosis and treatment
- D** Recommend dandruff shampoo and moisturising gel as an initial treatment

000016825e0095e575

90

A 46-year-old woman contacts you. She has been treated for several sinus infections over the last few months. She is constantly congested and has almost daily bloody scabs when she blows her nose. This has worsened in recent weeks. She has hearing loss in her right ear. She also experiences morning stiffness for several hours, has joint pain and has been slightly swollen in her fingers. She has developed a rash on both legs. It itches and is painful, and she has scratched herself to the point of bleeding in several places. Generally, she feels unwell.

Lab: ESR 51 (1 - 20 mm/L), CRP 48 (<5), Hb 11.2 (11.7 - 15.3 g/dL), Leukocytes 11.2 (4.1 - 9.8 $10^9/L$), neutrophils 8.3 (1.80 - 6.90 $10^9/L$), lymphocytes 1.90 (1.20 - 3.10 $10^9/L$), eosinophils 0.42 (≤ 50 $10^9/L$), Creatinine 98 (60 - 105 $\mu\text{mol/L}$), RF 36 (<14), PR3 ANCA 101 (≤ 3), ANA negative, without subgroups. Urine dipstick with 2+ leukocytes, 2+ blood, 1+ protein.

Upon examination, normal blood pressure and normal findings on heart and lung auscultation. No ankle oedema. Petechial rash on both calves.

What is the most likely diagnosis for this rheumatic vasculitis condition?

- A** Eosinophilic granulomatosis with polyangiitis (EGPA)
- B** Systemic lupus erythematosus (SLE)
- C** Polyarteritis nodosa (PAN)
- D** Granulomatosis with polyangiitis (GPA)

000016825e0095e575

91

A 56-year-old man is admitted to the medical department due to cough and dyspnea over the past few weeks. He feels generally unwell, has a fever and joint pain. He has trouble getting out of bed, climbing stairs, and holding his hands above his head. He is no longer able to go for walks as he used to. His fingers and toes are cold, and he describes whitish blanching with a transition to purple and then reddened fingers. He has had several sores on his fingertips that take a long time to heal. He smokes.

Clinical findings: Normal blood pressure. Lungs with bilateral basal crackles. Dry cracked skin on hands, cold fingers. Arthritis in metacarpophalangeal joints (MCP) 2, MCP 3, proximal interphalangeal joints (PIP) 4 on the right, and MCP 3 and PIP 5 on the left.

Reduced strength in proximal musculature, and he cannot do more than 5 squats before stopping. He rises from the chair by holding the armrests.

Lab: ESR 101 (1 - 2mm/L), CRP 97 (<5), HB 12.5 (13.4 - 17.0 g/dl), Leukocytes 10.9 (4.1 - 9.8 $10^9/L$), Creatinine 67 (60 - 105 $\mu\text{mol/L}$), ALAT 76 (10 - 70 U/L), CK 1631 (<280 U/L), Rheumatoid factor (RF) 120 (<14), ANA positive, anti-Jo1 61 (≤ 10 kU/L)

What is the most likely diagnosis?

- A** Rheumatoid arthritis (RA)
- B** Myositis (antisyntetase syndrome, ASS)
- C** Polymyalgia rheumatica (PMR)
- D** Systemic sclerosis

000016825e0095e575

92

A 76-year-old woman comes to you as her GP. She has felt tired and worn out for the past 4 weeks and has lost 5-6 kg in weight. She experiences night sweats. She is very stiff, especially in the morning. It is difficult to get out of bed in the morning, to rise from a chair, and she feels discomfort on the backs of her thighs. She finds it difficult to dress herself without help, especially when pulling things over her head. She has stiffness and pain in her shoulders and cannot reach things in the top kitchen cabinets. She does not describe any other symptoms.

Blood tests show SR 78 (1-20 mm/T) and CRP 72 (>5).

Upon clinical examination, there are normal findings in the heart and lung examinations. No signs of active arthritis are found, but she moves stiffly and awkwardly and has trouble lifting her arms over her head. The patient has no skin changes.

What is the most likely rheumatic disease?

- A** Myositis
- B** Polymyalgia rheumatica (PMR)
- C** Temporal arteritis
- D** Fibromyalgia

000016825e0095e575

93

Which antibodies are most relevant to test for in suspected systemic lupus erythematosus (SLE)?

- A ANA and antiphospholipid antibodies
 - B ANA, rheumatoid factor (RF), anti-citrullinated peptide, also called anti-CCP (ACPA)
 - C Antinuclear antibodies (ANA) and anti-neutrophil cytoplasmic antibodies (ANCA)
 - D ANA and HLA B27
-

000016825e0095e575

94

A 55-year-old man complains of persistent joint pain and stiffness that has lasted for several months. He has also noticed fatigue and weight loss. Physical examination shows symmetric swelling in several small joints in the hands and feet. X-rays reveal joint damage and erosions. What is the most likely diagnosis?

- A Rheumatoid arthritis
 - B Gout
 - C Osteoarthritis
 - D Psoriatic arthritis
-

000016825e0095e575

95

A 30-year-old man comes to you with persistent back pain that has lasted for over three months. The pain is worst at night and improves with movement. He has also had episodes of eye inflammation. What examination is most appropriate to confirm the diagnosis of spondyloarthritis?

- A MRI of the sacroiliac joint
 - B Blood test for HLA-B27
 - C Ultrasound of the sacroiliac joints
 - D Blood tests: CRP and ESR
-

000016825e0095e575

96

A 70-year-old man with osteoarthritis in several PIP and DIP finger joints is experiencing persistent pain and functional impairment despite treatment with NSAIDs and paracetamol. He wishes to discuss other treatment options.

Question:

What further treatment would be the most appropriate for this patient?

- A TNF inhibitor (Tumour Necrosis Factor alpha inhibitor)
 - B Corticosteroids
 - C Surgery
 - D Occupational therapy
-

000016825e0095e575

97

A 45-year-old woman visits her GP because she has experienced increasing Raynaud's Phenomena in all fingers and toes over the past 6 months. In addition, she has noticed that the skin has become thicker and less elastic on her forearms, the backs of her hands, fingers, as well as on her shins and toes. She often feels cold in her hands and feet and has had a tendency for wounds on her fingers to heal more slowly than before. Blood tests show an ESR of 8 mm/h (reference range 0-17 mm/h) and CRP <5 (reference range <5 mg/L). Rheumatological tests show a positive ANA result (reference range negative) and an anti-centromere antibody titer of >8.0 AI (reference range ≤0.9 AI). What is the most likely diagnosis here?

- A Diffuse form of systemic sclerosis
 - B Limited form of systemic sclerosis
 - C Primary Raynaud's Phenomenon
 - D Mixed connective tissue disease
-

000016825e0095e575

98

A young woman with a diagnosis of SLE is diagnosed with pulmonary embolism. Which type of antibodies are particularly associated with an increased risk of thromboembolic events in patients with SLE?

- A** ANCA antibodies
 - B** Thyroid antibodies
 - C** Antiphospholipid antibodies
 - D** Anti-CCP
-

000016825e0095e575

99

A 45-year-old woman comes to you with diffuse muscle pain that has lasted for several months. The pain is worst in the morning and after periods of inactivity. In addition, she often feels tired and has trouble sleeping. Upon examination, you find tenderness in several muscle groups, but no visible swelling or redness. Blood tests show normal levels of CRP and ESR. Anti-CCP is normal.

Question:

What is the most likely diagnosis based on the patient's symptoms and findings?

- A** Osteoarthritis
 - B** Rheumatoid arthritis
 - C** Polymyositis
 - D** Fibromyalgia
-

000016825e0095e575

100

A 65-year-old man with known osteoarthritis presents with sudden onset of pain, swelling and redness in his right knee. He has a fever and feels generally unwell. The doctor decides to perform a joint aspiration.

Based on the patient's symptoms and clinical findings, which of the following findings in the joint fluid is most consistent with the most likely diagnosis?

- A** Cloudy, yellowish-green fluid with a high white blood cell count
 - B** Clear, light yellow fluid with a low white blood cell count
 - C** Clear, straw-yellow fluid with a high glucose concentration
 - D** Bloody fluid with a high number of red blood cells
-

000016825e0095e575

101

A 48-year-old man comes to the doctor with pain and swelling in several joints, especially in the hands and feet. He has also experienced morning stiffness lasting over an hour. He recently quit smoking after smoking for 20 years, and he has started exercising regularly for a half marathon. Blood tests show elevated CRP and positive anti-CCP.

Which of the following lifestyle factors is most likely to have contributed to the development of rheumatoid arthritis?

- A** Intensive exercise
 - B** Moderate alcohol consumption
 - C** A diet including a lot of vegetables
 - D** Previous smoking
-

000016825e0095e575

102

A 29-year-old woman comes to you as her GP because she has felt increasingly more tired and fatigued over the past year. She is able to work but has no energy for other activities when she gets home. She experiences pain in her muscles and joints. She has a gritty feeling in her eyes and often drinks because her mouth feels dry. Blood tests show an ESR of 32 mm/h (ref 1-20 mm/h), CRP < 5 mg/L, and positive ANA with anti-SSA (anti-Ro subgroup).

Which of these diagnoses is most likely?

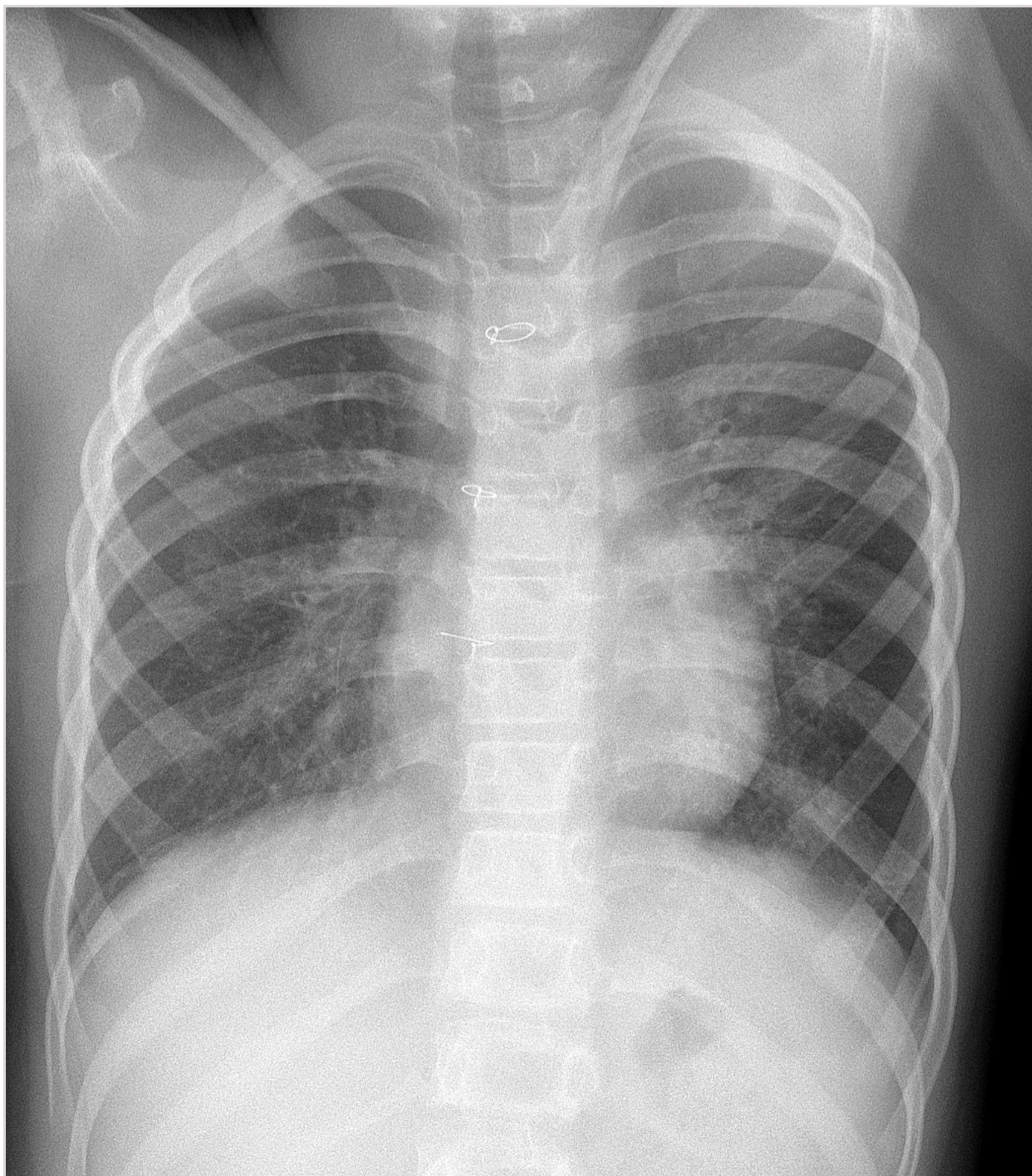
- A** SLE (Systemic Lupus Erythematosus)
 - B** Systemic sclerosis
 - C** MCTD
 - D** Sjögren's syndrome
-

000016625e0095e575

103

As a speciality registrar (LIS2) working at a paediatric clinic, you receive a 3-year-old boy with a 5-day medical history of respiratory symptoms. Fever, reduced general condition and cough without productive phlegm. On auscultation, central, coarse mucus sounds are heard. CRP 79 measured by the GP. From previously known Down's syndrome and operated on for a complex heart defect. You refer the patient for a chest X-ray.

What condition does the X-ray show?



- A Normal findings
- B Bronchitis
- C Bronchopneumonia
- D Lobar pneumonia

000016825e0095e575

104

A 15-month-old boy has been referred to the paediatric department due to suspected delayed motor development. The child was born at term, and there were no particular complications during the perinatal period. As the doctor in the paediatric department, you clearly observe during the examination that the child has delayed motor development and suspect that the child may have a congenital metabolic condition affecting brain development.

You wish to investigate this further with imaging. What is the best modality/examination for this issue?

- A** MRI of the head with spectroscopy
- B** PET CT
- C** Ultrasound of the head with Doppler
- D** CT of the head with contrast

000016825e0095e575

105

Vesicoureteral reflux (VUR) is a condition where urine flows back from the bladder into the ureter, potentially all the way up to the renal pelvis. VUR is believed to occur in 1-2% of all children. In children with urinary tract infections, reflux is found in 15-50%. Ultrasound (US) of the urinary tract is one of the modalities used for the assessment of VUR.

Which statement about ultrasound of the urinary tract is incorrect regarding VUR diagnosis?

- A** Ultrasound can be used to assess hydronephrosis, which is always associated with VUR.
- B** Ultrasound cannot rule out the presence of VUR.
- C** Ultrasound can be used for the diagnosis of associated urinary tract malformations.
- D** Ultrasound can be used to assess changes related to reflux nephropathy.

000016825e0095e575

106

What is an important sign of advanced disease when performing a CT scan in the evaluation of endometrial cancer?

- A** An unusually large tumour with high density/attenuation.
- B** The finding of peritoneal carcinomatosis.
- C** Enlarged lymph nodes in the pelvic region.
- D** Increased blood supply to the tumour area.

000016825e0095e575

107

A 14-year-old girl comes to the paediatric clinic with a 5-day history of increasing abdominal pain. While waiting for blood test results, the surgical on-call doctor refers her for an abdominal ultrasound and abdominal X-ray. As a registrar doctor (LIS3) at the radiology department, you choose to start with the ultrasound to see if you can find an explanatory pathology. The ultrasound reveals perforated appendicitis with several abscess-like loculations intra-abdominally, but you 'lose track' of all these fluid loculations. You decide to conclude the examination. She does not express strong pain upon palpation, and you assess her as not showing severe peritonitis.

What should you do now?

- A** Perform the X-ray, send the patient to the paediatric department and recommend a CT scan for further clarification within a short period of time
- B** Perform the X-ray and send the patient to the paediatric department
- C** Send the patient to the paediatric department and recommend an MRI for clarification the next day
- D** Send the patient to the paediatric department without the X-ray, but recommend a CT scan for further clarification within a short period of time

000016825e0095e575

108

A ureteropelvic junction obstruction is one of the most common conditions among congenital anomalies of kidney and urinary tract (CAKUT) and is the leading cause of persistent hydronephrosis in children after birth.

Which of the following alternatives can clarify if there is a ureteropelvic junction obstruction?

- A** Micturating cystourethrogram (MCUG)
 - B** X-ray pyelography and DMSA renal scan
 - C** Ultrasound of the urinary tract
 - D** X-ray urography and NM isotope renography
-

000016825e0095e575

109

A 28-year-old woman visits her GP due to bothersome itching in the genital area. Upon examination, you observe white plaques on the vulva. A biopsy is later taken, and the microscopic description is as follows:

There is hyperkeratosis. The epidermis is thin and there is basal degeneration. There is homogenisation of the upper dermis and a band-like subepithelial lymphocytic infiltrate.

What is the diagnosis?

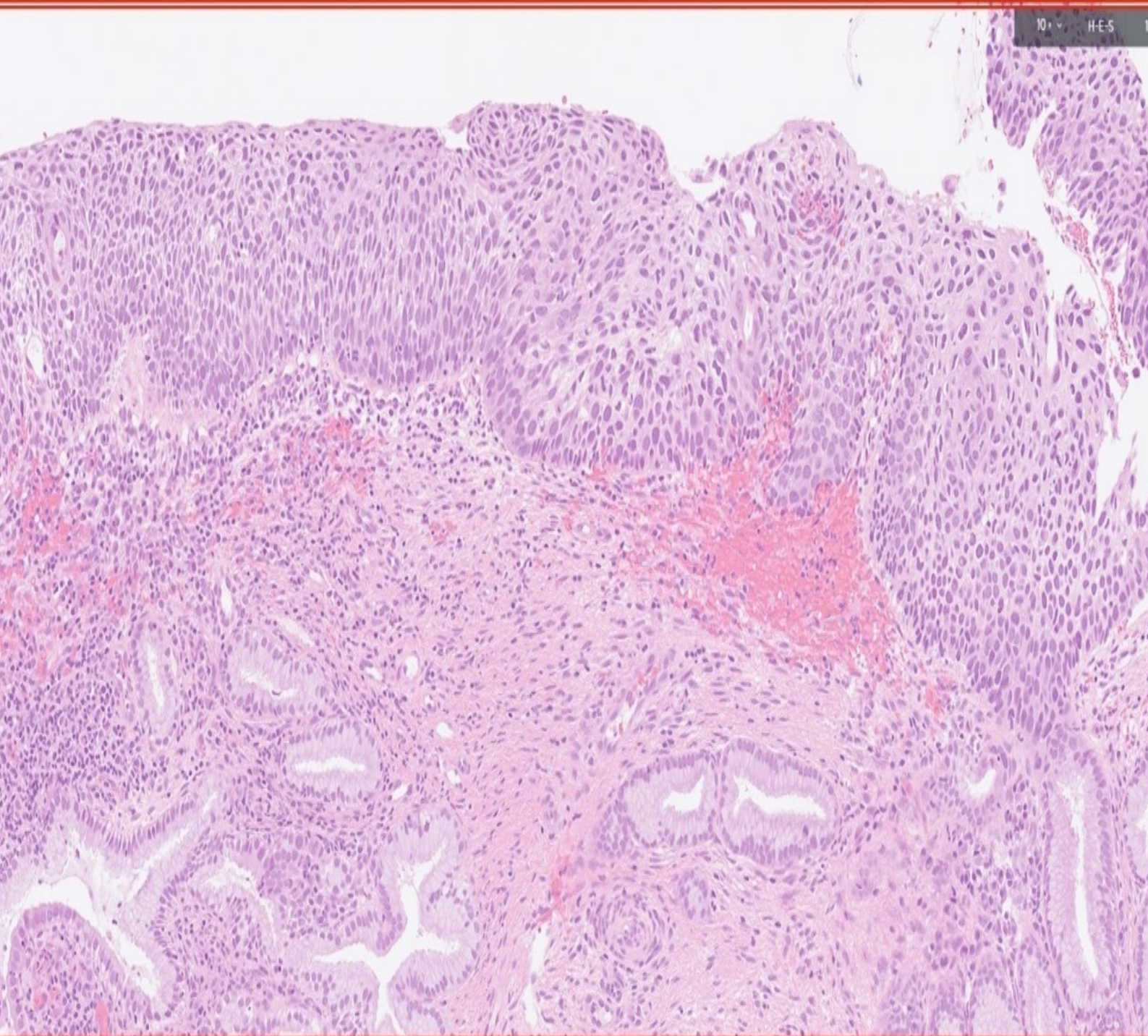
- A** Lichen sclerosus
 - B** Psoriasis
 - C** Chronic eczema
 - D** Fungal infection
-

000016825e0095e575

110

Below is an image from a histopathological section of a cervix.

What is the diagnosis?



- A** Atypia in the squamous epithelium, no atypia in the columnar epithelium
- B** The transformation zone is not presented
- C** Atypia in the columnar epithelium, inflammation in the stroma
- D** Atypia in the squamous epithelium and squamous cell carcinoma

000016825e0095e575

111

What does hypoplasia mean?

- A Normally sized organ, but with cells that are too small
 - B Small organ due to lack of cells
 - C Absence of an organ
 - D A hollow organ with an opening that is too small
-

000016825e0095e575

112

A 25-year-old woman has part of an ovary removed due to a cystic change. The microscopic description is as follows: Normal ovarian stroma is seen along with a tumour consisting of cysts lined by multilayered, keratinised squamous epithelium with underlying adnexal skin structures, adipose tissue, smooth muscle, and respiratory epithelium. No atypia or immature elements are observed.

To which group of ovarian tumours does this tumour belong?

- A Germ cell tumour
 - B Sex-cord stromal tumour
 - C Epithelial tumour
 - D Metastasis
-

000016825e0095e575

113

A woman is being examined due to abdominal pain. During laparoscopy, changes in the peritoneum are observed. A biopsy of the changes is taken. The microscopic description is as follows: The section from the peritoneal biopsy shows connective tissue with scattered glands lined by regular columnar epithelium. The glands are surrounded by a thin rim of cell-dense stroma without atypia. In the stroma, small blood vessels and both fresh and old bleeding are seen.

What is the diagnosis?

- A Adenocarcinoma
 - B Adenomyosis
 - C Endosalpingiosis
 - D Endometriosis
-

000016825e0095e575

114

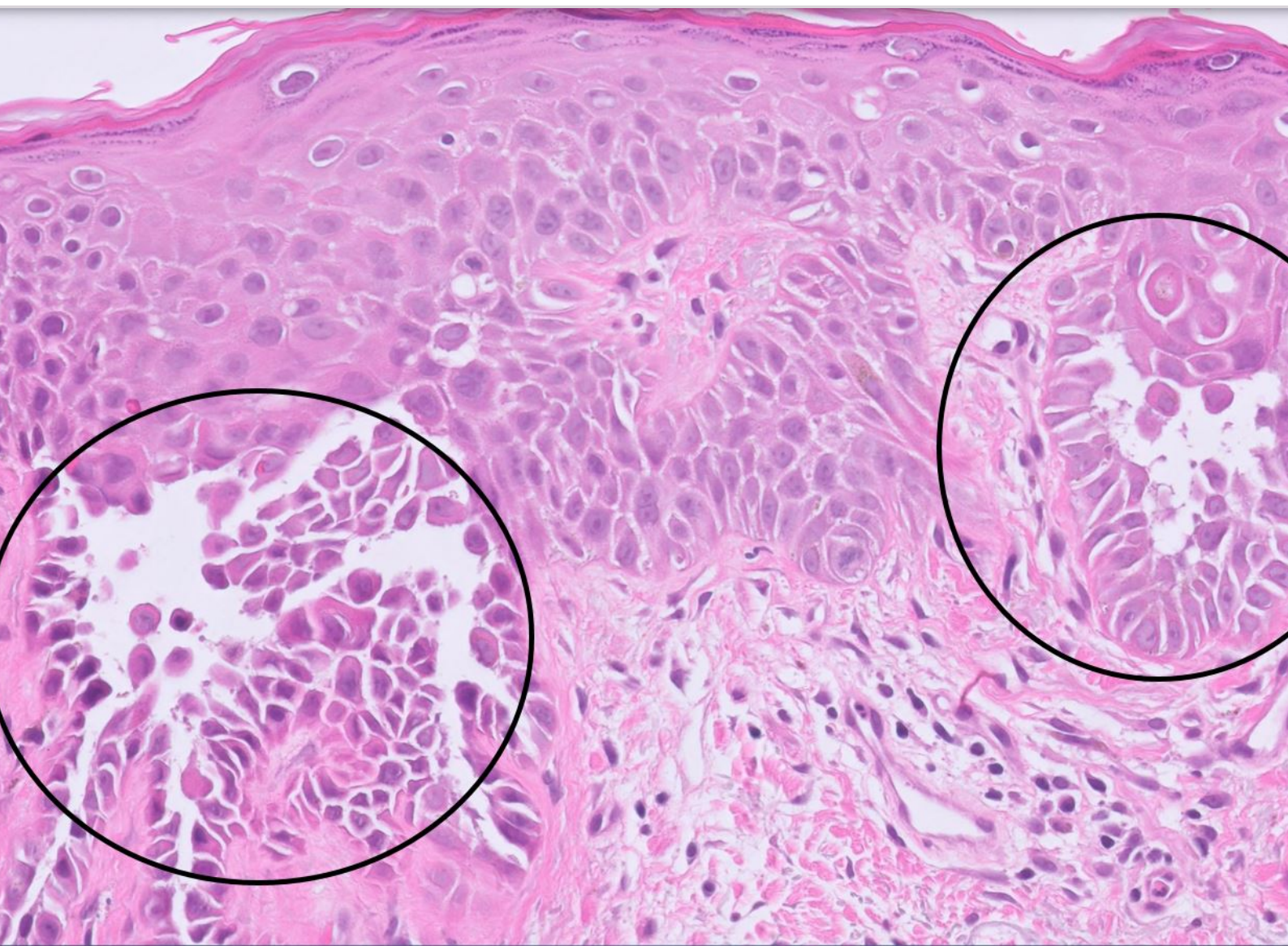
What does the skin condition acanthosis mean?

- A Diffuse hyperplasia of the epidermis
 - B Loss of cohesion between keratinocytes
 - C Thickened stratum corneum
 - D Hyperplasia of the stratum granulosum
-

000016825e0095e575

115

Below is a close-up image of the epidermis. What changes are seen in the two circles?

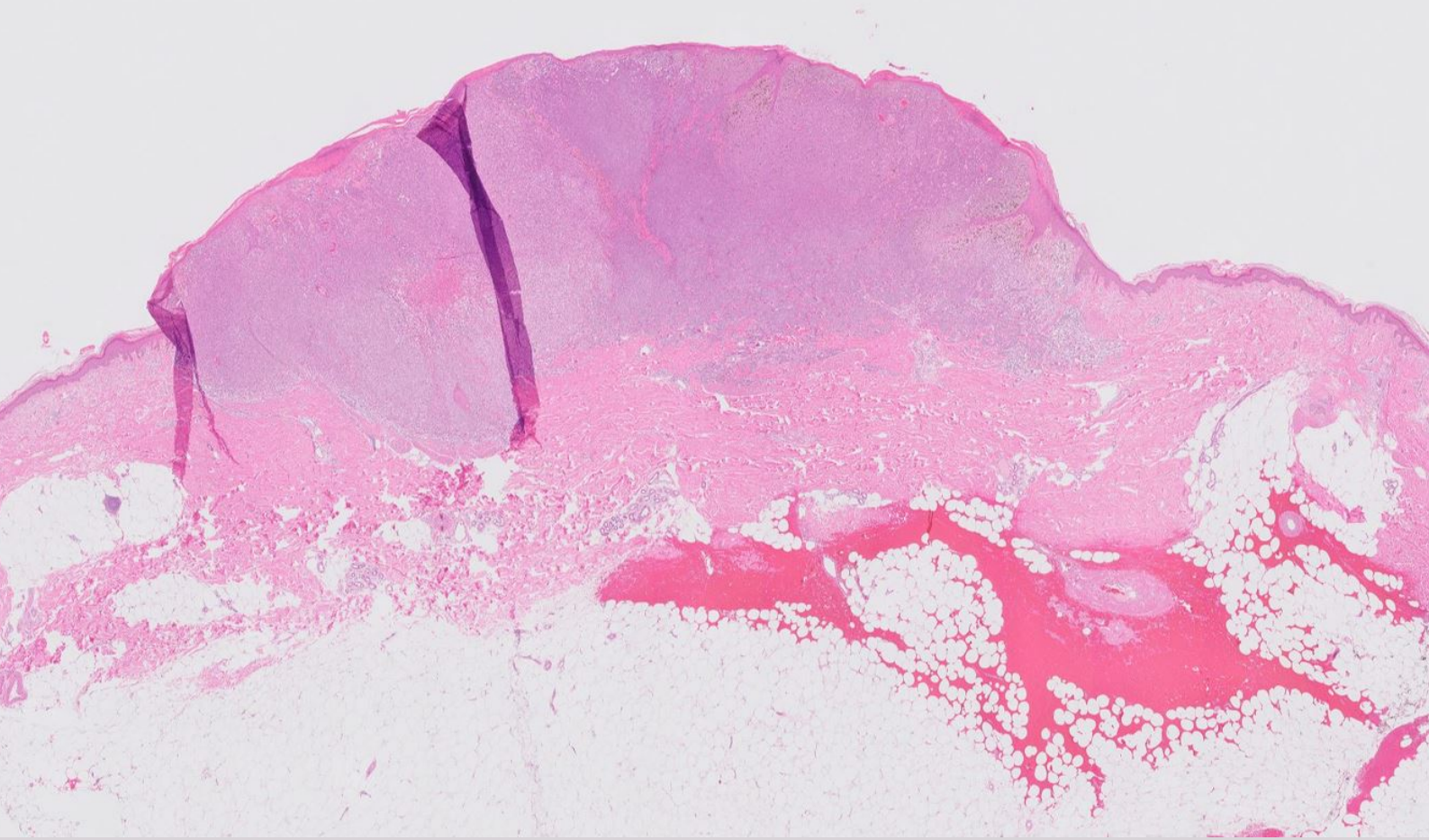


- A Parakeratosis
- B Basal degeneration
- C Acantholysis
- D Spongiosis

000016825e0095e575

116

The image below shows a section from malignant melanoma. Which Clark level do the changes correspond to?



- A** Level I
- B** Level III
- C** Level II
- D** level V

000016825e0095e575

117

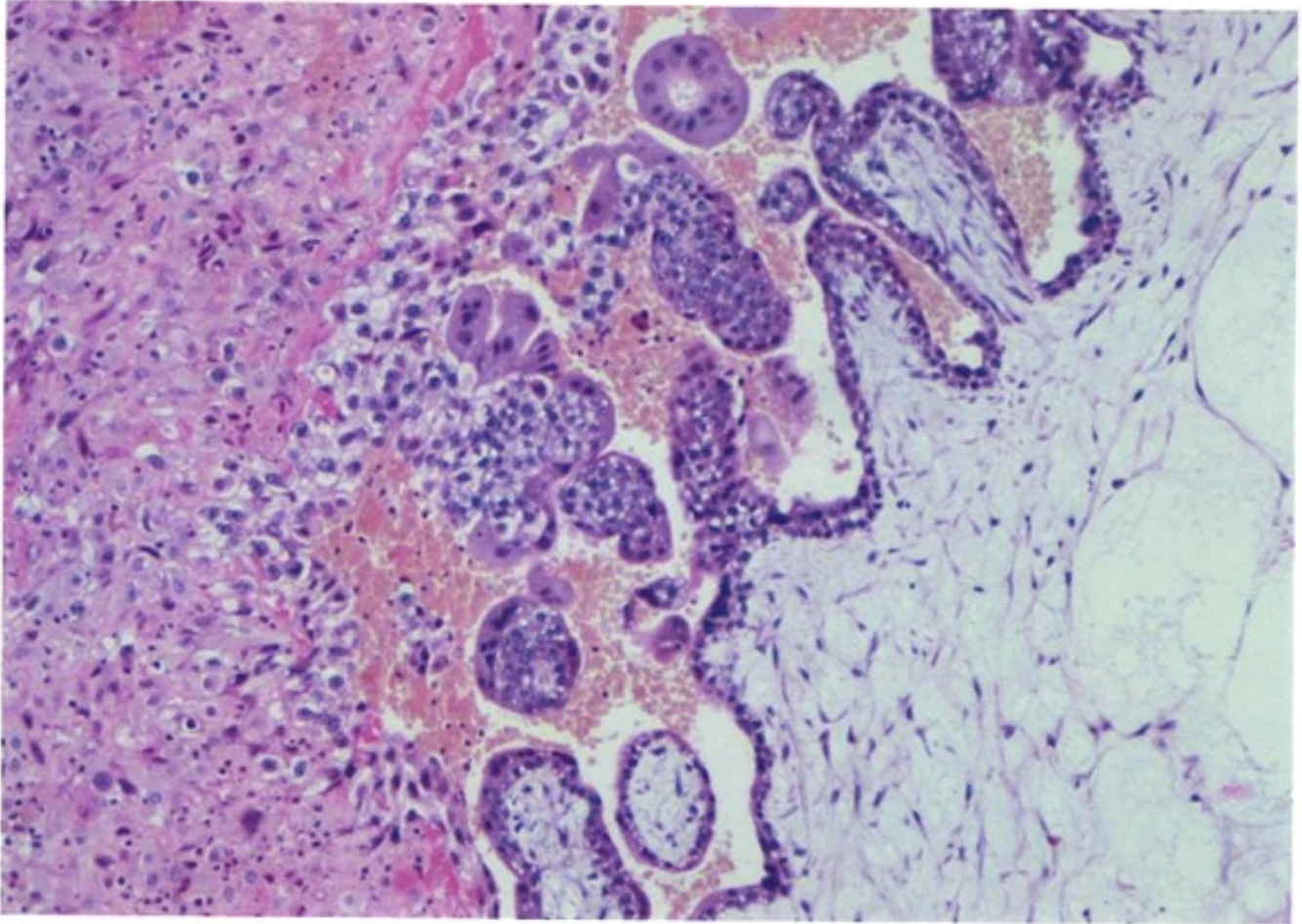
A hamartoma is

- A** normal-appearing cells/tissue elements, but located in the wrong organ.
- B** abnormal growth of cells/tissue elements that do not belong in the affected organ.
- C** an abnormal growth of cells/tissue elements that are normally found in the affected organ.
- D** a tumour with atypia, mitoses and necrosis, which has developed in the affected organ.

000016825e0095e575

118

Below is a microscopic image of early placental development, from the beginning of the third week of pregnancy. On the right, we see part of the extraembryonic mesoderm. In the middle, we see secondary placental villi, and on the left is part of the decidua. Which parts originate from the fertilised egg?



- A None of the parts
- B Extraembryonic mesoderm, secondary placental villi and decidua
- C Only extraembryonic mesoderm
- D Extraembryonic mesoderm and secondary placental villi

000016825e0095e575

119

People with atopic dermatitis are more likely to develop skin infections than people with psoriasis.

What is the main reason behind this?

- A Combination treatment with topical steroids and vitamin D analogues strengthens the skin in psoriasis
- B Psoriasis causes less itching and therefore less scratching of the skin compared to atopic dermatitis
- C It often requires more prolonged topical use of strong steroids in atopic dermatitis than in psoriasis
- D The production of antimicrobial peptides in the skin is reduced in atopic dermatitis, in contrast to psoriasis

000016825e0095e575

120

Some inflammatory diseases often cause little increase in C-reactive protein (CRP) in plasma. Which of these is it?

- A** Systemic lupus erythematosus
 - B** Bacterial pneumonia
 - C** Crohn's disease
 - D** Rheumatoid arthritis
-

000016825e0095e575