Eksamen IID engelsk 2014 MD4041
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1 Which of the following statements are (most) correct with regard to mentally retarded/developmentally disabled children?

A Some children with mental retardation show normal development in childhood
B Most often there is delay in several areas: motor, language and social functioning
C Most children with mental retardation have learning problems
D Gross motor skills are generally more delayed than fine motor skills
E Motor skills are often more delayed than language and social functioning

2 Oda (18 months old) has had loose bowel movements and some vomiting over the last two days. At examination, she is pale with sunken eyes. Clinically she is about 5% dehydrated. You want to try oral rehydration. She weighed 11 kg at the Child Health Centre two weeks ago. How much fluid do you want to give her during the first 6 hours?

A 262 ml
B 550 ml
C 1320 ml
D 137 ml

3 Which of these statements are correct with regard to febrile cramps?

A Febrile cramps are seen most frequently in children aged 3 and 4 years
B Febrile cramps occur mostly when the temperature is persistently high
C Most children with febrile cramps have more than one episode
D Serious infections must be ruled out, but are rarely the cause of febrile cramps
E Febrile cramps affect about 15% of all children

4 Per is fasting before surgery. He weighs 27 kg. How much fluids does he need per hour to cover his basic requirements?

A 56 ml/hour
B 68 ml/hour
C 98 ml/hour
D 77 ml/hour

5 A 27-year old woman gives birth at term. During the pregnancy she gave a positive PCR test for hepatitis C. The child is healthy and the period post-partum is normal. What advice should the mother be given before being discharged home?

A The child should be fed formula and should be given specific immunoglobulin and vaccination x 3 before its first birthday.
B The child can be breastfed because there is little risk of infection from mother to child; no follow up is necessary.
C The child can be breastfed, and should be given specific immunoglobulin and vaccination x 3 before its first birthday.
D The child can be breastfed and should be checked in 6 months for hepatitis C using the PCR test.
6 A 6-week old boy with Down's syndrome comes for routine check up at the Child Health Clinic. He has had poor weight gain as his weight which used to be on the 50 percentile, is now on the 2.5 percentile. He is pale and breathing rapidly with a respiration rate of 80/min. He has subcostal retractions, but normal auscultation findings over the lungs. A weak systolic murmur can be heard over the heart towards the apex. The liver is palpated 4 cm below the costal arch on the right side. Groin pulses are normal.

What is the most probable diagnosis?

A Serious feeding problems  
B Atrioventricular septum defect with heart failure  
C Acute infectious hepatitis  
D Untreated bronchial asthma

7 Petter is 4 years old and has recently been treated at home with an oral antibiotic for an intestinal infection after his regular GP received test results from a microbiological laboratory. Which intestinal infection is the most likely one based on the treatment he received?

A Giardia lamblia  
B Campylobacter jejuni  
C Salmonella enteritidis  
D Escherichia coli

8 Which of these types of cerebral palsy are most strongly associated with birth asphyxia (lack of oxygen during birth) in children born at term?

A Spastic hemiparesis and spastic diplegia  
B Spastic quadriplegia and dyskinetic cerebral palsy  
C Spastic quadriplegia and ataxic cerebral palsy  
D Ataxic cerebral palsy and dyskinetic cerebral palsy  
E Spastic diplegia and dyskinetic cerebral palsy

9 As a doctor on duty, you attend little Mari 3 years old when her parents call and say that the girl is having a fit. The parents say that the girl has had a cold for 2 days, but today has a fever and sore throat. While she was lying on the sofa, she suddenly became rigid, lost consciousness and her arms and legs jerked. The episode lasted 2 minutes. You examine the girl and find a temperature of 40 degrees Celsius and signs of tonsillitis.

What type of seizure did the girl most probably have?

A Febrile seizure  
B Complex partial epileptic seizure  
C Heat stroke (Hyperthermia)  
D Tonic-clonic epileptic seizure
10 Jørgen is 2 months old and previously healthy. He has a fever and takes very little milk when breastfeeding. At the hospital after a day's illness he is listless and pale, sleeps most of the time, but can be woken. The anterior fontanelle is not tense, he does not have neck or back stiffness, capillary filling time is 3 seconds, pulse 170/minute, tp 38.8 Celsius rectally, no rash, respiration rate 45/minute, no subcostal retractions, normal conditions at auscultation of the heart and lungs, normal palpation of the abdomen, normal findings at examination of the mouth, throat, ears and limbs. Spinal puncture reveals no cells and normal glucose and protein levels in CSF. Which of the diseases in the answers below is the most probable?

A. Bacterial pneumonia
B. Urinary tract infection
C. Purulent meningitis
D. Primary encephalitis
E. Acute bronchiolitis

11 Which of the following diseases in children is characterised by haematuria, renal failure and sometimes mild oedema?

A. Nephrotic syndrome
B. Haemolytic-uremic syndrome
C. Kawasaki's disease
D. Acute nephritic syndrome

12 The parents of 4-year old Petter come to the surgery because they are worried. Over the last two months they have noticed several episodes of a few seconds duration in which the boy appears distant, stares into space and is not contactable. These episodes have also been observed in the nursery school. The episodes can occur as small series. What is the most probable cause of the episodes?

A. Absence seizures
B. Simple partial seizures
C. Myoclonic seizures
D. Complex partial seizures

13 Christian (4 years old) comes to the GP surgery with stomach ache and atopical eczema. You suspect he is reacting to one or more foodstuffs and put him on an elimination diet. Elimination diets consist of "safe foods" that children and adults rarely react to. Which of the following foodstuffs are considered to be safe food?

A. Skimmed milk
B. Cooked carrot
C. Fried egg
D. Soya milk
14
A mother brings her 6-year old daughter to the GP because of recurring stomach ache. At examination the doctor finds that the girl is moderately overweight and has generally poor teeth. Otherwise normal findings.
How should the doctor manage the case?
A The GP should refer the girl for further investigations at the Paediatric Outpatient Clinic.
B The doctor should refer the girl to the dentist and talk to the mother and daughter about the importance of correct diet, exercise and dental hygiene.
C Because the examination did not find anything in particular, the doctor should talk to the mother and daughter about the importance of correct diet, exercise and good dental hygiene.
D The doctor should talk to the mother and daughter about the importance of correct diet, exercise and dental hygiene. In addition, he should contact the community nurse to get more information about the girl's home situation.

15
Erik (10 years old) has asthma and hay fever. He uses inhalation steroids daily and a beta-2-agonist as needed. In spite of this, over the last 4 weeks he has had symptoms with coughing at night, and he cannot manage more than the first 15 minutes of football training because he gets so short of breath. How should you now proceed with the drug treatment?
A Supplement with antihistamine
B Give a week’s course of penicillin
C Supplement with theophylline
D Supplement with a leukotriene antagonist

16
Which combination of skills is most DELAYED in cases of fetal alcohol injury?
A Daily activities and concept of time
B Speech and language comprehension
C Reading and writing skills
D Emotional maturity and social skills

17
At times, 1-year old Ida’s eczema gets worse, and her mother believes it is related to the fact that she has eaten egg the day before. You take specific serum IgE against egg which is elevated and shows 1.2 kU/L (ref <0.35 kU/L). Specific IgE against milk is also elevated (3 kU/L, ref. <0.35 kU/L). What is the most probable mechanism behind this exacerbation of eczema?
A Type I (IgE-mediated) hypersensitivity
B Histamine intolerance
C Type IV (cell-mediated) hypersensitivity
D Cross-allergy with milk

18
10-month old Jørgen has a high fever. The doctor demonstrates purulent otitis media in the left ear. Which treatment should the doctor recommend?
A Plenty of fluids and paracetamol
B Amoxicillin and paracetamol
C Phenoxyethylpenicillin and paracetamol
D Erythromycin and paracetamol
19 Which of these statements are (most) correct in relation to a fetal alcohol injury?

A Behavioural problems in children exposed to intoxicating substances generally improve when they are adolescents.
B There is a lower limit for harmful alcohol intake during pregnancy
C Even small amounts of alcohol in pregnancy can have a negative effect on behaviour and cognitive development in the child.
D Alcohol harms the fetus only in the first phase of pregnancy (1st trimester)

20 What does investigation of red reflex in the neonate give particular information about?

A The neonate's vision at close hold
B Retinopathy or retinal detachment in the neonate
C The refractive system (cornea, lens and corpus vitreum)
D The size of the pupils and reaction to light

21 Finn (7 years old) was diagnosed as a 3-year old with medulloblastoma in the cerebellum. He was operated and the tumour removed, and a ventriculoperitoneal shunt was inserted. He then had radiotherapy to the whole head and additional radiotherapy to the area surrounding the tumour. He received several courses of chemotherapy for almost a year. At school he is unevented and has learning difficulties. Which condition has contributed most to his problems at school?

A Radiotherapy of the brain that was given as part of the treatment
B Increased pressure in the brain before he was operated and received a ventriculoperitoneal shunt
C Chemotherapy over a long period of time after surgery
D Complicated surgery with insertion of a ventriculoperitoneal shunt

22 As the doctor at the Child Clinic, you are asked to assess the growth of a 6-year old girl. Up until the age of 5 she was on the 2.5 percentile for height for age, but over the last year she has grown very well and is now between the 25 and 50 percentiles. Previously she had a lot of respiratory infections, but the last year she has had very few. What is the most correct assessment?

A The growth spurt over the last year is catch-up growth after previous illness.
B Growth cannot be assessed without knowing the average parent height.
C The growth is clearly pathological and she must be investigated for precocious puberty.
D The growth curve expresses that she has been rather slow finding "her" height percentile.

23 Karl (8 years old) has always wet the bed at night. He often holds himself for a long time and has a tendency to wet himself during the day too. His mother is concerned and takes him to the doctor. Clinical examination shows normal conditions. What should the doctor do first when she starts treatment for Karl?

A Refer to the local Paediatric Department for investigation (ultrasound guided urinary tract) and treatment
B Reassure that this condition is common in children and that it will soon disappear by itself
C Try alarm mattress treatment and possibly Minirin for when he stays over at friends
D Motivate for change, keep a diary of drink and weeing pattern, offer follow up with the doctor
24
For the diagnosis Hyperkinetic disorder (ADHD) Jens (11 years old) meets 7 criteria for lack of concentration, 4 for hyperactivity and 2 for impulsiveness when he is at school. His parents do not recognise this description of him at all. They experience him as a quiet, shy and happy boy who can sit still, do his tasks and hobbies in a very concentrated manner. They say he is having problems with his school work.

Does Jens meet the criteria for hyperkinetic disorder?

A No, even though he meets the criteria at school, he doesn't meet them at home. This is not sufficient to fulfill the diagnosis.
B No, this diagnosis requires 9 criteria for lack of concentration, 6 for hyperactivity and 3 for impulsiveness
C Yes, 6 criteria for lack of concentration, 3 for hyperactivity and 1 for impulsiveness are sufficient for this diagnosis
D Yes, he meets more criteria than those necessary. The parents are not good informants regarding the diagnosis of this disorder

25
You are working at the Emergency Department and meet Rebecca, 14 years old. She has cut herself on both forearms. The wounds do not need suturing. Earlier in the evening her parents had argued violently and she witnessed that her father was drunk and violent towards her mother. She cries and is sad, but you do not consider her suicidal.

How do you perceive her problem and what will you do?

A She lives in a dysfunctional family that has resulted in self-harming. You call the Child Protection Services and refer her to the Child and Adolescent Psychiatric Outpatient Clinic for a non-emergency appointment
B You interpret her behaviour as a need for attention. Since this is about family problems and not psychiatry, you refer the whole family to the Family Welfare Services
C You consider her behaviour to be a symptom of a family in conflict and promise that you will call her parents the next day to advise them to go to family therapy
D She has a serious depression that requires admission to the Adolescent Psychiatric Emergency Ward. Even though you have not assessed her to be suicidal she could be if she goes home

26
Tom, 7 years old, doesn't want to go to school. At home he is unremarkable and plays well with his older brother and his younger sister. But when he has to go to school or if his parents are away, he becomes despairing, unhappy, and cries; he is afraid something will happen to them, or that something scary will happen to him while they are away. Then he becomes very busy checking that the house is locked.

Which diagnosis is most probable for Tom?

A Depressive episode
B Childhood social anxiety disorder
C Obsessive compulsive disorder
D Childhood separation anxiety

27
Odin, 5 years old, has a "difficult" temperament. He becomes angry very easily, is intense and wants to decide when playing. He often teases other children and he is sometimes nasty to the neighbour's cat. He says he is the strongest boy in the world. Over the last weeks he has had a lot of nightmares about scary monsters. He is very fussy about his food, has somewhat unclear speech and has an immature pencil grip.

Which of Odin's traits deviate most from his age?

A He gets easily angry
B Unrealistic self-image
C Violent to animals
D Nightmares
E Immature pencil grip
28  Parents bring their 9-year-old son to the clinic. Parents broke up when the boy was 3, as the father was drinking heavily at that time. The boy lives with his mother and his maternal grandparents. According to the mother the boy is out of control: he frequently gets into fight with his older brother, neighbors and classmates. He refuses to help his mother with the housework. He often deliberately annoys his mother and teachers, and blames others for his misbehavior.
What is the most likely diagnosis?
A  Oppositional defiant disorder
B  ADHD
C  Antisocial personality disorder
D  Intermittent Explosive Disorder

29  Henrik is an 18 months old boy with no significant medical history. He has achieved normal motor milestones. Henrik is the first and so far the only child in the family. When Henrik was around 14 months old his parents became concerned about his speech as he still was not using words. Parents also noticed that he likes lining up his toys, and sometimes he flaps his hand. According to the mother he doesn’t make eye contact readily and is never upset when she is leaving him.
What is the most probable diagnosis?
A  Normal Development
B  Rett Syndrome
C  Autism
D  Language delay

30  Daniel, 4 years old, lives with his mother and 2 older siblings. He is causing concern in the nursery school because he is often angry and physically aggressive towards others. He is difficult to calm and can act in a threatening and controlling manner towards his mother and other adults in the nursery school. The family have had help from the Child Protection Services after his father was violent towards his mother. The father now lives in another part of the country, and the children see him 3-4 times a year.
Based on his symptoms and the risk factors in his environment, which association pattern is the most probable in Daniel?
A  Secure attachment
B  Avoidant attachment
C  Disorganised, role-reversed attachment
D  Ambivalent attachment

31  For an adolescent to have post traumatisk stress syndrome (PTSD) He/she must have experienced one or more traumas.
Do genes play any role in the aetiology of this condition?
A  No, it is the number of negative life experiences that determines the severity of the condition
B  No, the aetiology of this condition is dependent solely on environment
C  Yes, because it differs markedly from an adjustment disorder
D  Yes, the same event can cause this condition in one person but not in another
32
Lise, 13 years old has lost weight over the last 6 months; from 44.5 kg (almost 50 perc) to 39.0 kg (10 perc). She has followed her height percentile; from 155 cm to 158 cm (50 perc). She eats very little; she says she has no appetite and tries to avoid foods high in calories. She thinks she is fat and is afraid of putting on weight. About every 2 weeks she has a bout of over-eating, after which she increases the amount she exercises to go down in weight. She has not had a period for 3 months. Which diagnosis does she meet the criteria for?

A  Atypical anorexia nervosa  
B  Prodromal eating disorder  
C  Anorexia nervosa  
D  Bulimia nervosa

33
Line, 4 years old, continually complains that her "head hurts" particularly in the morning; she also vomits quite often. Her father left home 4 months ago with his mistress. How do you assess her headaches?

A  Children often react to stress with "head hurts or tummy hurts" and the family situation should be investigated further before subjecting them to somatic-neurological investigations  
B  Her headache must be viewed as a psychosomatic stress reaction to the changed family situation  
C  In such young children with headache it is important to exclude somatic disease before concluding it is psychosomatic stress  
D  Headache is very common in children and adolescents if there are stress factors in the environment. Extensive somatic-neurological investigations could reinforce the psychosomatic problems

34
ADHD is a neuropsychiatric condition that involves the frontal lobes. Which statement best describes the functions that these brain structures perform?

A  Storing information that is necessary to strengthen the activity level  
B  Planning motor responses to sensory stimulation  
C  Long-term storage of information, particularly for language and auditory functions  
D  Planning and organisation of mental operations and impulse control

35
Susanne, 17 years old, experienced that her father had a heart attack 2 years ago. Over the last year she has become afraid to go out to the cinema or theatre, for example, because she is afraid she could be acutely ill and die. She has had frequent episodes of dizziness, palpitations, chest pains and feeling things are unreal. These episodes last a few minutes. She has also stopped taking the bus and wants her mother to drive her. What is the most probable diagnosis?

A  Depressive disorder  
B  Social anxiety disorder  
C  Panic disorder  
D  Obsessive disorder

36
What is the cause of abnormal copious bleeding 3 weeks after a vaginal delivery?

A  Membrane remnants  
B  Atonic uterus  
C  Undetected cervical tear  
D  Thrombocytopenia
37 A woman now aged 18 started her periods at 13. She stopped menstruating 2 years ago in connection with weight loss and exercise. Her hormones are investigated. Which hormone status will most probably be found?

A Hypergonadotropic hypergonadism  
B Hypergonadotropic hypogonadism  
C Hypogonadotropic hypergonadism  
D Hypogonadotropic hypogonadism

38 Which of the mentioned factors are most important for the prognosis of ovarian cancer?

A Stage  
B Age  
C Histology type  
D Serum level of tumour marker CA125

39 What is the contraindication for giving oestrogen (with or without gestagen) to a woman with problematic symptoms in the menopause?

A Mother with breast cancer  
B Smoking  
C Overweight  
D History of thrombosis

40 What is the Bishop score?

A A scoring system for predicting the start of labour  
B A scoring system that describes how ripe the cervix is  
C A scoring system that is used to assess the severity of preeclampsia  
D A scoring system that expresses vitality in the neonate

41 A woman attends for normal pregnancy check in week 25 with you, her GP. She complains of lower back pain. What is the most probable cause of this pain?

A Pregnancy-related pelvic pain  
B Nucleus pulposus prolapse  
C Premature contractions  
D Obstipation

42 Why is increasing malodorous discharge a frequently occurring symptom of cervical cancer?

A Cervical cancer causes rectovaginal fistula.  
B Cervical cancer results in hypersecretion from endocervical mucous glands.  
C Cervical cancer has been exposed to the vaginal bacterial flora and has been infected.  
D Cervical cancer is caused by HPV infection that gives a discharge.
43 A young woman attends for an appointment with you, her GP. She gave birth to her 3rd child 2 months ago. She had diet-controlled gestational diabetes, otherwise it was an uncomplicated pregnancy and delivery.

What is the correct follow up for this woman?

A  Give her an appointment for a glucose load test in a couple of weeks.
B  Ask her to come back to take a p-glucose.
C  Send a referral to Endocrinology Outpatients at St.Olavs Hospital.
D  Ask her to keep a blood sugar diary and give her an appointment for follow-up in one week.

44 Syncytiotrophoblast cells produce a hormone that is important for the pregnancy to continue. Demonstration of this hormone is used in pregnancy tests.

What is this hormone called?

A  Human placental lactogen
B  Corticotropin-releasing hormone
C  Progesterone
D  Human chorionic gonadotropin

45 Marit (27 years old) who has previously been healthy, is pregnant for the second time in week 12. In the first pregnancy she had mild preeclampsia. She complains of a headache that she has had for the last few days. At examination you find BP 150/93 and urine stix shows albumin +1.

Which examination(s) will most probably explain the condition?

A  Blood tests for Albumin, INR, fibrinogen, antithrombin, haptoglobin
B  Urine microscopy
C  24-hour measurement of BP and a new urine sample
D  Blood tests for Hb, trc, ASAT/ALAT/LD, urate, creatinine

46 The patient is 38 years old, pregnant with her 3rd child in week 36. Her two previous children weighed 3,900g and 4,500g. A sugar load test was performed in week 24, and revealed fasting blood glucose of 5.0 mmol/L (ref.: 4.2 - 6.3 mmol/L) and a 2-hour glucose load gave 8.3 mmol/L (ref.: < 7.8 mmol/L). She was then given detailed dietary and lifestyle advice. She has only put on 7 kg during the pregnancy, and all HbA1c levels have been below 6.0%.

Today’s SF result gives the same value as 3 weeks ago.

What is the most correct course of action?

A  You tell her it is normal that the child’s head pushes down into the pelvic entrance with the 3rd child, and therefore the fundus is a little lower.
B  You tell her that this child will probably not be as big as the previous babies because of the good glucose regulation.
C  You arrange a new check of the SF measurement in 1 week with the midwife.
D  You refer her to the Maternity Outpatients Clinic/fetometry.

47 Histologic type is one of several prognostic factors in endometrial cancer. Which of the histologic types mentioned has the best prognosis?

A  Clear cell adenocarcinoma
B  Serous papillary adenocarcinoma
C  Endometroid adenocarcinoma
D  Carcinosarcoma (mixed Müllerian tumour)
48
Which statement best fits the copper coil?

A. It cannot be given to nullipara  
B. The coil increases the risk for extrauterine pregnancy  
C. The copper coil increases menstrual bleeding  
D. The coil should be inserted immediately after menstruation, before probable ovulation

49
What is the most common cause of post-partum bleeding?

A. Coagulopathies  
B. Atonia  
C. Retained placenta  
D. Tears in the vagina/cervix

50
A 35-year old woman who has a family history of breast and ovarian cancer comes to your GP surgery.
- her mother had breast cancer at 48 years of age  
- her maternal grandmother had ovarian cancer at 55 years of age  
- a cousin (daughter of her mother’s sister) had breast cancer at 37 years of age  
What advice do you give the woman?

A. Refer the woman for genetic counselling and gene testing.  
B. Annual check by the GP with cervical cytology.  
C. Annual mammography and gynaecological examination by a gynaecologist.  
D. Prophylactic surgery (salpingo-oophorectomy + mastectomy) as soon as possible.
The picture above shows the menstrual cycle in women. Which hormone represents the curve that is 1 (green), 2 (blue), 3 (red) and 4 (yellow)?

A 1 (green) is AMH, 2 (blue) is oestradiol, 3 (red) is LH and 4 (yellow) is progesterone.
B 1 (green) is FSH, 2 (blue) is oestradiol, 3 (red) is hCG (human chorionic gonadotropin) and 4 (yellow) is progesterone.
C 1 (green) is FSH, 2 (blue) is progesterone, 3 (red) is LH and 4 (yellow) is oestradiol.
D 1 (green) is FSH, 2 (blue) is oestradiol, 3 (red) is LH and 4 (yellow) is progesterone.

52 A 44-year old woman comes to you, her GP. Previously she has had regular periods. The last 2 years, she has had increasingly heavy menstrual bleeds lasting 6-7 days at 3-4 week intervals; on occasions she has felt listless and tired. She last had a gynaecological examination 4 years ago with normal findings. At Gyn. examination now you find normal findings at inspection of the vulva, vagina and portico. At bimanual palpation you feel a swelling in the pelvis that appears mobile, size estimated at 8-10 cm in diameter. Blood tests show: Hb=12.0 (ref:11.7-15.3 g/dl). Ferritin = 7 (ref: 9-140microg/L). What is the most probable diagnosis?

A Benign ovarian tumour
B Tumour of the bladder
C Uterine myoma
D Malignant ovarian tumour
53
Why should breastfeeding and, in particular, pregnant women be advised to abstain from alcohol?

A  The alcohol concentration in the fetus can be higher than or the same as in the mother.
B  Alcohol does not cross the placental barrier, but alcohol is still dangerous because it often causes high-risk behavior.
C  Neonates will have the same alcohol percent as the alcohol percent in the breast milk.
D  Alcohol is concentrated in the placenta.

54
Liv is para 0, gravida 1, in week 37. She has been for check-ups in the primary healthcare services and the pregnancy has up until now been normal. The last couple of days she has felt "less activity" and today there has been no fetal kicking. Investigation at the hospital concludes with "no heart activity in the fetus". Which of the answers is most frequently associated with intrauterine fetal death?

A  Twins
B  Fever in the mother
C  Rhesus immunisation
D  Growth retardation in the fetus

55
Which one of the factors listed below is a risk factor for endometriosis?

A  Uterine malformation
B  Smoking
C  Late onset of menstruation
D  Overweight

56
A 78-year old man has been referred to Urology Outpatients because of increasing micturition problems (LUTS). He has had insulin-dependent diabetes mellitus for 35 years. He says that over the last year he has had 2 urinary tract infections with a high fever and poor general health. He states that there is reduced stream pressure at micturition and poor bladder emptying. No nocturia or pollakiuria. PSA 3.6 ng/ml (normal range men > 69 years: 0 - 6.5 ng/ml, creatinine 175 micromol/L (60-100 micromol/L). Which of the following investigative procedures will generate the best information on the cause of his urination problems?

A  Urethrocystoscopy, uroflowmetry and 3-phase CT of the urinary tract
B  Urethrocystoscopy, pressure flow investigation (cystoflowmetry), DRE of the prostate and ultrasound of the urinary tract
C  Urethrocystoscopy, 3-phase CT of the urinary tract and digital rectal examination (DRE) of the prostate
D  Urethrocystoscopy, uroflowmetry and DRE of the prostate
57
A 78 year old man has an appointment to renew his driving licence. Tests include a urine sample that shows haematuria 3+. He has no complaints. The patient is referred for 3-phase CT. The results show everything to be OK, but the bladder was difficult to assess because it was empty. What should you do?

A You call the patient and inform him that they couldn't find anything wrong, but that he will be referred for a cystoscopy
B You call the patient and inform him that the investigation shows everything is fine, and that he should come with a urine sample for follow-up in 6 months.
C You refer the patient for a new CT with a full bladder and for cystoscopy at Urology Outpatients.
D You call the patient and inform him that they can't find anything wrong, but that his bladder needs to be examined using ultrasound when it is full.

58
Kari (67 years old) has undergone laparotomy three times, and has had part of her intestines removed due to adhesions and fistulas (Crohn's disease). She has also been admitted several times due to pain caused by small stones in the urinary tract, with spontaneous passage. She has now been diagnosed with a 12 mm stone distally in the right ureter, about 4 cm from the ureteral ostium. She is afebrile; creatinine 110 micromol/L (normal range 60-100 micromol/L). She has daily moderate pain episodes that are alleviated with paracetamol.

Which treatment option is considered to be the best to cure her ureteral stone?

A Refer her for robotic-assisted laparoscopic removal of the ureteral stone.
B Continue with paracetamol as analgesic, and wait 3 weeks in the hope that the stone will spontaneously pass to the bladder
C Refer her for ESWL (Extracorporeal shock wave lithotripsy).
D Refer her for ureterorenoscopy with laser lithotripsy of the stone.

59
Ola (20 years old) comes to the doctor's surgery because of pain in his back/flank area on the left side. He describes the pain as continuous when it is present. The pain normally comes when he is out drinking beer. The pain disappears the next day. Otherwise he feels well. You examine him and cannot find anything wrong; there is no pain at the moment. You wonder if the patient could have pyeloureteral stenosis.

What should you do?

A You refer the patient to Urology Outpatients for further investigation with a query about pyeloureteral stenosis.
B You ask the patient to contact the surgery again in 6 months if the condition has not improved. You check his creatinine.
C You explain to the patient that since the pain passes so quickly, treatment will not be necessary. You ask him to come back if the pain becomes continuous or if he gets a fever. You check his creatinine to make sure his kidney function is good.
D You refer the patient for ultrasound of the kidneys to check that the ureters are OK.

60
Per (83 years old) with a history of heart attack undergoes TURP (transurethral resection of the prostate) due to micturition problems (LUTS). Pre-operativ PSA (prostate specific antigen) is 5.0 ng/ml (normal range men > 69 years: 0 - 6.5 ng/ml), and at digital rectal examination (DRE) the prostate is firm and elastic. Histology of the TURP resection reveals adenocarcinoma in 5% of the resected prostate tissue, with Gleason 3+3, score 6.

Which treatment plan would you recommend for this patient?

A No active treatment, only clinical follow up
B Robotic-assisted radical prostatectomy
C Hormone therapy
D Curative radiotherapy
61 Gunnar (65 years old) has undergone surgery for cancer of the prostate with radical prostatectomy 2 months ago. Prior to the operation he had no problems with urinary incontinence but now he must use a pad that has to be changed 2-4 times/day. He is performing postoperative pelvic floor exercises. He is dry at night but feels the leakage is very problematic when he is active outdoors. He comes to you as his GP for advice.

Which of the following answers indicate the probable diagnosis and best treatment/advice?

A  Urge incontinence. He is given a prescription for beta-3-adrenoceptor agonist.
B  Mixed incontinence. He is referred to a urologist for assessment for sling surgery.
C  Stress incontinence. He is encouraged to continue with the pelvic floor exercises.
D  Stress incontinence. He is recommended to reduce his fluid intake before physical activity, primarily coffee and tea.
E  Overflow incontinence. He is reassured that most people get better with time.

62 Some people have a genetic predisposition (autosomal recessive inheritance) for developing stones in the urinary tract.

Which type of urinary stone does this patient group make?

A  Citrate stones
B  Uric acid stones
C  Cystine stones
D  Oxalate stones

63 A young man aged 18 contacts the health centre because he wonders whether his testicles are normal. Two weeks ago he was kneed in his scrotum while playing football and now thinks the one testicle is larger than it used to be. You examine the patient and find that his right testis is larger, but that the surface is even.

What should you do?

A  Take blood samples for HCG, AFP to exclude testicular cancer.
B  Explain that having testicles of different sizes is perfectly normal.
C  Refer him for ultrasound of the scrotum to exclude testicular cancer.
D  Explain to the patient that there has been some swelling of the testicle as a result of being kicked, and that this will pass within a couple of weeks.

64 You have referred a 70-year old woman for CT of the urinary tract after a painful episode that you presume is due to kidney stones. The patient was effectively treated with analgesics. The results of CT show that the patient has an 8 mm stone in the distal ureter on the left side. There are no signs of hydronephrosis.

What should you do?

A  You consider that such a small stone has passed spontaneously and that further action is not necessary.
B  You inform the patient about the CT results. If the patient doesn't have any symptoms, order a new CT in a few weeks to see if the stone has passed spontaneously.
C  You contact the patient by phone and ask whether the patient has any symptoms. If the patient is well, no further investigations are necessary.
D  You refer the patient for admission as emergency help due to the risk of obstruction affecting kidney function. Even though there are no symptoms at the moment, it is important to prevent damage to the kidney.
65
A 71-year-old woman is referred to you for drug-resistant hypertension. She follows her treatment regimen and takes 25 mg of hydrochlorothiazide, 100 mg of losartan (Angiotensin Receptor Blocker, ARB), and 10 mg of amlodipine (calcium channel blocker, CCB) therapy daily, along with a baby aspirin and a multivitamin. She does not smoke or drink alcohol and is sedentary and thin. Her BMI is 21 kg/m². Her blood pressure (BP) is 162/70 mmHg without orthostatic symptoms. She has a trace of pedal edema bilaterally that is not present in the morning. Her EKG results are normal. Aside from a s-carbamide of 10 mmol/l (3-7 mmol/l), the results of her laboratory tests, including cholesterol values, are otherwise unremarkable. Her potassium, in particular, is 4.1 mmol/l.

If you started her on spironolactone, which ONE of the following is MOST likely to occur?

A  Her systolic BP is unlikely to change, but her diastolic BP is likely to decrease by 5–10 mmHg.
B  Her blood sugar is likely to fall by > 0.5 mmol/l.
C  Her potassium level is likely to increase by approximately 0.4 mmol/l.
D  Her cholesterol values are likely to increase by 10% for every 25 mg of spironolactone.

66
A 37-year-old man with ESRD (End-stage renal disease) from diabetes presents to the emergency department with severe weakness and dizziness. An electrocardiogram reveals signs of hyperkalemia and serum potassium (kalium) is 8 mmol/L (3.5 – 4.4) and HCO₃ level is 18 mmol/L (22 -30). You start treatment with insulin-glucose and intravenous calcium. Before you consider urgent haemodialysis; which ONE of the following should be added to the treatment of this patient?

A  Administration of kalium exchange resin by mouth
B  Administration of kalium exchange resin (ion exchange «Resonium-Calcium») by enema
C  Administration of sodium bicarbonate infusion
D  Administration of Aldosterone infusion

67
In which one of the following patients would you consider performing a renal biopsy to determine the basis for the patient’s renal dysfunction?

A  A 21-year-old patient with 15 years of type 1 diabetes, evidence of proliferative retinopathy, an eGFR of 81 ml/min/1.73 m² and a urinary albumine/creatinine ratio of 230 mg/mmol.
B  A 41-year-old patient with type 2 diabetes with a 6-month history of reduction of eGFR from 67 ml/min/1.73 m² to 38 ml/min/1.73 m², urinary albumine/creatinine ratio of 310 mg/mmol (increased from 30 mg/mmol 6 months ago) and hypertension requiring three antihypertensive agents.
C  A 54-year-old patient with type 2 diabetes with proliferative retinopathy, urinary albumine/ creatinine ratio of 380 mg/mmol and eGFR of 28ml/min/1.73 m².
D  A 44-year-old patient with type 2 diabetes, with a stable eGFR of 42 ml/min/1.73 m² and a urinary albumine/creatinine ratio of 130 mg/mmol and 1+ hematuria on a dipstick test with microscopic confirmation but no dysmorphic red blood cells seen.

68
You see a 48-year-old man in the clinic 5 years after transplantation. The primary disease leading to ESRD (End-stage renal disease) was diabetic nephropathy. His immunosuppression includes the usual triple medication; tacrolimus, MMF (mycophenolat moffetil) and prednisone. He complains of new-onset leg swelling and is found to have a serum creatinine of 168 µmol/L and a spot urine albumin/ creatinine ratio of 250 mg/mmol.

Which one of the following statements regarding the prognosis of proteinuria after kidney transplantation is correct?

A  Proteinuria after kidney transplantation increases the risk of graft failure and death
B  Proteinuria after kidney transplantation only affects outcome in patients with nephrotic range proteinuria
C  Proteinuria after kidney transplantation only affects graft survival in the presence of donor-specific antibody
D  Proteinuria after kidney transplantation has no effect on graft survival
69 What is the most commonly seen histopathology in patients with acute renal injury?

A Acute tubular necrosis (ATN)
B Focal segmental glomerulosclerosis (FSGS)
C Acute glomerular necrosis (AGN)
D Acute interstitial nephritis (AIN)

70 Karin (60 years of age) was admitted due to a 4-day history of illness and reduced general health. You find that her s-creatinine is 160 umol/L (normal range: 50-90 umol/L), and this is clearly higher than at the last check up at the GP 6 months ago (s-creatinine 80 umol/L). You diagnose acute renal injury. Which answer describes the best investigations for this patient?

A Check Hb, white cells and thrombocytes in full blood, as well as s-K, s-Ca, s-Phosphate, s-bicarbonate, s-carbamide, s-creatine, s-albumin, and u-stix. Order ultrasound of the urinary tract.
B Check Hb, white cells and thrombocytes in whole blood, as well as s-K, s-Na, s-Chloride, s-Calcium and blood gasses. Calculate estimated GFR using MDRD (Modification of Diet in Renal Disease) formula + creatinine clearance in a 24-hour urine collection.
C Check Hb, white cells and thrombocytes in whole blood, as well as s-CRP, s-K, s-Na, s-Chloride and s-Calcium. Order CT urinary tracts.
D Re-check s-creatinine, as well as s-K, s-Na, s-Chloride og s-Calcium. Order ultrasound of the urinary tract and X-ray of the thorax.

71 In your practice as a GP, you diagnose many patients with chronic kidney disease, and the question becomes which of these should be referred to a specialist. Which of the following answers is the most correct?

A All patients with eGFR <15 ml/min. In addition, patients with eGFR 15-60ml/min and microhaematuria.
B All patients with clinical/symptomatic kidney disease, i.e. renal failure or nephrotic syndrome.
C All patients with eGFR <30 ml/min or macroalbuminuria. In addition, patients with suspected glomerulonephritis or other special problems.
D All patients with eGFR <60 ml/min and microalbuminuria.

72 Physical activity influences insulin sensitivity and therefore the need for injected insulin in type 1 diabetic subjects. Against this background, which of the following statements is correct?

A Physical activity normally decreases the need for insulin during and after activity.
B Physical activity normally decreases the need for insulin solely during activity.
C Physical activity normally increases the need for insulin solely during activity.
D Physical activity normally increases the need for insulin during and after activity.

73 Radioiodine is a common treatment for Graves disease. This treatment has some small and some major disadvantages. Which of the following poses a major disadvantage (i.e. a major risk)?

A Risk of cardiovascular disease
B Risk of leukemia
C Risk of thyroid cancer
D Risk of hypothyroidism
Dagny had a radius fracture in connection with a fall on the ice. The doctor refers her for a bone density measurement which reveals a T-score of -2.8 in the lumbar column and -2.4 in the neck of the femur. She has a somewhat low dietary intake of calcium and vitamin D, and the doctor starts supplements with this. Which specific treatment is the first choice for this patient?

A Parathyroid hormone analogue  
B Antibody against RANKL (denosumab)  
C Oestrogen/gestagen  
D Bisphosphonate

Berit (45 years old) underwent thyroidectomy four years ago due to problematic tractable hyperthyroidism and has since been on replacement therapy with Levaxin. Recently she has had problems with muscle cramps in her hands and feet as well as numbness around her mouth and in her hands.

What is the most probable cause of this?

A Hypothyroidism  
B Hypocalcemia  
C Hypercalcemia  
D Hyperthyroidism

Marit (35 years of age) has gone to the doctor’s because of long-term fatigue and weight loss. She says she has almost fainted several times recently. The doctor notices that she has increased pigmentation for the time of year. Measurement of blood pressure reveals she has hypotension. Blood tests show hyperkalemia and hyponatremia.

What is the most probable cause of this electrolyte imbalance?

A Cortisone insufficiency  
B Adrenalin insufficiency  
C Aldosterone insufficiency  
D Androgen insufficiency

Several studies have shown that the frequency of newly diagnosed type 1 diabetes in young people varies during the course of the year.

What has been documented to be associated with the increased frequency?

A The summer months compared to the winter months  
B The winter months compared to the summer months  
C The pollen season compared to the rest of the year  
D The spring compared to the autumn.

Trine is 29 years old and previously healthy. She recently gave birth to a daughter and after the birth experienced acute back pain. An X-ray of the spine was taken which revealed 3 compression fractures in the thoracal and lumbar columns. Measurement of bone density gave a T-score of -4.5 in the lumbar column and -3.5 in the neck of femur. She has low levels of vitamin D, and you start her on calcium and vitamin D supplements. You want to give the patient specific treatment that will maximally increase bone density and re-establish the microarchitecture.

Which of the following alternatives should you choose?

A Bisphosphonate  
B Parathyroid hormone analogue  
C Antibody to RANKL (denosumab)  
D Oestrogen/gestagen
79
The hormone Glucagon-like peptide -1 stimulates release of insulin and is relevant in the treatment of type 2 diabetes. But the hormone also has other effects.
Which of the following statements on effect are completely correct?

A  Inhibits release of glucagon and increases the emptying time of the stomach
B  Stimulates release of glucagon and reduces the emptying time of the stomach
C  Stimulates release of glucagon and increases the emptying time of the stomach
D  Inhibits release of glucagon and reduces the emptying time of the stomach

80
Rolf (56 years of age) has had type 2 diabetes for 3 years. He works as a bus driver (has dispensation). He has slightly reduced GFR with pl-creatinine 120 µmol/L (ref : 60 - 105 µmol/L) and GFR 70 ml/min/1.73m². Over the last year he has been treated with metformin 1 g x 2, but has mild gastrointestinal side effects. HbA1c which one year ago was 6.7%, has increased to 7.7%, and fasting blood sugar is generally too high (9-11 mmol/L). As his GP you believe that he needs supplemental treatment.

What should you try?

A  Increasing metformin to 1 g x 3
B  Supplement with a sulfonylurea preparation
C  Supplement with a DPP-4 inhibitor
D  Supplement with long-acting insulin at bedtime

81
Absorption of subcutaneously injected insulin can vary depending on a number of conditions.
Which statement is best-documented as correct in regard to this?

A  Faster absorption from the thigh than the abdomen
B  Slower absorption with coarser than thinner needles
C  Faster absorption with coarser than thinner needles
D  Faster absorption from the abdomen than the thigh

82
A 60-year old man discovers blood in his urine. Investigations reveal that there is a tumour with a stalk and slight bleeding up to the right in the bladder. The tumour is removed and pieces sent for histopathology examination.

What is the most probable histopathologic diagnosis?

A  Follicular carcinoma
B  Adenocarcinoma
C  Papillary transitional cell carcinoma
D  Transitional cell carcinoma in situ
E  Squamous epithelial carcinoma
A woman comes to the surgery because she has burning and itching in the genital area. At examination you find a whitish pale area on the vulva. You take a punch biopsy which you send to the Pathology Department. When the woman returns for follow-up a week later, you still have not received the results of the biopsy. You call your colleague in Pathology who finds the biopsy and tells you that the epithelium is atrophic, the corneal layer is thickened, the basal layer shows signs of degeneration with underlying oedema and below this there is a band of lymphocytes. Your colleague is quite new in the subject and says he must first ask another colleague. You remember your lectures from your days as a medical student and make a suggestion.

Which diagnosis would you suggest?

A. Balanitis xerotica et obliterans  
B. Infection with human papilloma virus  
C. Infection with treponema pallidum  
D. Lichen sclerosus et atroficus  
E. Vulval intraepithelial neoplasia  

Ellen is 38 years old. She complains of headache and problems with her vision. Blood tests show that she has persistent high serum prolactin. What is the most probable diagnosis?

A. Meningioma  
B. Astrocytoma  
C. Pituitary adenoma  
D. Pheochromocytoma  

In breast cancer, histologic grading is important for the clinician when deciding what treatment the patient is to have. Which three microscopic characteristics are assessed by the pathologist when the tumour is graded?

A. Percentage of tubular structures in the tumour, number of mitoses in 10 visual fields and degree of nuclear pleomorphism  
B. Percentage of tubular structures in the tumour, amount of calcification and number of mitoses in 10 visual fields  
C. Penetration of the basal membrane, amount of calcification and percentage of necrosis in the tumour  
D. Degree of nuclear pleomorphism, number of mitoses in 10 visual fields and penetration of the basal membrane  

Anne is 25 years old. She gave birth to her first child a year ago. Now she has an enlarged thyroid gland. At first it was also tender. Now she has hypothyroidism. What is the most probable diagnosis?

A. Lymphocytic (autoimmune) thyroiditis  
B. Papillary carcinoma  
C. Colloid nodular goiter  
D. Graves' disease
About 300 cases of testicular cancer are registered in Norway each year. The most common of these is seminoma. Which histologic description best fits this diagnosis?

A. Islands of tumour cells with an appearance reminding one of germinal cells, fibrous bands and lymphocytes
B. Nodules comprised of epithelioid cells with central necroses, numerous multinucleate macrophages and lymphocytes
C. Areas with highly-differentiated tissue types such as keratinised squamous epithelium, respiratory epithelial cells with cilia, smooth muscle cells, bronchial glands and islands of cartilage
D. Areas with solid tumour tissue, cystic areas with bleeding and necroses

A 25-year old woman has the following symptoms: irregular periods, hirsutism and weight increase. At ultrasound investigation, small subcapsular cysts are seen on both ovaries. What is the most probable diagnosis?

A. Addison's disease
B. Polycystic ovarian syndrome
C. Diabetes type 1
D. Cushing's disease

You are involved in the delivery of a child that has a large tumour in the sacrococcygeal region. What is the most probable diagnosis?

A. Nephroblastoma
B. Neuroblastoma
C. Wilms' tumour
D. Rhabdomyosarcoma
E. Teratoma

Ovarian tumours can be hormone-producing. What is the ovarian tumour called that secretes androgens and can give masculine characteristics?

A. Brenner tumour
B. Sertoli-Leydig cell tumour
C. Granulosa cell tumour
D. Embryonal carcinoma
E. Thecofibroma

Which of these statements can be considered a disadvantage of diagnostic ultrasound?

A. The examination can be performed bedside
B. There is no radiation exposure
C. It is operator-dependent
D. The examination is usually fast
92
What is the first choice of examination procedure when a tumor in the urine bladder is suspected?

A  PET-CT  
B  CT  
C  Cystoscopy  
D  MRI  
E  Ultrasound

93
Which one of these statements about diagnostic ultrasound examination of the scrotum is true?

A  This examination is significantly inferior in diagnostic value compared to MRI.  
B  This examination will solve most diagnostic problems in the scrotum.  
C  This examination will tell you which type of tumor the scrotal mass is.  
D  This examination is of no value in the evaluation of testis torsion.

94
You suspect that a patient has a pituitary tumour. Which imaging investigation would you choose?

A  CT venography of the cavernous sinus  
B  MRI of the pituitary  
C  MRI of the neuraxis  
D  CT of the brain and pituitary

95
Maja is 28 years old and pregnant in the 4th month. She has been in a serious car accident and organ injury is suspected. Ultrasound has shown free fluid in the abdomen, and the gynaecologist has shown a live fetus.
The surgeon wants further imaging diagnostics before a possible laparotomy. What is the best choice with regard to further imaging diagnostics?

A  X-ray overview of the abdomen  
B  Ultrasound with contrast  
C  MRI of the abdomen  
D  CT of the abdomen