2020 - IID - MD4043 - Eksamen 1
Eksamensdato: 2020-05-27

1
A 33-year-old woman has an appointment with you to have her coil replaced. An hormonal coil was inserted 5 years ago, soon after she gave birth. The insertion was uncomplicated. She has regular, but quite sparse periods, about every month. She does not smoke and has no family history of cardiovascular disease.
You perform a gynaecolgical examination. You find the cervix, but no coil strings. What is the best way to proceed?

A You refer her for an X-ray overview of the abdomen
B You say the coil must have fallen out and insert a new one
C You say she cannot use the coil any more and give her a prescription for a combined pill
D You flush the vagina and fish around in the cervix using a swan neck forceps

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2
A previously healthy woman aged 29 has an appointment with you for her postnatal check-up after giving birth to her first child 8 weeks ago. According to the discharge summary from the hospital she gave birth at term. It was a vacuum assisted delivery because of prolonged second statge of labor. Other than this, she says that she had residuaal urine the first day after the birth, and was catheterised a couple of times. After this, voiding was adequate. The stay in the maternity ward was otherwise stated to be normal, and in the discharge summary her Hb after the birth was 12.7 g/dL. During the pregnancy she was seen alternately by you and the midwife for check-ups and the pregnancy was normal. Other than the pregnancy check-ups, you see that the last time you saw her was almost 3.5 years ago. What would be the most correct things to discuss at the check-up?

A Ask her to have the postnatal check-up/talk about the birth with the midwife; she can also give advice about contraception and take cervical cytology. Assess the need for somatic status in regard to BP/urine.
B Go quickly through the birth. Find out how she and the child are now. Ask in regard to urinating. Take her BP, pulse, and temp. In addition, check to see whether she has begun to loose the weight she put on during the pregnancy.
C Go quickly through the birth. Find out how she and the child are now. Ask in regard to urinating. Ask about contraception. Cervical cytology
D Before she has an appointment with you, you refer her for a consultation at the hospital because you consider that this experience was very tough, and a vacuum-assisted delivery is generally very dramatic. Any additional investigations can be performed by the hospital.

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3
Which samples are taken routinely at the first antenatal check-up?

A Hb, HbA1c, S-ferritin, HIV, syphilis, Hepatitis B, ABO and RhD typing and antibody screening
B Hb, S-ferritin, Hepatitis B, HIV, syphilis, ABO and RhD typing and antibody screening, as well as a test for asymptomatic bacteriuria
C Hb, S-ferritin, HIV, Rubella status, ABO and RhD typing and antibody screening
D Hb, S-ferritin, Hepatitis B, HIV, syphilis, ABO and RhD typing and antibody screening, chlamydia, and a test for asymptomatic bacteriuria

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4
Infection with parvovirus B19 (erythema infectiosum) is also known as the 5th childhood disease. This infection in pregnant women sometimes results in severe anaemia in the fetus. Why do most fetuses not get the infection, even when the pregnant woman has been infected?

A The infection is only dangerous for a fetus that has growth retardation
B The mother's IgM antibodies pass the placental barrier and quickly protect the fetus against serious infection
C The mother's IgM antibodies pass the placental barrier and protect the fetus if the mother has had the infection earlier in life
D The virus does not normally pass the placental barrier, and the infection only occurs when there has been bleeding between the maternal and fetal circulation.

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5
What do we mean by vasa previa?

A The umbilical cord is inserted centrally in a placenta previa
B Fetal blood vessels lie across the internal cervical opening
C The umbilical cord can be palpated in the vagina during the delivery
D The umbilical cord is inserted on the edge of a placenta previa

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6
A 33-year-old woman has an appointment with you for check-up after she gave birth to her first child a week ago. It was an uncomplicated vaginal delivery at term. Before the pregnancy she had generally been healthy and used no regular medicines. The last few days of the pregnancy she had signs and symptoms of preeclampsia. She was then admitted in gestation week 39+0 with a blood pressure of 165/107 and 3+ proteins in her urine. After being induced, she had an uncomplicated birth of a boy weighing 3300 g. The patient was discharged from hospital after 5 days with BP 140/80 and Trandate treatment (lowers blood pressure) 100 mg x 2. Today she complains that she feels tired and has some frontal headache.
BP at today's check-up with you is 160/107, 165/100 and 155/96. Urine dipstick 4+ blood otherwise negative.
As her GP, what is the best way to manage this situation?

A You increase the blood-pressure lowering medicine and give her a follow-appointment in 3 days
B You complete the check-up and think that the blood pressure will normalise spontaneously
C You refer her to Renal Medicine Outpatients querying whether she is developing chronic hypertension
D You recommend a new check-up with you in 1 week. Continue with an unchanged dose of the blood-pressure lowering medicine

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7
A 30-year-old woman who is pregnant for the first time, and so far has had a normal pregnancy, has an appointment with you her GP. She has been very well and worked until she started maternity leave in week 37. She has attended the routine antenatal check-ups. After she started maternity leave she has had problems with itching, particularly on the palms of her hands and on her stomach.
You notice that there aren't any scratch marks, and when asked she says that she itches most at night.
What is the best way to deal with this situation?

A You recommend soothing creams because the skin on the stomach can itch considerably as it gets stretched.
B You check her blood pressure and urine and ask her to come back fasting the next day for blood tests.
C You phone in for a prescription for antihistamines for her
D You refer her the same day as emergency help to Maternity Outpatients, because itching during pregnancy can be dangerous.

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8
At the first antenatal check-up in gestation week 12 you measure a blood pressure of 145/95. What will you do?

A Refer to the hospital for assessment within one week.
B Start immediate treatment with labetolol (trandate) to avoid a further increase in blood pressure.
C Give lifestyle advice and start treatment with an ACE inhibitor to avoid a further increase in blood pressure.
D Agree an appointment in a couple of weeks. If the BP measurement is also elevated then, you will perform a 24-hour blood pressure measurement.

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9
Which of the following presentations cannot be delivered vaginally?

A Frank breech (flexed hips and extended knees)
B Occiput posterior
C Face presentation
D Shoulder presentation

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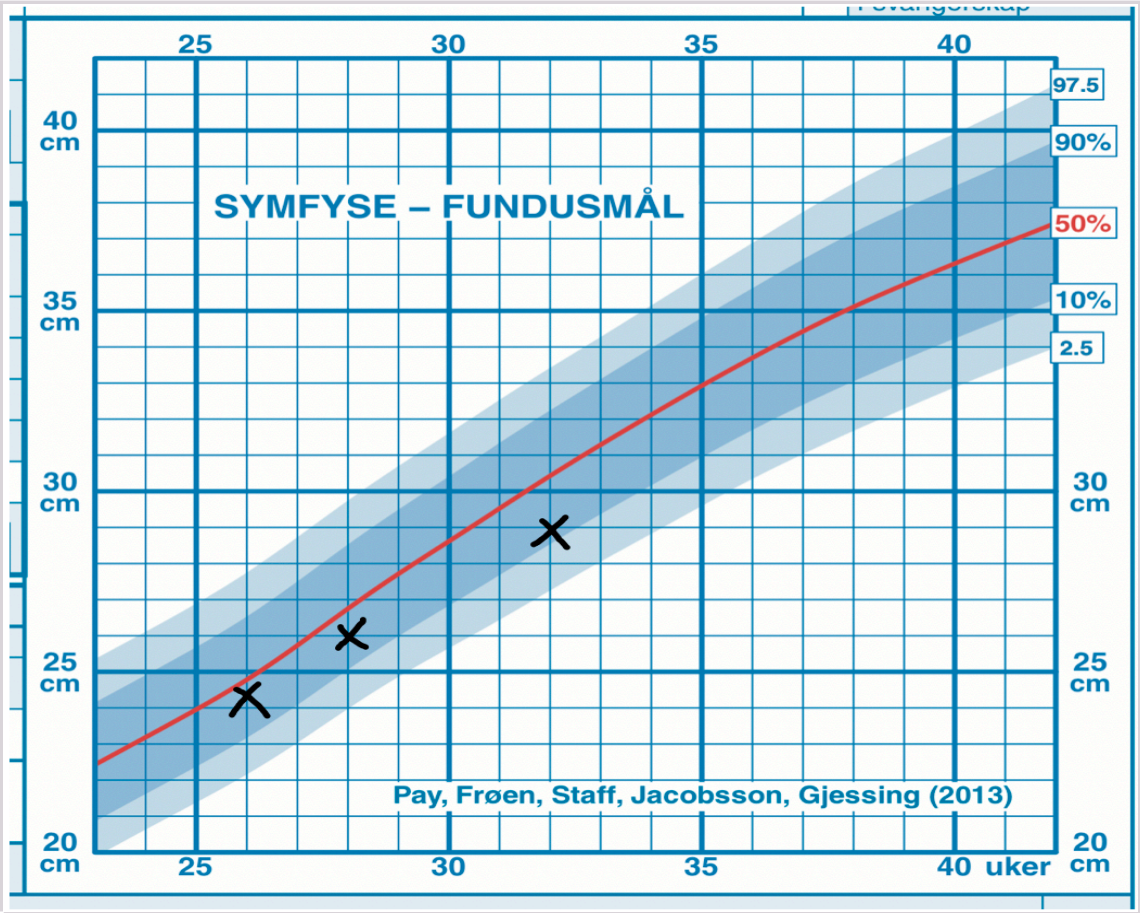
10
A 27-year-old, healthy, first-time pregnant woman has an appointment with you her GP. She is pregnant in gestation week 36+1. She has attended regular check-ups with you throughout the pregnancy. She feels well. She feels the baby moving every day. You measure a normal blood pressure and find a negative urine dipstick. Using Leopold's maneuver you find the fetus is in the head position. You measure the symphysis-fundus height (SF height) to be 29 cm. The image below displays an extract from her Personal Maternity Record.
What is the most correct course of action?



A You send a referral to the Maternity Outpatient Clinic for a speedy assessment because you have found a low SF height.
B You ask her to come back for a new check-up in one week because her SF height is a little low today.
C You tell the woman everything looks fine and give her a new appointment with you in two weeks' time in accordance with the national guidelines on maternity care.
D You send her directly to the hospital because you find a low SF height.

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11
What is considered to be the median length of gestation in Norway (median length from the first day of the last menstruation to birth)

A 280 days
B 259
C 294
D 283

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12
A 30-year-old woman who is pregnant for the first time has heard that the birth will injure the pelvic floor and result in urine leakage. She has been given much contradictory advice on pelvic floor exercises in pregnancy and asks you what advice she should follow. What would be the best advice for her?

A You encourage her to avoid pelvic floor exercises until she has finished having children
B You encourage her to start systematic strengthening exercises of the pelvic floor muscles
C You encourage her to train very carefully to avoid enlarging the muscles and prolonging the birth
D You encourage her to wait with training the pelvic floor muscles until after the birth

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13
A 67-year-old woman is being investigated for postmenopausal bleeding. Gynaecological examination reveals normal findings at inspection, the uterus is the normal size at bimanual palpation and you do not palpate any masses. Transvaginal US reveals an irregular 12 mm intrauterine mass. The ovaries measure 2x3 cm in diameter. You take a pipelle biopsy and the result shows the presence of endometroid adenocarcinoma.
What is the most correct investigation for this patient now?

A CT thorax/abdomen/pelvis + MRI pelvis
B CT thorax/abdomen/pelvis
C Surgical staging
D Diagnostic hysteroscopy

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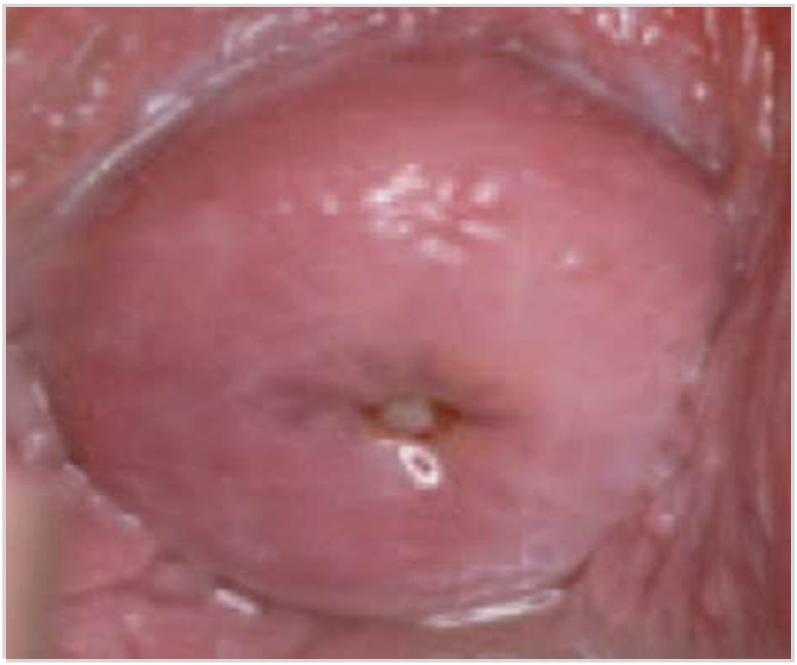
14
A 21-year-old woman makes an appointment with you for a cervical cell test. She has a cousin who was recently diagnosed with cervical cancer and is very worried. The patient is healthy and takes no medicines. She has regular periods, no spotting or postcoital bleeding. You perform a gynaecological examination. You inspect the cervix, which you can see in the image below.
What is the most important next step?



A Take a cervical sample for cytology and an HPV test
B Refer the patient to the Department of Medical Genetics for gene testing
C Ask her to make an appointment for a cervical test in 4 years
D Refer the patient to a gynaecologist for colposcopy

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15
What is the most common histologic type of vulvar cancer?

A Basal cell carcinoma
B Adenocarcinoma
C Malignant melanoma
D Squamous cell carcinoma

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16
A 31-year-old woman has a pathological cell cytology (pap smear). The patient's cervical cytology revealed high-grade intraepithelial squamous cell lesion (HSIL). This was followed up with colposcopy and biopsies from the cervix. The biopsies also demonstrated high-grade cervical intraepithelial neoplasia (CIN III) and therefore conization was performed afterwards. What are the most typical long-term complications of this intervention?

A Urinary incontinence and urine retention
B Abscess and chronic pelvic infection
C Constipation and fecal incontinence
D Cervical incompetence and cervical stenosis

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17
Which contraceptive can cause reduced bone density?

A Minipill
B Contraceptive implant
C Hormonal coil
D Contraceptive injection

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18
Which condition or finding is not a common cause of irregular vaginal bleeding in a 17-year-old girl?

A Polycystic ovaries
B Ectropion
C Cervicitis
D Cervical polyp

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19
Which statement about PCOS is most correct?

A Most women with PCOS have to use in vitro fertilisation to become pregnant
B Overweight and PCOS increase the risk of spontaneous abortion
C Women with PCOS more frequently have uterine malformations
D About 25% of all women with PCOS remain childless even after in vitro fertilisation treatment (IVF treatment).

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20
A 23-year-old woman contacts you her GP because of stomach pain that has lasted for 3 days. She is pregnant with 16 weeks' amenorrhea. She describes a nagging pain in the lower part of the abdomen, a littel pale pink discharge and frequent urination. You are also her mother's GP, who has had conization for severe cervical dysplasia.
Urine dipstick reveals leukocytes 3+, nitrite+, sent for culture. At gynaecological examination, the cervix is closed and macroscopically unremarkable. You see no signs of brownish fluor albus or fresh bleeding. At bimanual palpation, the uterus is enlarged corresponding to the amenorrhea and there is slight palpation tenderness over the symphysis.
What is the most correct course of action?

A Refer her for Outpatient ultrasound investigation with the gynaecologist within one week
B Start treatment for a urinary tract infection
C Take cervical cytology and HPV
D Refer her to a gynaecologist for ultrasound investigation the same day

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21
Why have many clinicians been sceptical about diagnosing personality disorders in adolescents?

A Because such problems cannot be diagnosed in adolescents
B Because such problems only develop in adults
C Because there are no good treatments for children and adolescents with these problems
D Because adolescents are still developing and it is thought that there is a high risk of pathologising normal development.

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22
Severe behavioural problems (Conduct disorder) in 4-to-8-year-old children represent a significant risk of criminality as an adult.
Which treatment option is most effective?

A A manual-based structured intervention programme for children and parents, schools and nursery schools such as "De Utrolige Årene" [The Incredible Years]
B Guidance from the municipal Child Welfare Services for the parents on how to set boundaries for their children.
C A manual-based structured intervention programme for children that is based on cognitive behavioural therapy such as "Coping Cat".
D Guidance from department of Child and Adolescent Psychiatry to services such as Child Welfare Services, pedagogical-psychological services, health sister and school.

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23
Why are children with ADHD susceptible to develop attachment disorder?

A Attachment disorder is a part of disturbed brain development
B The parents of children with ADHD have poorer parenting ability
C Children with ADHD are demanding children and there is an increased risk of burden on the parents of children with ADHD
D Children with ADHD are demanding children

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24
Johanna 16 years of age, "I tried hashish for the first time before I was 16. Friends said it would help me relax and concentrate after I started at high school. It helped for the first six months, but then I began to forget things and get more anxious. Smoking increased over the spring and was the only way I could relax or have fun. My schoolwork went downhill and I failed two subjects in the spring. My mother had noticed my red eyes and poor health and thought I was sick. She took me to the GP who understood the problem." As the GP, what do you do?

A Discuss the problem with Johanna and explain that her mother must be informed to be able to help her
B Notify the parents, school and community sister
C Refer the patient for cross-disclipinary specialised addiction treatment
D Give Johanna several individual appointments

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25
Disorganised attachment predicts development of social and behavioural problems in the child. Is this statement correct?

A No, social and behavioural development is not affected by attachment patterns
B Both yes and no. Disorganised attachment predicts social problems, but not behavioural development, in children
C Yes, a disorganised attachment pattern is a low-moderate predictor for development of social and behavioural problems
D Yes, a disorganised attachment pattern is a strong predictor for psychopathology in children

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26
You are the GP. A 14-year-old girl and her mother attend your surgery. The mother is concerned because the girl no longer wants to eat with the rest of the family, and her menstrual periods have become irregular after having been regular. She wants to eat alone, refuses to eat sauce, pasta, rice, butter and foods containing fat. She has lost 5 kg over the last 3 months. In addition she is exercising more and becomes very angry if she can't exercise. The girl believes her parents' concern is over-exaggerated, because she is not vomiting, is active and eats more healthy. She believes she is too solid and wants slimmer thighs. At examination you find: BP 90/60, pulse 50 soft but regular, height 160 cm, 40 kg, corresponding to less than the 10th percentile/height. Normal blood tests.
What further investigations and treatment do you consider to be most correct?

A Medical history, extended blood tests, map her diet and training patterns and at the same time refer her to the specialist health services (BUP - Child and Adolescent Psychiatric Services) for treatment.
B You encourage the parents to let the girl eat what she wants, to see if she will eat with the rest of the family and reduce the conflict level in the family.
C Because the patient experiences herself to be healthy and appears in good general health, but not motivated for treatment, further action now is not appropriate. You encourage the mother and patient to contact you if the situation gets worse or causes more concern.
D Because the weight loss has happened gradually over several months and she appears to be in good general health, it is reasonable to agree a follow up appointment in a couple of weeks' time. You encourage her to increase her dietary intake until the next appointment.

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27
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A Bulimia nervosa
B Anorexia nervosa
C Atypical anorexia nervosa
D Binge eating disorder

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28
Some parent education programmes have demonstrated a good effect on disorganised attachment patterns in children. Some of the core components of such programmes are:

A Focussing on quality time with the child through playing and stimulating to be social
B Help the child to develop good learning strategies to stimulate better school performance
C Providing comfort and care, and being with the child when they experience difficult emotions
D Teach the child strategies to stop thinking about traumatic memories

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29
A mother attends your GP surgery with her 5-year-old son. She is very concerned about what is happening in nursery school. She experiences him as a very clever boy; she mentions that he knows more about outer space than she does and that he has already taught himself to read. She says that things go well at home, he is a very kind boy who is occupied with his things and requires little activation from his parents. She says that as a family they like to have fixed routines and rarely have visitors to the home. She says it can be very difficult when they want to leave the house because he is so focussed on his activity. Moreover the nursery school has reported concerns that the boy gets very angry and in conflicts if he does not get to do what he wants, and that he does not take part in games with the other children. The boy is reading a book while his mother is talking. He does not take part in the conversation, and does not make eye contact. He sudddenly talks loudly and in a monotone voice about the mini planet Pluto, but does not appear to be interested in what his mother thinks about this. You suspect an autism spectrum disorder. What is the recommended treatment?

A Protecting the child from contact with the outside world
B Medication treatment
C Individual psychotherapy for the child to increase adaptation to others
D Psychoeducation and facilitation for the child with everyone he meets

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30
You consider it to be necessary to admit a boy to an acute psychiatric day unit for adolescents. The patient lives in a foster home, placed there pursuant to Section 4-4 of the Child Protection Act [barnevernsloven] where the parents have voluntarily agreed to placement in a foster home as a support intervention without a care order. The patient is 15 years old and resists admission, but the foster parents, biological parents and responsible person in the Child Welfare Services see the need and want this to happen. Who has to give consent to admit the boy?

A The foster parents must give consent because he lives with them.
B You must get consent from the boy's biological parents because the child has not been taken into care.
C The responsible person in the Child Welfare Services must give consent because they are responsible for the assistance with foster home placement.
D You must section the boy if he does not consent because he is 15 years old and considered to have capacity to consent to medical treatment.

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31
You are the GP for a 6-year-old boy who has started in 1st year at school. You know the family and boy well, and have previously referred him to BUP for suspected ADHD. One day you are called by the nurse at the school who says that the boy has serious behavioural problems and easily gets into conflict with other children. The day before the boy had hit another boy and been taken aside by the teacher. He then started crying and said that "the teacher musn't tell his parents or he would be given a beating". The school nurse wants to help to deal with this. What is the most correct thing to do in this situation?

A You call the Child Welfare Services with a concern notification without telling the parents in advance.
B You call the boy's mother, who is also your patient, and tell her what the boy has said.
C You ask the school nurse to call the parents in to a meeting to tell them about the boy's problems and what he has said.
D You call the intake team at BUP and ask for the boy to be prioritised for fast-track admission.

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32
You are the doctor at the Child and Mother Clinic. A boy attends for his 1-year check-up. You examine his scrotum and find one testicle on the left side, but none on the right. What do you do?

A You suspect testicular retention. You examine the groin to determine whether there is a testicle present. Regardless of the findings, you refer the boy to a urologist or paediatric surgeon for assessment
B Reassure the parents saying that the testicle will eventually drop down into the scrotum
C Conclude that the boy lacks a testicle and ask the parents to contact the urologist when he is fully grown for a testicle prosthesis
D You suspect testicular retention. You examine the groin but cannot definitely feel a testicle. You conclude that the boy lacks a testicle and do nothing further

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33
A four-week-old boy was admitted with a possible pyloric stenosis. Which of the following statements is most useful when making a diagnosis?

A Generally results in hypochloremic metabolic acidosis
B Generally diagnosed best by overview X-ray of the abdomen
C Generally diagnosed best using ultrasound of the abdomen
D Generally presents with bile-coloured projectile vomiting

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34
A couple with a 2-month-old boy comes to the acute treatment centre. The boy has been lethargic and restless all day. He has vomited and the vomit has a green colour. His abdomen is distended. He had a bowel movement the day before, but today the parents have observed neither a stool nor flatulus. Which condition do you suspect?

A You suspect constipation and recommend that the parents give the child an enemea
B You suspect intestinal obstruction such as intestinal malrotation/volvulus. You refer him to the nearest hospital that has a paediatric surgeon.
C You suspect gastroenteritis and refer to the Paediatric Department for fluid therapy
D You suspect milk allergy and refer for elective investigations with the paediatrician

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35
A 1-month-old boy comes with his parents to the acute treatment centre-in clinic. The boy is lethargic and unwell. He appears to have waves of stomach pain when he cries and can't be comforted and pulls his legs up towards his stomach. His mother shows you a nappy with some mucous and blood.
What do you suspect and what do you do next?

A You suspect enterocolitis and refer him to the Paediatric Department
B You suspect gastroenteritis and recommend high fluid intake
C You suspect acute constipation and give the boy a Microlax enema
D You suspect invagination and refer him as emergency help to the Surgical Department

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36
A mother and her 12-month old child attend for a check-up at the family practice because they have recently moved here as refugees from a country in central Africa. The boy has been relatively healthy all his life, continues to be solely breastfed and is growing reasonably well. His mother nevertheless says that he has been a little pale recently and, because he has also had a slight temperature, cough and runny nose for the last two days, haematology is performed giving as the only finding a low Hb of 8.8 g/dL (ref. 10.5-13.1).
What is the most probable cause of the anaemia?

A Iron deficiency
B Sickle cell anaemia
C Malaria
D G6PD deficiency

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37
An 11-year-old healthy girl comes with her mother to the GP surgery because she has now had her first period. It is almost 2 years since her breasts started growing. Since the age of 3, she has grown around the 50th percentile (corresponds to 167 cm as an adult) for length versus age, and today she lies just below the 90th percentile with her 154 cm.
Which statement is probably correct about the height of the girl as an adult?

A She will end up above the 90th percentile (corresponds to above 175 cm)
B She will end up a couple of cm around the 75th percentile (corresponds to between 169 and 173 cm)
C She will end up a couple of cm around the 50th percentile (corresponds to between 165 and 169 cm)
D She will end up a couple of cm below the 25th percentile (corresponds to below 163 cm)

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38
Malin was born by vaginal delivery one week before term. Examination by the paediatrician on her 2nd day was normal, and mother and child were discharged after 48 hours in the Maternity Ward. One week after going home, Malin has a fever of 38.9 degrees and the mother calls the emergency clinic in the municipality. Malin has wet nappies, but is very lethargic. It is a 4-hour journey to the nearest hospital.
What is the correct course of action?

A Ask the mother to give paracetamol for the fever, and to take the child to the emergency clinic the next day if the fever has not gone down
B Order an X-ray of the thorax and ultrasound of the head at the nearest hospital and ask the mother to take Malin there
C Send an e-prescription for Penicillin to the nearest pharmacy and ask the mother to collect the medicine and start treatment the same day
D Ask the mother to take Malin to the nearest emergency clinic for a clinical examination

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39
A couple come to the walk-in clinic with a 1-month-old boy. Yesterday they saw a lump in his right groin. It was soft and could be pressed back. Today, it is hard, red and tender. They are unable to push it back in. The boy has not had a bowel movement today. What do you do?

A You suspect a tumour and refer for further investigations with a paediatrican.
B Refer him for Surgery as emergency help with a suspected incarcerated inguinal hernia.
C You suspect a swollen lymph gland due to a viral infection. You send him home and expect it will pass.
D You suspect an abscess and incise it under local anaesthetic

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40
A boy born at term of healthy parents after a normal pregnancy weighs 3550 g at birth. He is their first child. On day 3 after birth, the boy weighs 3350g, and his mother has started to produce milk. At examination, the boy is a little listless and his skin and sclera are yellow.
Which blood tests should be taken to determine treatment and possible cause?

A Infection status and acid/base
B Total bilirubin, Coombs' test, ABO and Rhesus
C Conjugated and unconjugated (indirect) bilirubin
D Haemoglobin, leukocytes and thrombocytes

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41
As a doctor in the Paediatric Emergency Clinic you see a four-year-old girl who now weighs 15 kg, is acutely ill, and appears to be dehydrated. She is admitted and given IV fluids becasue she cannot keep anything down and is debilitated. She continues to vomit as much during admission as the day before, i.e. 5 bouts of vomiting, in addition to four bouts of diarrhoea per day, and she has had a persistent fever of around 38.5 degrees Celcius. Recently she weighed about 16 kg.
What total volume of fluids should be given in the first 24 hours?

A 1500-1800 ml
B 2500-2800 ml
C 3000-3300 ml
D 2000-2300 ml

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42
A 6-year-old girl attends your doctor's surgery because her parents think her friends are growing faster than her. You see that she has moved from lying between the 50-75th percentile for length at the last measurement at 4 years of age and now lies directly below the 25th percentile after having grown 8 cm over the last two years. Target height based on the parents is 170 +- 9cm (corresponds to between 10-25th percentile and up to about the 97th percentile).
What statement about the girl's growth is correct?

A Pathological growth and rate for this age group
B Normal growth and rate for the age group
C Pathological growth because she also lies at the extreme edge of the target height based on her parents
D Normal growth because she lies within the target height derived from her parents

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43
A 6-week old boy is admitted with a fever and poor general health that has persisted for a day. A urinary tract infection is diagnosed with high CRP and growth of enterococci in the urine. He is treated with antibiotics and responds well. As part of the investigations, an ultrasound is performed which reveals dilation of the ureters and renal pelvis bilaterally and a half-filled bladder.
Which investigation should now be requisitioned?

A X-ray micturition (voiding) cystourethography
B DMSA scan of the kidneys
C New ultrasound of urinary tract (control)
D MRI of kidneys and urinary tract

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44
A low IQ score is used to diagnose intellectual disability. But such a diagnosis has widespread consequences for the individual. Low IQ score is not sufficient to make the diagnosis.
Which of these supplementary criteria are necessary to diagnose intellectual disability?

A A need for additional pedagogic follow-up in nursery school and school
B A lack of adapative behaviour based on age
C Abnormal behaviour
D Delayed motor development

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45
A 13-month-old boy who has recently begun in nursery school comes to the acute treatment centre after an episode with loss of consciousness, rolling of the eyes, rigidity, breath holding and perioral cyanosis. It lasted about 1-2 minutes. Afterwards he was dazed and tired for about 10 minutes before he became awake and responded as normal. His parents say that he has had a cold for 3 days, has kept touching his ear, and been whiny, and today feels a little hot. At examination at the emergency clinic his temperature measures 39.2, and at otoscopy the tympanic membrane in the left ear appears inflamed. He is snotty, whiny and does not want to be examined, but is considered to be awake and adequate neurologically, no neck stiffness. CRP 45 (ref. range <5). Blood glucose 4.0 (ref. range 4.0-6.0 mmol/L)
What should the acute treatment centre doctor do?

A Refer to the nearest Paediatric Department for admission after febrile seizures for observation, and any further investigations to exclude meningitis
B Refer to Outpatient EEG for suspected epilepsy
C Give Stesolid rectal liquid at the acute treatment centre to prevent more episodes as he still has a fever
D Give an antipyretic/painkiller for the ear infection and information about febrile seizures

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46
The mother of a six-week-old boy comes to the GP because her boy has a cough. The illness started six days ago with sneezing and a runny nose. His coughing has increased and at times causes his face to turn blue and he retches. The mother does not think he breastfeeds as well as he did earlier. An older brother, aged seven, has been coughing for three weeks, but has not been too affected.
At examination the child has no fever, is awake and gives good contact. His respiration is quiet, there is some nasal secretion, reddish injected mucous membranes in the throat, and his ears, heart, lungs and abdomen are normal.
The doctor takes the following tests at the surgery: CRP 12 mg/dl, (ref. < 5 mg/L), leucocytes 27.3 x 10^9/L (ref. 4–20.0 x10^9/L), Hgb 12.9 g/dl (ref. 9.0–16.6 g/dl), Strep A test negative.
Which diagnosis is most probable, and which action is important to initiate?

A Whooping cough. Take a whooping cough test, give erythromycin
B Bacterial respiratory tract infection. Give penicillin, Paracetamol in case of fever
C Whooping cough. Admit the child as an emergency to the hospital
D Viral respiratory tract infection. Wait and see for a few days, Paracetamol in case of fever

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47
A boy born of Norwegian parents and from a healthy family was admitted aged 18 months. From around 1 year of age he showed signs of growth stagnation, increasing tendency to diarrhoea, signs of failure to thrive and increasing abdominal circumference. Overview X-ray of the abdomen was interpreted to correspond to constipation. Laxatives were started which resulted in increased diarrhoea. At 15 months of age he underwent gastroscopy, the results of which were compatible with coeliac disease. This was not confirmed by blood tests and there was no improvement on a gluten-free diet. The clinical situation worsened and he has now been admitted aged 18 months. At examination you find an uncared for, hypertensive, febrile and emaciated boy. At closer examination you find sweaty skin, prolonged capillary refill, periorbital ecchymosis and several blue-purple spots and noduli in the skin. What is the most probable diagnosis for this boy?

A Physical abuse
B Acute lymphatic leukaemia
C Sepsis with disseminated intravascular coagulation
D Neuroblastoma

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48
5-month-old boy, born at term after a normal pregnancy has developed normally up to present. The last two weeks, the parents have noticed that he often appears distant and is difficult to make eye contact with, often throws out his arms several times after each other, and cries and appears unhappy. He makes contact in-between, gurgles and can appear happy. In regard to motor function, he appears more passive. His parents are concerned and have come to the Mother and Child Clinic.
What should the doctor at the Mother and Child Clinic do?

A Refer to Paediatric Outpatients for assessment
B Refer to the municipal physiotherapist for advice and interventions to promote development
C Reassure the parents saying that it most probably is a slightly lively Moro reflex
D Refer to the Paediatric Department for emergency assessment the same day

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49
You are the on-call doctor in the emergency clinic. A couple come with their 3-week-old girl who has been unwell all day and cried a lot. She is vomiting and cannot keep food down. The mother says that the vomit is greenish/bile coloured. When you examine the child, her abdomen is distended and the girl screams when you palpate. What is the correct course of action?

A You suspect intestinal malrotation/volvulus and refer the child as emergency help to the nearest hospital
B You suspect gastroenteritis and send them home recommending that they ensure she gets a lot of fluids
C You suspect milk protein allergy and refer for elective investigations at the nearest Paediatric Department

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50
You are a doctor in A&E and receive a 50-year-old woman with stomach pain which you believe is kidney stone pain. Which imaging diagnostics would you requisition to most quickly clarify the diagnosis?

A Ultrasound kidneys
B X-ray of the urinary tract
C CT urinary tract with contrast
D CT without contrast

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51
A 60-year-old man has an appointment with you his GP because of weak urine stream, more frequent urination and increasing nocturia over the last 5 years. The prostate is palpated to be firm, smooth and elastic in consistency throughout with a retained mid-furrow and is not enlarged. PSA value is 3.4 (0.01-4.1 u/L)
What should you do?

A Interpret the condition as benign prostatic hyperplasia and start treatment with a beta blocker.
B Interpret the condition as benign prostatic hyperplasia and start treatment with a 5-alpha-reductase inhibitor.
C Interpret the condition as benign prostatic hyperplasia and start treatment with a phosphodiesterase type 5 (PDE5) inhibitor.
D Interpret the condition as benign prostatic hyperplasia and start treatment with an alpha blocker.

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52
A previously healthy 27-year old man is admitted with increasing cough, problems breathing and fever over the last 14 days. In addition, he has back pain. He has been taking Phenoxymethylpenicillin 1.3 gr. x 3 daily as prescribed by the Urgent Treatment Centre without effect.
Blood tests reveal

Analysis	Result	Ref. range
B-Hb	13.5 g/dl	13.4 – 17.0
B-Leukocytes	6.4 x10**9/litre	3.7 – 10.0
B-Thrombocytes	214 x10**9/litre	145 - 390
B-SR	80 mm/hour	1 - 19
P-CRP	60 mg/litre	0 - 5
P-Sodium	141 mmol/litre	137-145
P-Potassium	3.8 mmol/litre	3.5 – 4.4
P-Creatinine	89 micromol/litre	60 - 105

X-ray of the thorax reveals bilateral, large, lung densities/infiltrates.
What should be done as the next step in investigations?

A Bacteriological examination of expectorate and haematoxylin and eosin (HE) staining of sputum which can be guiding for choice of antibacterial drug.
B Auscultation of the lungs and heart and bronchoscopy with sterile sampling of material from the bronchi.
C Consideration of possible penicillin-resistant bilateral pneumonia and assessment of change of antibiotic treatment to quinolones, e.g. Tarivid.
D Measurement of pulse and blood pressure and palpation of lymph nodes and scrotum.

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53
As a GP you see a 24-year-old man with a swelling in the right scrotum that has arisen over the last weeks and you believe it is a hydrocele. You use a torch to illuminate the scrotum and your findings support the suspicion of a hydrocele.
What is the next investigation or referral you should perform as the GP?

A You refer to Urology Outpatients to investigate for a hydrocele.
B You order CT testis to exclude a spermatocele
C You order ultrasound of the scrotum to verify the diagnosis.
D You perform a urinary dipstick to exclude an ascending urinary tract infection.

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54
What is the most common method for treating hydrocele in the testis in Norway today?

A Retrograde embolisation in the Radiology Department.
B Tapping and injection of a sclerosing agent.
C Elevation, diuretic and palliative treatment.
D Radical surgery with removal of membranes.

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55
A 78-year-old man contacts you his GP because of tiredness, an increasing need to urinate, decreased stream force and a tendency to urinary incontinence over the last 9 months. He has a symptom score (IPSS) of 24. PSA is 12. He passes about 200 ml unclear urine and using ultrasound you measure a residual urine of about 900 ml.
What is the first step in treatment, and further investigations?

A Insertion of a two-way catheter and referral to a Urologist
B Urine for culture and referral to a Urologist.
C Digital rectal palpation and referral to a Urologist.
D PSA follow-up in one week and referral to a Urologist.

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56
Thomas is 28 years old and previously completely healthy. There are no known cases of cancer in his family. Over the last few weeks he has felt a change in his left testicle. He has no symptoms, and it is not painful to touch. As his GP you want to exclude testicular cancer.
Which condition other than cancer can give palpable changes in the testis itself (within the tunica albuginea)?

A Leydig cell tumour
B Hydrocele
C Spermatocele
D Varicocele

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57
In order to make a diagnosis of prostate cancer, it is necessary to take biopsies via the anus. This is performed under local anaesthetic in the Urology Outpatient Clinic. Which statement about this procedure is correct?

A Low dose X-ray is used routinely to aim the needle into the prostate itself.
B The prostate is very resistant to infection and prophylactic antibiotics are not necessary.
C Routine, systematic biopsies are taken to ensure that the entire prostate is carefully examined.
D Routine tissue samples are only taken in the area that had been palpated as potentially malignant at rectal palpation.

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58
As a doctor in A&E you receive a 45-year-old man who is admitted with severe pain in the right testis and epididymis which is large, hard and red. You cannot examine him properly because of the pain. The pain has lasted 3 hours. What is the most probable diagnosis?

A Testicular cancer with acute bleeding
B Testicular cancer
C Testicular torsion
D Epididymitis

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59
Gunnar (55) has been diagnosed with high blood pressure at 3 check-ups. The average is 145/88 mmHg. He is otherwise healthy, but smokes 5 cigarettes a day. His weight is normal (65kg). His father had a heart attack when he was 60, but is still alive and healthy.
Which treatment option is the most correct?

A His blood pressure is only slightly increased. It is sufficient to check his BP when he returns at a later date for something else (opportunistic screening).
B Start treatment with a moderate dose of a calcium blocker
C Check BP again in 3-4 months
D Start treatment with a moderate dose of a calcium blocker and angiotensin II receptor blocker

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60
Kristin (24) has been shown to have hypertension with an average blood pressure of 170/105. She has no children, is studying economics and feels completely well. She is investigated and you find Renin 560 (H) and Aldosterone 150 (lower normal range).
What is the most probable diagnosis?

A Hypoaldosteronism
B Fibromuscular dysplasia
C Atherosclerotic renovascular disease
D Conn's syndrome

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61
Kristoffer (32) has been shown to have hypertension (average 178/103). He has started taking three medicines (ACE inhibitor, thiazide, and calcium blocker), but this has little effect (BP now about 160/100). You have taken various blood tests and have received the following results:
Hb 14.1 (13.5-17.5), Na 141 (135-145), K (3.9 (3.5-4.6), creatinine 115 (65-105), uric acid 550 (150-430), TSH 2.2 (0.5-4.6), free T4 12.5 (11.5-19,5), Renin 4 (10-45) Aldosterone 675 (150-810), glucose 7.1 (3.5-6.5), HbA1c 5.7% (4.0-5.6%), urine dipstick Albumin - Erythrocytes- Leukocytes+ Nitrite-.
What is the most probable cause of his treatment resistant hypertension?

A Hyperaldosteronism
B Diabetic nephropathy
C Renal artery stenosis
D Hypothyroidism

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62
Anna (62) had high blood pressure at her last check-ups (average 145/80). She is healthy but has had diabetes type 2 for the last 3 years. She is being treated with Metformin 1000mg x2. Blood tests are satisfactory, including HbA1c 7.4%, urine dipstick shows Leukocytes +, Albumin ++, otherwise negative.
Which action is the most correct?

A Slightly increased blood pressure should be treated. She is given a prescription for an ACE inhibitor at a high dose (Lisinopril 20 mg x1)
B Slightly increased blood pressure should be treated. She is given a prescription for an ACE inhibitor at a moderate dose (lisinopril 10mg x1) plus low dose thiazide (hydrochlorthiazide 12.5 mg x1)
C Slightly increased blood pressure should be treated. She is given a prescription for a calcium blocker at a moderate dose (amlodipin 5 mg x1)
D No new actions are necessary now; new check-up in 6 months.

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63
Petter (83) attends for a check-up. He lives at home, but had a stroke 5 years ago with moderate sequelae in the form of decreased strength in his right arm. He has a home nurse x2 per dag. He feels slightly tired and wonders if he can have more help in the house. His appetite is slightly less than before, and he is beginning to feel his age. He has had high blood pressure for many years and is being treated with three different medicines (Lisinopril 10 mg x1, Amlodipin 10 mg x1, Hydrochlorthiazide 25 mg x1). He does not complain about side effects and his BP is generally around 150/75 mmHg.
Which action is the most correct?

A Discontinue thiazide due to the risk of developing DM and increase ACE to the maximum dose
B No change to his medication
C Discontinue thiazide and the calcium blocker
D Discontinue thiazide and ACE inhibitor

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64
Kristin (75) has had high blood pressure on 3 occasions. The average is 165/75 mmHg. She is otherwise healthy and takes no medicines. Blood and urine show nothing unusual.
Which statement/alternative is most correct?

A There is an indication for treatment and the treatment goal is 120-130/70-80 because she is otherwise healthy
B There is no indication for treatment for this blood pressure in this age group
C There is an indication for treatment and the treatment goal is 140-150/70-80 because of her high age
D There is an indication for treatment and the treatment goal is 130-140/70-80

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65
Kåre (55) has been shown to have high blood pressure on several occasions, the average is 165/94. He is otherwise healthy, and there are no other risk factors based on the medical history and blood/ urine tests.
Which treatment option is most correct?

A ACE inhibitor at a relatively high dose (Lisinopril 20 mg x1)
B Thiazide at a low-moderate dose (Hydrochlorthiazide 25 mg x1)
C Calcium channel blocker at a moderate dose (Amlodipin 5 mg x1) plus ACE inhibitor at a moderate dose (Lisinopril 10 mg x1)
D Calcium channel blocker at a moderate dose (Amlodipin 5 mg x1)

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66
A 28-year-old man has had type 1 diabetes for 9 years. He attends for check-up with his GP for the first time in 3 years. He feels well. Blood pressure is 114/70 mmHg.
Lab.:
creatinine 97 micromol/L (ref. 60–105 micromol/L);
e GFR ≥90 (ref. ≥90);
HgbA1c 66 mmol/mol (ref. 28–40 mmol/mol);
Urine dipstick: negative (ref. negative),
u-albumin/creatinine ratio: 24 mg/mmol (ref. <3 mg/mmol)
The urine findings are checked with the same result
What is the correct assessment?

A He has poorly regulated diabetes with irreversible kidney damage. However, optimisation of his blood sugar can reduce progression of the kidney damage.
B He has poorly regulated diabetes and a high risk of end-stage renal failure within a few years
C He has poorly regulated diabetes with the onset of kidney damage. Optimisation of his blood glucose can reverse the kidney damage.
D He has poorly regulated diabetes with significantly increased albumin excretion in the urine. The most important action is to start on an ACE inhibitor or Angiotensin II blocker

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67
A 28-year-old man has had type 1 diabetes for 9 years. He attends for check-up with his GP for the first time in 3 years. He feels well. At clinical examination his blood pressure is 164/90 mmHg, otherwise normal findings.
Lab.:
creatinine 87 micromol/L (ref. 60–105 micromol/L);
e GFR ≥90 (ref. ≥90);
HgbA1c 62 mmol/mol (ref. 28–40 mmol/mol);
Urine dipstick: protein +, blood +++, otherwise negative (ref. negative),
u-albumin/creatinine ratio: 45 mg/mmol (ref. <3 mg/mmol)
The urine findings are checked with the same result
What is the correct assessment?

A He has poorly regulated diabetes with the onset of kidney damage. Optimisation of his blood glucose can reverse the kidney damage.
B He has poorly regulated diabetes with irreversible kidney damage. However, optimisation of his blood glucose can slow the progression of the kidney damage.
C He has poorly regulated diabetes but, with significantly elevated albumin excretion in the urine, the most important action is to start on an ACE inhibitor or Angiotensin II blocker
D He has poorly regulated diabetes with the onset of kidney damage, but a condition other than diabetic nephropathy is supected. He should be investigated further.

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68
A 28-year-old man has had type 1 diabetes for 9 years. He has not attended a diabetes clinic for several years, but now comes for a check-up. Without being asked, he admits that he has not been good at looking after himself and his health because he feels so well. His blood pressure is 164/92 mmHg, his skin is a little pale, but otherwise he appears healthy.
Lab.:
creatinine 87 micromol/L (ref. 60–105 micromol/L);
e GFR ≥90 (ref. ≥90);
HgbA1c 69 mmol/mol (ref. 28–40 mmol/mol);
Urine dipstick: albumin 3+ (ref. negative),
u-albumin/creatinine ratio: 287 mg/mmol (ref. <3 mg/mmol)
The urine findings are checked with the same result
What is the correct assessment and action?

A He has poorly regulated diabetes and in addition there is indication of kidney disease. It is important to have better blood glucose regulation. Await treatment with an ACE inhibitor or Angiotensin II antagonist due to the risk of rapid decline in kidney function; first refer to a nephrologist. He should be referred for an eye check.
B He has poorly regulated diabetes and in addition has nephrotic syndrome. It is important to have better blood glucose regulation and treatment with an ACE inhibitor or Angiotensin II antagonist. He should be referred for an eye check. He should be referred to a nephrologist for suspected kidney disease with cause other than diabetes.
C He has poorly regulated diabetes and probably diabetic nephropathy with significant albuminuria and hypertension. There is a risk of developing renal failure within the next few years, but nonetheless it is important to have better blood glucose regulation and treatment with an ACE inhibitor or Angiotensin II antagonist. He should be referred to a nephrologist and for an eye check.
D He has poorly regulated diabetes and probably diabetic nephropathy with significant albuminuria and hypertension. It is important to have better blood glucose regulation and treatment with an ACE inhibitor or Angiotensin II antagonist. He should be referred for an eye check. It is currently not necessary to refer him to a nephrologist because his GFR is normal.

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69
A 77-year-old woman saw her GP because she felt tired and listless. Blood samples were taken, and some of the results for tests taken at 11.00 in the morning are shown below.

Analysis	Result	Referance range
S-Albumin	48	36-45 g/L
S-Calcium	3.13	2.15-2.51 mmol/L
S-PTH (Parathyroid hormone)	<0.4	1.6-6.9 pmol/L

Which of the following is the most probable explanation of the results?

A Hypercalcaemia due to high albumin
B Hypercalcaemia due to malignant disease
C Primary hypoparathyroidism
D Secondary hyperparathyroidism

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70
Below are the analysis results for venous samples from a number of patients. Assume that the same results are found in any follow-up tests.
How many of these test results meet the diagnostic criteria for diabetes mellitus?
- b-HbA1c: 42 mmol/mol
- b-HbA1c: 62 mmol/mol
- b-HbA1c: 105 mmol/mol
- fasting p-glucose: 6.4 mmol/L
- fasting p-glucose: 7.9 mmol/L
- fasting p-glucose: 11.9 mmol/L
- p-glucose after glucose load: 6.3 mmol/L
- p-glucose after glucose load: 8.9 mmol/L
- p-glucose after glucose load: 11.9 mmol/L

Explanations:
- b: blood
- p: plasma
- after glucose load: sample taken 2 hours after peroral glucose load with 82.5 g glucose monohydrate

Reference ranges:
- fasting p-glucose 4.2-6.3 mmol/L
- b-HbA1c: 28-40 mmol/mol

A 2
B 3
C 4
D 5

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71
A man (aged 62) is receiving chemotherapy as life-prolonging treatment due to metastatic cancer. In addition to cytostatics he is receiving Dexamethasone (high-dose glucocorticoid), planned for a few more weeks. At the blood checks a few weeks after starting treatment his non-fasting p-glucose was 19.8 mmol/L. For the last couple of days he has had to get up at night to urinate. HbA1c is slightly elevated 52 mmol/mol (=6.9%). what do you do?

A 1. Give rapid-acting insulin (Humalog/Novorapid) in accordance with the following; 2U if blood glucose >10 mmol/L, 4U if blood glucose >14 mmol/L and 6U if blood glucose >18 mmol/L
B Give advice on a diet with fewer carbohydrates and increased physical activity, and start on Metformin 500 mg x 2
C Start him on an intermediate-acting insulin (Humulin/Insulatard) in the morning and evening
D HbA1c is satisfactory and the treatment goal has been achieved; therefore there is no need to start diabetes treatment

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72
A woman (35 years of age) with diagnosed type 1 diabetes calls the surgery when the switchboard opens at 8.00 am. She uses an insulin pump, and has moderately good glucose regulation (HbA1c 62 mmol/mol) with almost daily hypoglycaemia. She is contacting you because today she woke early due to feeling very unwell, nausea and vomiting. Blood glucose 12.6 mmol/L.
What is the first condition you must consider?

A Infectious gastroenteritis
B Ketoacidosis
C Primary adrenal failure (Addison's disease)
D Inflammatory intestinal disease

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73
A 37-year-old woman has high blood pressure (BP) of 165/100 at a routine check-up with her GP. At follow-up one month later it is 170/105.
She has previously been healthy and takes no medication. She thinks her muscles are weaker, otherwise no symptoms. She is slim, and there are no clinical findings apart from the elevated BP. She does not know of any members of her family who have high BP. Blood tests with her GP show a low serum potassium of 3.2 (ref. range 3.5-4.6) mmol/L. Follow-up tests show persistent hypokalaemia.
What is the most probable cause of her hypertension?

A Primary hyperparathyroidism
B Cushing's syndrome
C Primary hyperaldosteronism
D Pheochromocytoma

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74
A 24-year-old student with type 1 diabetes is admitted with diabetic ketoacidosis (DKA). Blood glucose is 28.7 mmol/L (ref. 4.2-6.3 mmol/L), venous sample results include pH 7.04 (ref. 7.31-7.42), bicarbonate 9 mmol/L (24–31), Na 135 (137–145) mmol/L, K 4.2 (3.5-4.4) mmol/L, creatinine 146 (60-105 µmol/L). He is receiving NaCl 0.9% and insulin infusion in accordance with standard procedure. Should he have a potassium supplement and, if so, when?

A He has normal serum potassium and does not need a potassium supplement
B He should have a potassium supplement added to the 0.9% NaCl infusion when he has normal diuresis
C He should have a potassium supplement added to the 0.9% NaCl infusion from the start
D He should have a potassium supplement added to the 0.9% NaCl infusion until he can eat by himself

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75
The patient is a 45-year-old woman. She sees you her GP because of episodes of headache, sweating, palpitations and anxiety. You determine that her blood pressure is significantly elevated and start her on conventional treatment for this. However, she does not respond to the treatment.
You wonder whether this could be pheochromocytoma. Which blood tests will you take to verify this?

A aldosterone and renin
B metanephrines, normetanephrines
C cortisol, ACTH
D angiotensin II

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76
Nina, age 65, has osteopenia, which is treated with calcium (1000 mg) and vitamin D supplements (800 IU). She visits a doctor for a routine check-up. Clinical examination is normal. Blood samples are taken which show an elevated calcium of 2.82 (reference: 2.15-2.51) mmol/L, and albumin of 41 (reference 36-45) g/L. Her kidney function is normal. She has previously been healthy and takes no medication apart from calcium and vit D supplement.
What is the most probable cause of the patient's hypercalcaemia?

A Vitamin D overdose
B Myelomatosis
C Benign familial hypocalciuric hypercalcaemia
D Primary hyperparathyroidism

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77
A 32-year-old woman has type 1 diabetes (T1D). She has a BMI of 27.2 kg/m2. She uses an insulin pump, and also an SGLT-2 inhibitor (empagliflozin) 10 mg daily 'off-label' (i.e. is not an approved indication) to avoid putting on weight. In connection with a mild infection she is nauseous, vomits and has abdominal pain. Blood glucose 14.2 mmol/L (reference range 4.2-6.3 mmol/L) by self-testing.
Which of the conditions below is it important to exclude?

A Acute gastroenteritis
B Diabetic ketoacidosis
C Non-ketotic hyperosmolar syndrome

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78
A 68-year-old man with type 2 diabetes gets an infection with fever. He drinks too little. He is admitted after one week with very poor general health and confusion. P-glucose 42.5 mmol/L (ref. 4.2-6.3 mmol/L), pH 7.32 (ref. 7.35-7.45), s-bicarbonate 19 mmol/L (ref. 21-27), s-osmolality 341 mosmol/kg (ref. 289-305), anion gap 9 mmol/L (ref. <11), p-lactate 1.3 mmol/L (ref. 0.5-2.2 mmol/L), p-ethanol <2.2 mmol/L (0.09 Promille). B-haemoglobin 19.9 (ref. 13.4-17.0 g/dL), haematocrit (EVF) 0.63 (ref. 0.41-0.53). What is the most important first treatment?

A Rapid-acting insulin as an intravenous infusion
B Rapid-acting insulin as an intramuscular bolus dose
C Intravenous sodium bicarbonate (NaHCO3) as bolus
D Intravenous sodium chloride (NaCl) as infusion

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79
Herman, 45 years old, has, for a long time, had symptoms that occur sporadically with sweating, headache, palpitations and chest pains. At the same time he has also had anxiety. At his general practioner's, his BP has repeatedly been high at 200/110 mm Hg. Sometimes it has been normal. Levels of Hb, CRP, creatinine, Na and K have been normal, but fasting blood sugar has been somewhat elevated.
What is the most probable diagnosis for this patient?

A Pheochromocytoma
B Renal artery stenosis
C Hyperaldosteronism
D Essential hypertension

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80
Mona is 65. She had a radius fracture one year ago which was treated in Outpatients. She has now gone to her GP wondering whether she has osteoporosis. She is worried because her mother had pronounced osteoporosis. The doctor refers her for bone density measurement which reveals a T score of -3.0 in the femur neck and -3.5 in the lumbar spine.
What should the doctor give this patient in addition to calcium and vitamin D supplements?

A PTH analogue
B Estrogen/progesterone
C Bisphosphonate
D Selective estrogen-receptor modulators

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81
A 54-year-old woman attends for follow-up of her treatment for breast cancer at your GP surgery. She had a mastectomy and sentinel node biopsy on the right side. In addition, she has been recommended to have endocrine treatment for 5 years post-treatment. The notes from the hospital states mammography and clinical follow-up once a year for 10 years after the operation. At the follow-up appointments, you as her GP have been requested to note any side effects of the endocrine treatment.
What, in addition, should be included in the clinical follow-up and what is the purpose of the follow-up plan?

A At follow up appointments, one would expect to perform a general clinical examination with blood samples. The purpose is to find sequelae from the treatment and to possibly discontinue endocrine treatment if she has a lot of side effects.
B At follow-up appointments, one would expect to examine the area operated on and the regional lymph nodes. The purpose is to find any recurrence of the breast cancer and, in addition, to issue new prescriptions so that the patient can continue the endocrine treatment.
C At follow-up appointments, one would expect to examine the remaining breast and the regional lymph nodes. The purpose is to find any new breast cancer and, in addition, to initiate measures in the event of side effects of the endocrine treatment.
D At follow-up appointments, one would expect to examine the area operated on, the remaining breast and the regional lymph nodes. The purpose is to find recurring or new breast cancer and, in addition, to initiate measures in the event of side effects of the endocrine treatment.

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82
A 45-year-old woman has made an appointment with you her GP after she became aware of a lump in her left breast. She discovered it 2 days ago, and she is now afraid that she has breast cancer. After taking the presenting history and performing clinical examination you assess that she should be referred for further investigations. The lump is 2 cm in diameter. There are no palpable lymph nodes in the regional lymph nodes.
Where should she be referred and what are the most likely investigations you will tell her about?

A She is referred to the Breast Diagnostics Centre for mammography. Further investigations are decided there, but these are likely to be ultrasound and biopsy.
B Because she is under 50, she should first be referred directly for MRI of the breasts. Those findings will determine whether biopsy is necessary.
C She is first referred to the Surgical Department for assessment. The surgeon assesses whether investigation is appropriate and which investigations are to be performed
D Because it is a palpable lump, ultrasound of the affected breast and biopsy of the lump is sufficient

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83
List the three most serious complications after thyroid and parathyroid surgery

A Damage to the trachea, keloid formation in the scar, hypoparathyroidism
B Bleeding, damage to the recurrent laryngeal nerve, hypoparathyroidism
C Damage to the trachea, postoperative wound infection, keloid formation in the scar
D Bleeding, damage to the recurrent laryngeal nerve, postoperative wound infection

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84
You are a GP and a 72-year-old woman has made an appointment with you. She has noticed dimpling of the skin on the lateral side of one of her breasts. She noticed it 2-3 months ago but because she couldn't feel a lump in her breast she did not make an appointment earlier. The woman is healthy but slightly overweight. You find it a little difficult to examine her as she has large breasts. You note that the dimpling is relatively discreet, but otherwise find normal conditions at palpation of the breast and the regional lymph nodes.
Should this be investigated and why?

A Investigation of this is not necesary because the examination found nothing wrong.
B Investigation of this is not necessary because she would soon be invited for another breast screening mammography anyway
C Investigation of this is not necessaary because it is most probably a deep infection that is treated with antibiotic tablets for 7 days with follow up
D This should be investigated for suspected breast cancer and the patient is referred to the nearest Breast Diagnostics Centre.

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85
A patient has been diagnosed with a 7 mm concrement in the left ureteropelvic junction, and has been relieved with a JJ stent in the left ureter for a few days. He is attending for stone treatment using ESWL. Which radiological modality is normally used to check whether the concrement is still present and, if so, whether it is in the same place as before?

A X-ray of the abdomen in one plane
B Ultrasound urinary tract
C 3-phase CT urinary tract
D Stone CT urinary tract

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86
Which contrast phase(s) during CT of the urinary tract are best suited for stone (concrement) diagnostics?

A Venous phase and excretion phase.
B Only the excretion phase.
C Pre-contrast phase and venous phase.
D CT urinary tract without contrast (pre-contrast phase).

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87
A man has been diagnosed with a malignant tumour in his left testis. Which of the following imaging investigations is best suited for staging metastatic disease before choosing the treatment programme?

A CT thorax, abdomen and pelvis
B Ultrasound abdomen + bone scintigraphy
C MRI posterior abdominal wall + MRI liver
D MRI pelvis + MRI total spine

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88
Just about a year ago, a 65-year-old man was diagnosed with prostate cancer ISUP grade group 1 (Gleason<6) and was placed on active surveillance. He now has pain in the lumbosacral spine. You want to investigate whether he can have bone metastases, even though he is known to have low-grade prostate cancer. These 4 modalities can all detect bone metastases, but which is considered to have the best sensitivity?

A X-ray
B Scintigraphy
C CT
D MRI

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89
About 2 years ago, a 22-year-old man was involved in a cycling accident when he experienced severe trauma to the perineum. He recovered quickly afterwards. Recently, he has felt that it has become more difficult to empty his bladder, it takes longer. The Urologist who is investigating him using cystoscopy meets a non-passable stenosis in the bulbar part of the urethra and suspects a trauma-induced constriction. Which imaging diagnostic is commonly used to investigate such stenoses?

A MRI bladder and urethra
B Urethrography with retrograde contrast
C Ultrasound penis and bladder
D 99mTc-DTPA scintigraphy

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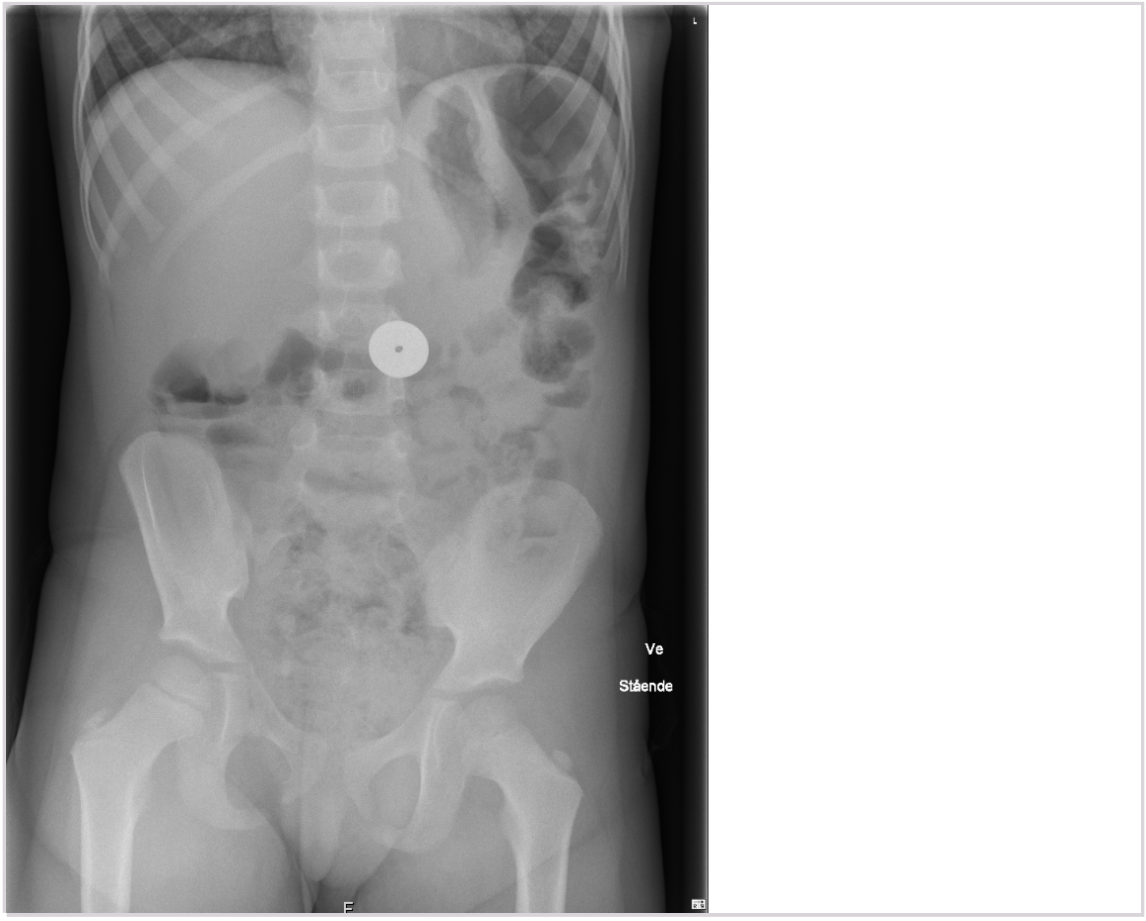
90
A 4-year-old girl has swallowed a 1-krone coin. She was referred for X-ray of the abdomen from the Urgent Treatment Centre which showed 'a foreign body located in the area of the stomach'. After 13 days neither she nor her parents have seen it in her stools. She is asymptomatic. A new X-ray is taken which shows 'foreign body persists located more centrally, uncertain in which section of the intestines'. What do you do to find the location of this?



A Refer for X-ray procedure with peroral contrast (fluoroscopy).
B Refer for gastroscopy with removal of the foreign body.
C Refer for CT abdomen (low dose) to find the exact location.
D Wait and see. No need for further diagnostics as of now. The coin is small and will pass by itself.

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91
A 2.5-month-old boy is admitted to the Paediatric department with clinical and biochemical suspicion of pyelonephritis. Ultrasound of the urinary tract did not find any underlying pathology. His general health and blood tests improved after iv. antibiotic treatment. After a few weeks, supplementary investigation of the urinary tract is desired to determine the cause of the pyelopnephritis.
Which imaging modality do you refer him for?

A X-ray MCUG
B X-ray urography
C X-ray pyelography (antegrade)
D MRI urography

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92
A 6-year-old boy fell out of a tree (3-4 metres) and hit the ground with the left side of his stomach and lower part of his chest. He is unable to stand because of the pain. The ambulance arrives and takes him to A&E. His circulation is stable, but he has macroscopic haematuria when he tries urinating. X-rays of the thorax and pelvis are taken.
What is the next imaging diagnostic modality for such trauma received in A&E?

A Does not need further investigation with imaging modality. The boy must go to the operating theatre - strong suspicion of kidney injury.
B CT abdomen/pelvis
C CT multitrauma (CT head neck / / thorax / abdomen / pelvis)
D Ultrasound abdomen

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93
A 52-year-old woman has been diagnosed with an infiltrating breast carcinoma, histologic grade 3. The tumour was negative for oestrogen and progesterone receptors at immunohistochemistry, but was positive for HER2 using fluorescence in-situ hybridisation (FISH) where an increased copy number (amplification) of the HER2 gene was found.
Which treatment alternative will be the most beneficial for this patient?

A Trastuzumab
B Antiandrogen
C Anti-oestrogen
D Aromatase inhibitor

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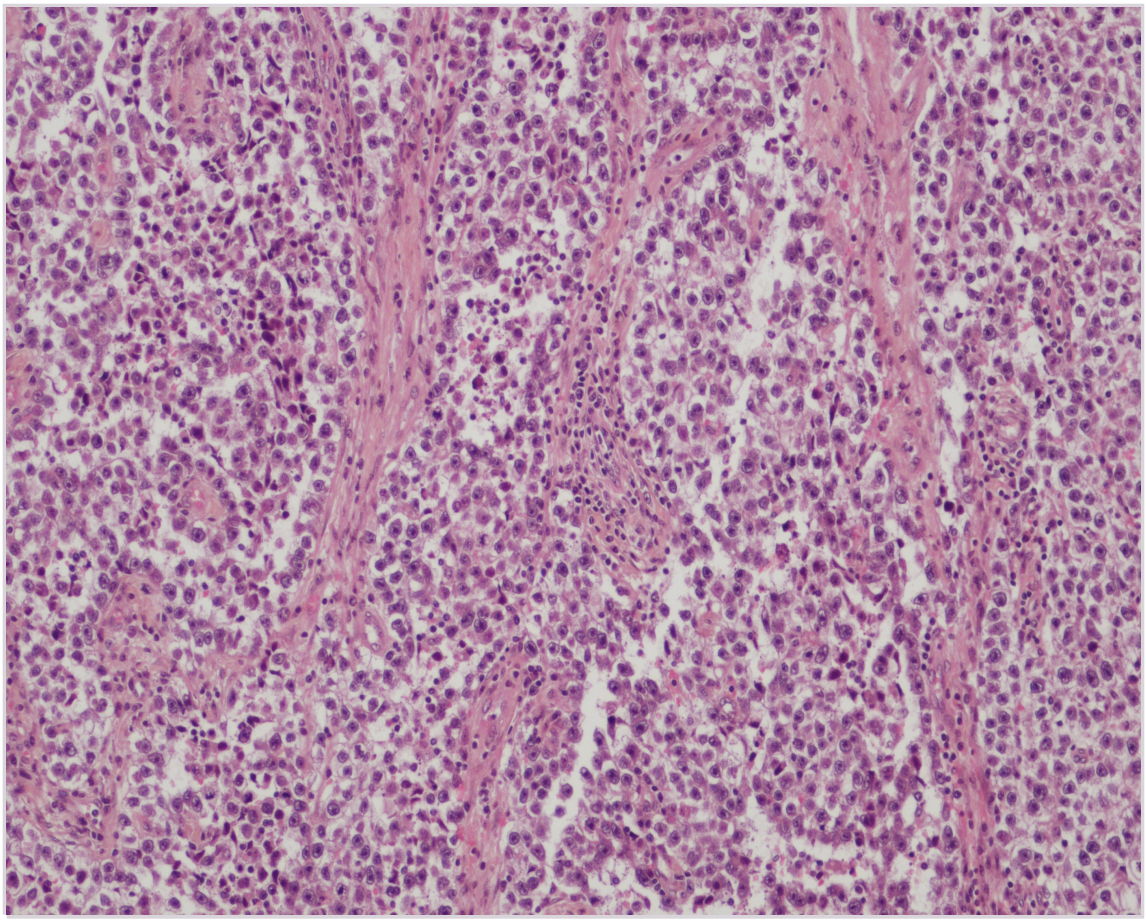
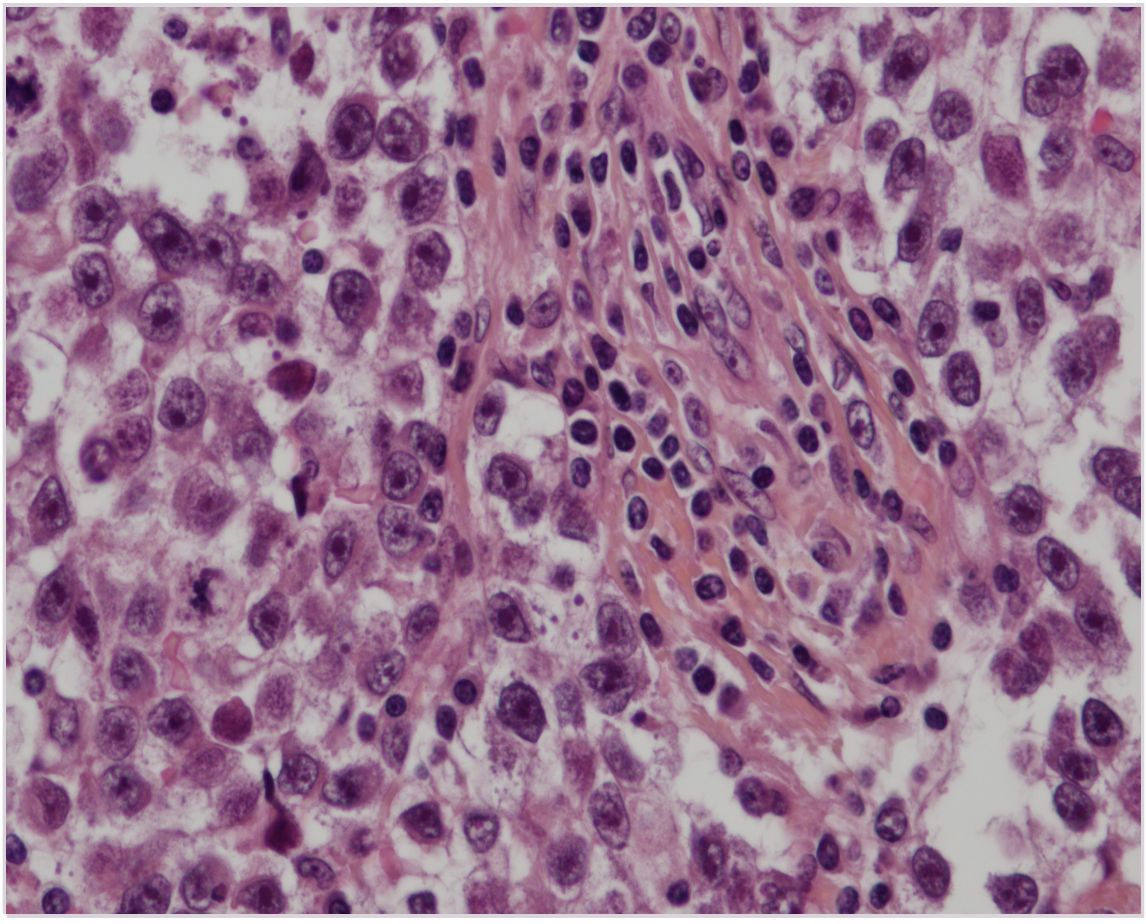
94
Around 300 new cases of testicular cancer are diagnosed every year in Norway, and about 50% of the patients are under 32 years of age. Almost 95% of the cases are classified as testicular germ cell tumours (TGCT). The images display an haematoxylin-erythrosin-safran (HES) stained histology section from a testicular germ cell tumour (x100 and x400).





Which type of germ cell tumour is this?

A Malignant teratoma
B Mixed germ cell tumor
C Choriocarcinoma
D Seminoma

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95
Which statement about endometrial carcinomas is correct?

A Endometrial hyperplasia is associated with endometrioid carcinoma
B Type II endometrial carcinomas are normally oestrogen dependent
C Serous carcinomas are examples of type I endometrial carcinomas
D Endometrioid carcinomas have a poorer prognosis than serous carcinomas

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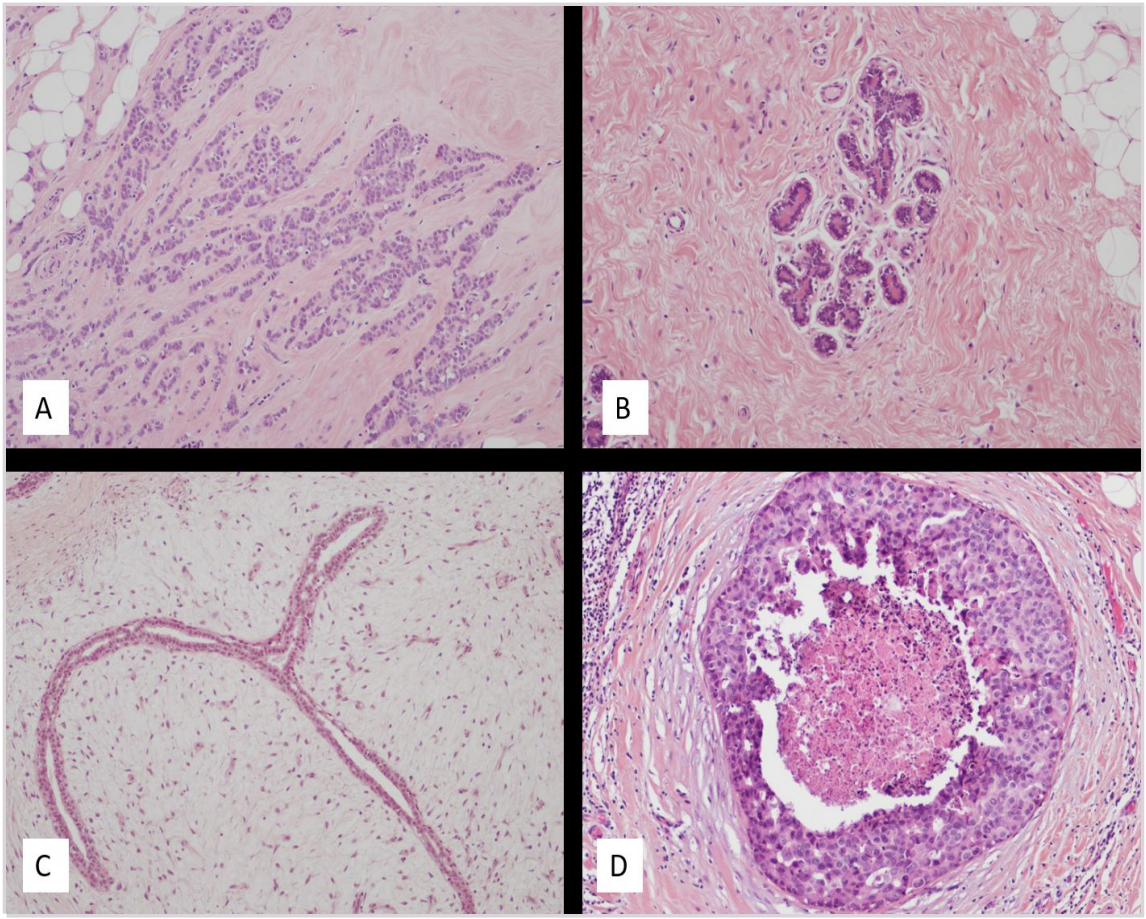
96
At mammography screening, a 58-year-old woman has been diagnosed with microcalcification in an area in her right breast. Histopathology finds changes compatible with ductal carcinoma in situ (DCIS). Which of the four images below displays DCIS?



A Image A
B Image B
C Image C
D Image D

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97
A 75-year-old woman has been diagnosed with thickened endometrium at ultrasound. A pipelle sample was taken and the sample reveals endometrial hyperplasia with atypia. Infiltrating growth is not seen. Even though infiltrating growth has not been seen, the gynaecologist recommends performing a hysterectomy.
Why do you think this was recommended?

A Because atypical hyperplasia is often associated with considerable pain
B Because it is a simple operation without complications
C Because atypical hyperplasia can develop to adenocarcinoma
D Because atypical hyperplasia always gives major bleeding problems

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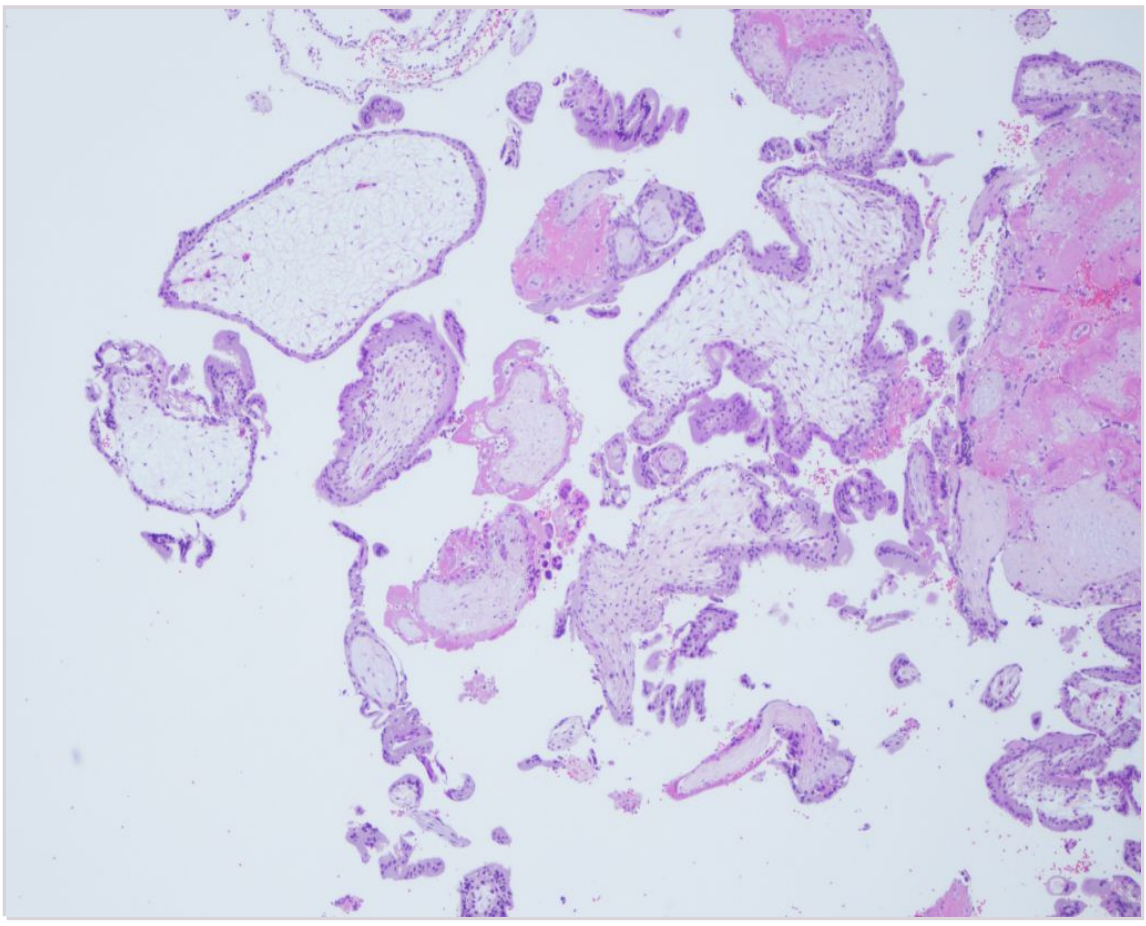
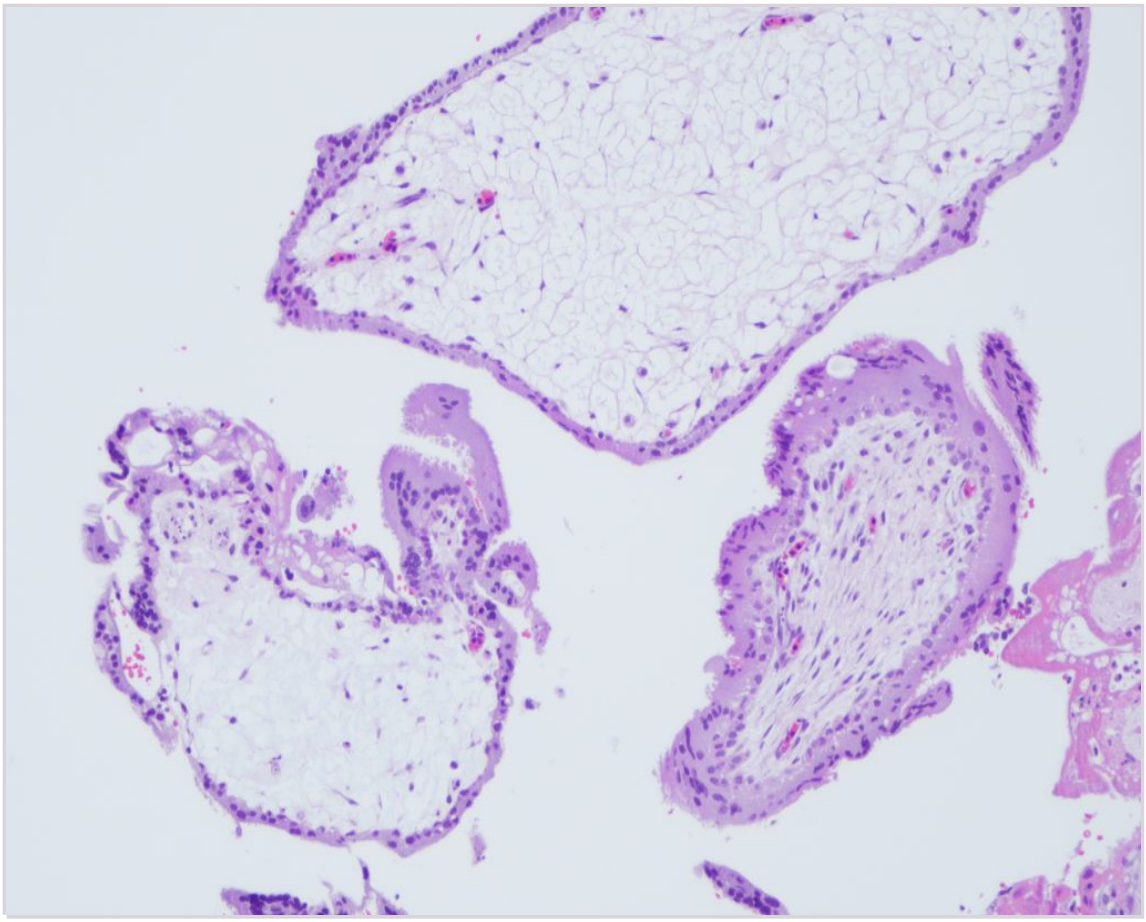
98
A young woman was admitted to hospital because of acute stomach pain. She underwent surgery shortly after admission. Below you see two histology images from a rough content of the left tube lumen (X40 and X100, respectively).
What is your diagnosis?





A Normal tube
B Extrauterine pregnancy
C Intraepithelial carcinoma
D Infection and inflammation

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99
A 55-year-old man had surgery for a tumour in the kidney. The tumour is 3 cm in size and is located subcapsularly without penetration into the renal pelvis. Histology reveals that the patient has cancer with site of origin in the kidney.
Which diagnosis do you expect?

A Pheochromocytoma
B Clear cell carcinoma
C Squamous cell carcinoma
D Transitional cell carcinoma

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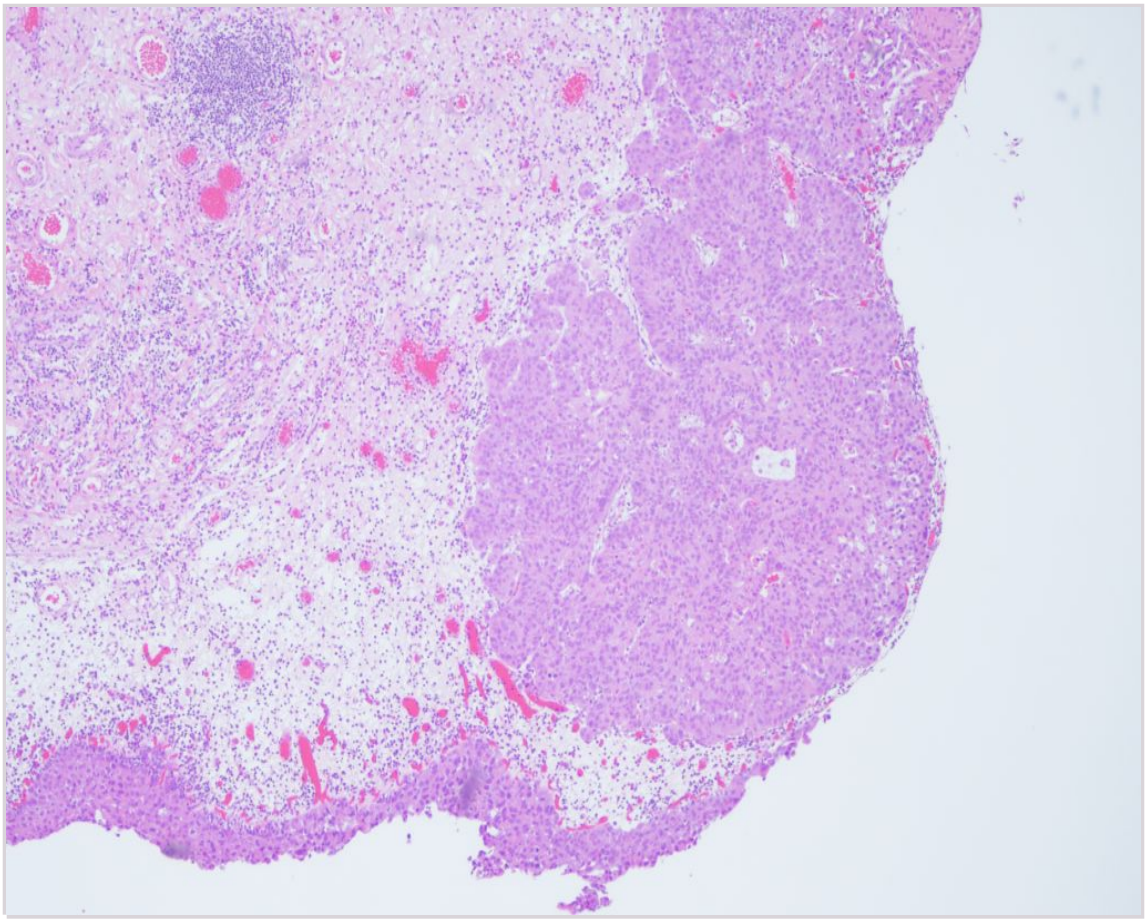
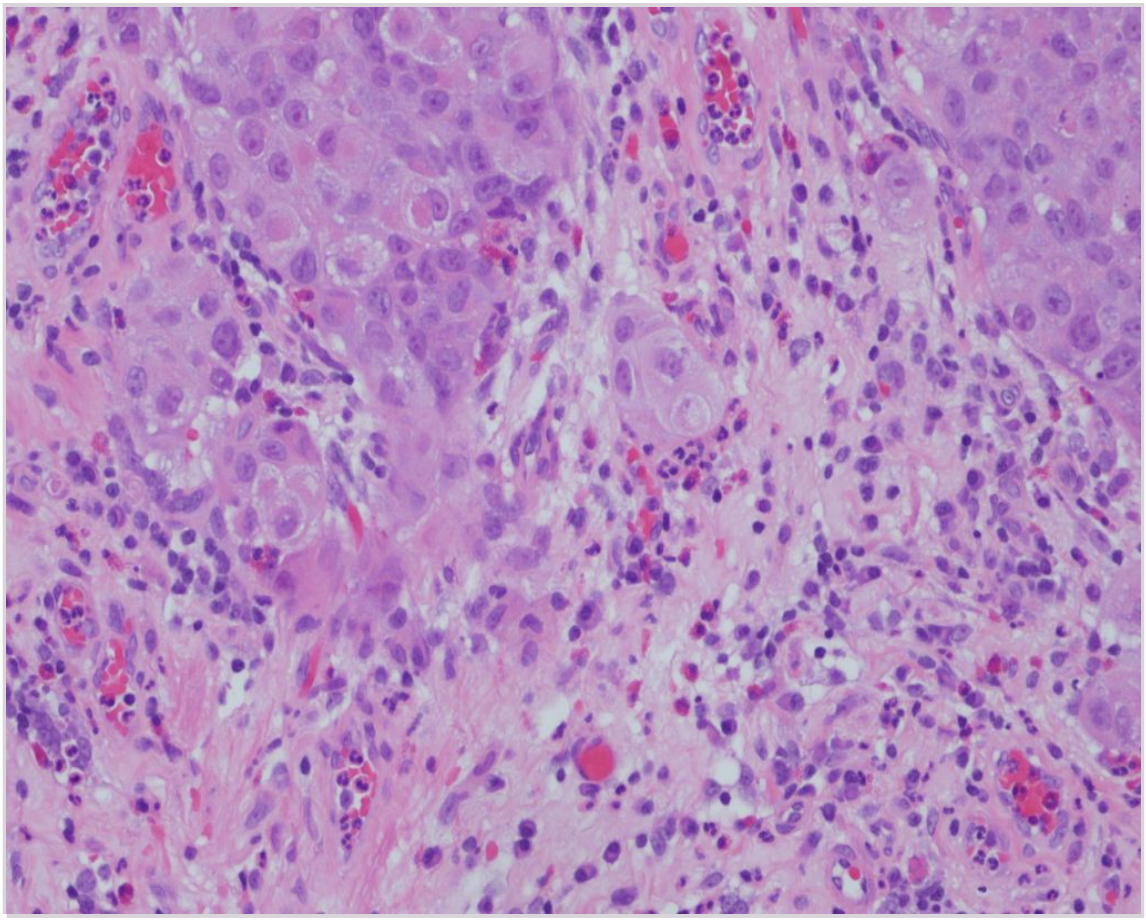
100
A 70-year-old man is investigated for blood in his urine. Irregular areas were seen in the mucous membranes of the bladder and biopsies were taken.
Below you see two images from one of the biopsies (X40 and X200, respectivley). What is your diagnosis?





A Transitional cell carcinoma
B Squamous cell carcinoma
C Inflammation and reactive epithelium
D Normal bladder mucous membrane

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101
A 33-year-old woman attends for pregnancy check-up in her third pregnancy. Her youngest child had septicaemia with group B streptococci immediately after the birth. Fortunately, the child recovered and is now healthy. The woman is naturally concerned that the same thing will happen again because she is a carrier of the bacteria in her vagina.
How should a situation like this be managed in accordance with Norweigan guidelines?

A A vaginal sample for group B streptococci is taken in gestation weeks 35-37, and antibiotics given in connection with the birth if the test is positive
B The child is placed under intensified monitoring during and after the birth, and is given early treatment at any signs of infection
C Antibiotics are given in connection with the birth because she has already given birth to one child who got septicaemia with group B streptococci in connection with the birth
D It is not necessary to take a sample from the mother, but she is given antibiotics for 2-4 weeks before the birth to remove the group B streptococci from her vagina

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102
You suspect Tinea capitis with effect on the hair in an 11-year-old boy.
Which fungal species is the most probable cause of this disease?

A Microsporum species.
B Aspergillus species.
C Malasezzia species.
D Candida species.

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103
A 67-year-old woman from Bangladesh is seeking asylum in Norway. She comes to the doctor with a cough that has lasted several weeks. She has lost weight during this period and is very tired. X-ray of the lungs shows a diffuse infiltrate apically in the right upper lobe, and hilus gland enlargement on the same side. The on-call doctor at the hospital admits the patient for further investigations. What isolation regimen should be used?

A Contact transmission regimen
B Airborne transmission regimen
C Droplet transmission regimen

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104
As the On-duty specialist in medicine you see a man aged 23 who has been travelling around the villlages of India. He has drunk water from the tap. He has a fever, headache and stomach pain. BP: 95/60 and pulse 115. Rapid tests for malaria and Dengue fever have been taken both of which are negative.
Which investigation should you do for this patient?

A Take a blood culture for typhoid fever
B Take a bone marrow sample for culture for typhoid fever
C Take a blood sample to perform Widal's reaction for Salmonella infection
D Take a stool sample for culture of pathogenic intestinal bacteria for Salmonella gastroenteritis

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105
A 45-year-old man with rheumatoid arthritis is to start treatment with rituximab (anti-CD20 antibody). You explain that he has a slightly increased risk of hypogammagobulinaemia (low levels of IgG) and that he is therefore at a slightly higher risk of infections.
Which infections is he primarily susceptible to?

A Meningitis with meningococci and Listeria monocytogenes
B Skin and soft tissue infections with staphylococci and streptococci
C Respiratory tract infections with pneumococci and Hemophilus influenzae
D Urinary tract infections with E. coli and Proteus mirabilis

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106
A 25-year-old man is admitted with a high fever. Four weeks ago he returned from a trip to several countries in East Africa. He took a malaria prophylactic (Malarone), but he took the tablets irregularly during the last part of his stay.
Is malaria the probable diagnosis?

A No, because the incubation time for malaria is always less than 2 weeks
B Yes, because the incubation time for malaria increases above 2 weeks if the malaria tablets are taken irregularly.
C Yes, because the incubation time for malaria in East Africa is always longer than 4 weeks
D No, because a malaria prophylactic is very effective even if used irregularly

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107
A 75-year-old man is admitted to the Medical Dept with BP 85/50, pulse: 120, and fever (39˚C). Urine dipstick reveals 3+ for blood and 3+ for leukocytes. He has previously had kidney stones several times, and therefore ultrasound of the urinary tract is performed. This reveals significant hydronephrosis of the right renal pelvis.

Which treatments should the doctor start in this patient?

A Ampicillin + gentamicin i.v. and referral for admission for nephrostomy
B Selexid i.v. and referral for admission for nephrostomy
C Ampicillin + gentamicin i.v. and referrel for stone crushing (ESWL)
D Selexid i.v. and referral for stone crushing (ESWL)

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108
A 72-year-old woman with type 2 diabetes mellitus continues to have a high HbA1c in spite of treatment with three different peroral antidiabetics. You decide to try insulin in this patient. What should you use in the start-up phase?

A Intermediate-acting insulin in the evening
B Intermediate-acting insulin in the morning and evening, and rapid-acting insulin with all meals
C A ready-mixed combination of rapid-acting and intermediate-acting insulin with breakfast and the evening meal
D Rapid-acting insulin with all meals

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109
Hydrochlorthiazide, furosemide, spironolactone and amiloride all belong to the group of medicines known as diuretics. Two of these medicines can give hyperkalemia as a side effect.
Which medicines are they?

A Spironolactone and amiloride
B Amiloride and hydrochlorthiazide
C Hydrochlorthiazide and furosemide
D Furosemide and spironolactone

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110
Angiotensin receptor inhibitors and ACE inhibitors both affect the renin-angiotensin-aldosterone system, but by different mechanisms of action. This results in some differences in the side effect profiles for the two drug groups.
Which side effect is considered to be the most clinically important difference?

A Dry cough
B Thirst
C Urine retention
D Cold limbs

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111
A woman is pregnant in gestation week 9+0. She has just found out that she is pregnant. Last week she took a medicine which according to the reference literature could potentially harm the fetus. What is the most probable type of effects?

A Physiological anomalies in the neonatal period
B All-or-nothing effect; i.e. the pregnancy will either miscarry or the fetus is unharmed
C Intrauterine growth retardation
D Structural anomalies

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112
An elderly man with prostatic hyperplasia, hypertension, hypothyroidism, previous heart attack and moderate renal failure uses among others the following medicines:
- Metoprolol (a beta blocker)
- Ramipril (an ACE inhibitor)
- Doxazosin (an alpha blocker)
- Levothyroxine

He now complains of exhaustion and sweating, and has had an unintended weight loss of 5 kg. ECG reveals new-onset atrial fibrillation.
Which medicine is the most probable cause of this?

A Levothyroxine
B Ramipril
C Metoprolol
D Doxazosin

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113
Medicines in the group known as phosphodiesterase-5-inhibitors must not be used together with glyceryl trinitrate (nitroglycerin) and other nitrates.
What is the reason for this?

A The combination can cause renal failure
B The combination can cause a large drop in blood pressure
C The combination can give a prolonged QT interval with a risk of torsades de pointes arrhythmias
D The combination can cause seizures

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114
Postmenopausal hormone treatment is associated with both positive and negative effects. Of the negative effects, there is a special type of cancer that is considered to have a causal relationship with exposure to such treatment. Which cancer is this?

A Lung cancer
B Uterine cancer
C Osteosarcoma
D Breast cancer

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115
NSAIDs can be nephrotoxic by causing a reduction in renal bloodflow and thereby a reduced GFR. This is seen particularly in patients who are old and ill and who have additional conditions or diseases that result in increased activation of the adrenergic system or the RAAS. This potentially nephrotoxic mechanism is a direct consequence of the NSAIDs' analgesic mechanism of action. What is this mechanism of action?

A Reduction of COX-mediated synthesis of prostaglandins and related endogenous compounds from leukotrienes.
B Reduction of COX-mediated synthesis of prostaglandins and related endogenous compounds from arachidonic acid.
C Reduction of COX-mediated synthesis of prostaglandins and related endogenous compounds from thrombocytes.
D Reduction of COX-mediated synthesis of prostaglandins and related endogenous compounds from ascorbic acid.

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116
Finasteride is a medicine that is used in benign prostatic hyperplasia and acts by blocking the enzyme testosterone-5-alphareductase.
Here are four statements about this medicine:
- A potential side effect is hypotension
- It can increase the concentration of prostate specific antigen
- It should not be used together with beta blockers
- The effect cannot be evaluated before at least six months after start of treatment

Only one of these statements is correct. Which one?

A A potential side effect is hypotension
B It can increase the concentration of prostate specific antigen
C It should not be used together with beta blockers
D The effect cannot be evaluated before at least six months after start of treatment

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117
A woman is being treated with levothyroxine for hypothyroidism. She then becomes pregnant. How should the treatment with levothyroxine be changed in connection with the pregnancy?

A The dose of levothyroxine is immediately reduced by 20-30% with a positive pregnancy test
B The dose is basically not changed, but TSH and free T4 are monitored and measured in each trimester
C The dose of levothyroxine is immediately increased by 20-30% with a positive pregnancy test
D Use of levothyroxine is contraindicated in pregnancy

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