

Ministry of Education and Science of Ukraine  
V. N. Karazin Kharkiv National University

**HIV-AIDS IN UKRAINE.  
DERMATOLOGICAL ASPECTS**

Methodological recommendations  
for the preparation of applicants of higher medical education  
of the 4th year in the discipline “Dermatology, venereology”

*Electronic resource*

Kharkiv – 2023

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The methodological recommendations were developed by the team of teachers of the Department of infectious diseases and clinical immunology of V. N. Karazin Kharkiv national university of the School of medicine. An indicative map of the applicants work for higher medical education is provided, with clear, consistent and detailed recommendations for preparation at each stage of the practical training. The list of basic theoretical questions and practical skills, structure and content of topics, test modules for the initial and final level of knowledge control are given, the basic and additional literature is specified, there are references to the electronic resources of department's educational materials in the annexes.

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**ESTIMATED MAP OF WORK FOR HIGHER MEDICAL EDUCATION  
APPLICANTS FOR PRACTICAL CLASSES PREPARATION**

<b>PREPARATORY phase:</b>	
1.	To know the <b>interdisciplinary integration</b> of practical classes topics with acquired theoretical knowledge and practical skills in basic disciplines (medical biology, medical and biological physics, Latin language, human anatomy, normal and pathological physiology, biological and bioorganic chemistry, pathological anatomy, microbiology, virology and immunology, pharmacology, philosophy etc.). Acknowledge the terminology (including Latin transcription).
2.	<b>Motivational characteristic</b> and <b>substantiation of the topic</b> of the practical lesson <b>on behalf of the formation of clinical thinking</b> , in particular for the further development of skills in knowledge application in diagnosing of the main symptoms and syndromes and the possibilities of modern laboratory and instrumental methods of internal organs examination in the process of further study and future professional work.
3.	To give better insights into the types of student's educational activity, information provided on the reference stands of the department: thematic calendar plans of lectures, practical classes and extra-curriculum independent work of the 4th year higher medical education applicants corresponding to the curriculum of the model and working program of the discipline «Dermatology, venereology».
4.	Utilization of the basic and additional <b>educational and methodical literature:</b> <ul style="list-style-type: none"> <li>● <b>textbooks and tutorials</b> (printed and electronic versions), which are listed in these guidance after the theoretical section;</li> <li>● <b>educational and methodological materials of the department</b> (methodical recommendations for independent preparation for practical classes for the 4th year higher medical education applicants in the discipline «Dermatology, venereology» and methodological recommendations for independent student's work);</li> <li>● attendance of <b>lectures</b> (on-site supply of the educational process using multi-media presentations during lectures) - according to the thematiccalendar plan. Usage of <b>printed publications</b> for classes preparation, they can be obtained from the library and / or <b>electronic versions of it</b> available on the official site of the V. N. Karazin KhNU <a href="http://www.univer.kharkov.ua/en/departments">http://www.univer.kharkov.ua/en/departments</a> (navigation for sections: ... /Faculties / Departments / Infectious diseases and clinical immunology) - ref. Annex 1;</li> </ul>

and in the open interactive database of the electronic archive of the Repository of the V. N. Karazin KhNU resources <http://ekhnur.univer.kharkov.ua> (navigation: Faculty of Medicine / Educational editions, Medical Faculty) - ref. Annex 2.

It is advisable to note the main issues in the form of notes

#### **MAIN phase:**

Practical classes duration is 4 academic hours, they are held at the **clinical base** — Municipal non-profit enterprise «State Dermatovenerologic Dispensary №1» of Kharkiv municipal council. (Kharkiv, Tsilinogradskaya Street, 50) — see Annex 3.

#### **ATTENTION!**

Its forbidden to attend department classes without a medical uniform, replaceable shoes, medical cap, mask, shoe covers, stethofonendoscope.

1. To achieve the educational goal of practical classes and mastering the theoretical part of the subject, it is necessary to **LEARN** and **ASKNOWLEDGE** the answers to **the main theoretical questions** of the lesson's topic (ref. to the list of the main theoretical questions) that will be checked by the lecturer through an oral and / or written survey (correction, refinement, additional answers) on the main phase of practical classes conduction.

2. **TO BE ABLE TO** solve with explanations of theoretical, multiple choice (for control of the initial and final level of knowledge), situational tasks proposed for the mastering of the topic.

3. **TO MASTER PRACTICAL SKILLS on the topic**

- Take active part in the teacher's demonstration of the methodology of patient's examination, and to assign practical skills near the patient's bed under the supervision of a teacher.

To perform the patient's examination, interpret the received laboratory and instrumental investigations data, be able to use tools needed.

- Make syndromic diagnosis. To perform a differential diagnosis, to analyze the principles of the treatment, to give prescriptions for essential medicines prescribed.

4. **EXECUTE** obligatory tasks foreseen for independent student work

#### **FINAL phase:**

1. On the basis of theoretical knowledge and practical skills mastering on the topic to form clinical thinking and syndromic diagnosis making skills for further study in the medical profession.

Purpose and main tasks of the work on the topic of the practical lesson

**HIV-AIDS IN UKRAINE. THE MAIN VARIANTS OF THEIR CLINICAL COURSE. DERMATOLOGICAL ASPECTS OF THIS PROBLEM. BASIC ORGANIZATIONAL AND LEGAL PRINCIPLES FOR COMBATING ITS FURTHER DISSEMINATION**

Increase the level of knowledge on the etiology, pathogenesis, classification, clinical features and diagnosis of patients with allergodermatoses: the main clinical and instrumental methods of examination, to teach students of higher medical education in the 4th year of training modern tactics of management of patients with venereal pathology.

**MAIN QUESTIONS**

**As a result of studying the 4th year higher medical education applicants**

**must KNOW (the main theoretical questions):**

1. etiopathogenic characteristics of HIV and AIDS;
2. features of classification and clinical manifestations HIV and AIDS;
3. general course of HIV and AIDS in the human body;
4. characteristics and variety of clinical manifestations of HIV and AIDS;
5. principles of treatment and prevention of HIV and AIDS.

**must BE ABLE (basic practical skills on the topic of the practical lesson):**

1. properly collect patient history on HIV and AIDS;
2. make a diagnosis on clinical grounds;
3. run diagnostic (skin) tests to confirm the diagnosis;
4. make a differential diagnosis;
5. assign individual pathogenetic treatment.

**Tests to control the INITIAL LEVEL OF KNOWLEDGE**

1. HIV is a:
  - A. Arbovirus
  - B. Papillomavirus
  - C. Retrovirus
  - D. Herpes virus
  - E. Adenovirus
2. AIDS is a condition caused by:
  - A. Yeast
  - B. Candida albicans
  - C. Proteus vulgaris

- D. Bacteria
  - E. HIV infection
3. AIDS does not declare itself as:
- A. Infectious skin lesions
  - B. Allergic dermatitis
  - C. Seborrheic dermatitis
  - D. Hairy (cobblestone) tongue
  - E. Tumors
4. Which medicines are recommended for the treatment of AIDS patients?
- A. Antiviral
  - B. Sedatives
  - C. Antimalarial
  - D. Antihistamines
  - E. Analgesics
5. Place of differentiation of T-lymphocytes:
- A. Thymus
  - B. Bone marrow
  - B. Lymph node
  - D. Blood serum
6. Nucleic acid of HIV:
- A. DNA
  - B. RNA and DNA
  - B. RNA
7. Is it possible to reproduce HIV in T-suppressors?
- A. No
  - B. Yes, provided there is an intercurrent infection
  - B. Yes
  - D. Sometimes possible
8. Is HIV damage to T-killers?
- A. Yes
  - B. No
  - C. Yes, but with hyperinfection by other viruses
  - D. Sometimes it is possible
9. Is it possible to damage CNS cells with human immunodeficiency virus?
- A. No
  - B. Probably, but on condition that the patient has any of the infections
  - B. Yes

G. Sometimes it is possible

10. HIV is classified:

- A. HIV-1
- B. HIV-1 and HIV-2
- C. HIV-1 and HIV-2 and HIV-3

Standards of answers: 1–C, 2–E, 3–B, 4–A, 5–A, 6–B, 7–A, 8–B, 9–B, 10 – B.

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## STRUCTURE AND CONTENT OF THE TOPIC

**Acquired immunodeficiency syndrome (AIDS).** The AIDS epidemic was first recognized in the USA in 1981. The early cases were male homosexuals with pneumocystis pneumonia or Kaposi's sarcoma and immunosuppression. Later it became clear that the human immunodeficiency virus (HIV) could be acquired from contaminated body fluids, particularly semen and blood, in many ways, the importance of which varies from country to country. In the UK and the USA, for example, most cases have been homosexual or bisexual men; in parts of Africa, on the other hand, the disease is most often spread heterosexually. Other groups at high risk are intravenous drug abusers who share contaminated needles and syringes, and haemophiliacs who were given infected blood products. Up to a half of babies born to infected mothers will be infected transplacentally.

The global epidemic is not slackening off though the pattern of transmission in industrialized nations is changing. Heterosexual transmission now accounts for 25–30% of new cases in Europe and the USA.

**Pathogenesis.** The human immunodeficiency viruses, HIV-1 and HIV-2 (mainly in West Africa), are RNA retroviruses containing reverse transcriptase enzymes, which allow the viral DNA copy to be incorporated into the chromosomes of the host cell. Their main target is a subset of T lymphocytes (helper/inducer cells) that express glycoprotein CD4 molecules on their surface. These bind to the surface envelope of the HIV.

Viral replication within the helper/inducer cells kills them, and their depletion leads to the loss of cell-mediated immunity so characteristic of HIV infection. A variety of opportunistic infections may then follow.

**Course.** The original infection may be asymptomatic, or followed by a glandular fever-like illness at the time of seroconversion. After a variable latent phase, which may last several years, a persistent generalized lymphadenopathy develops. The term 'AIDS-related complex' refers to the next stage, in which many of the symptoms of AIDS (e.g. fever, weight-loss, fatigue or diarrhoea) may be present without the opportunistic infections or tumours characteristic of full-blown AIDS. Not all of those infected with HIV will develop AIDS but, for those who do,

the average time from infection to the onset of AIDS is about 10 years. Once AIDS develops, if untreated, about half will die within 1 year and three-quarters within 4 years.

**Histopathology.** Benign lymphadenopathy biopsies of HIV patients have shown one of the following morphological patterns:

- Florid follicular hyperplasia
- Mixed follicular hyperplasia and follicular involution
- Follicular involution
- Lymphocyte depletion

These histological features relate clinical stage of the disease with CD4 counts.

**History and Physical.** Primary infection occurs 4 to 10 weeks after unprotected sexual practice with an HIV-infected person. The primary HIV infection is characterized by the following symptoms:

- Fever
- Joint pain
- Skin rash
- Sore throat

### **Swollen lymph nodes.**

Chronic HIV infection is characterized by the following signs and symptoms and can last for decades:

- Fever
- Fatigue
- Diarrhea
- Weight loss
- Oral thrush
- Shingles
- Persistent generalized lymphadenopathy

### **Evaluation**

HIV infection can remain undetected for years. However, there are several tests to diagnose it:

- Fourth generation assay: Detect specific antibodies and P24 HIV antigens
- Rapid test: Use blood or saliva to detect an HIV infection within hours
- Polymerase-chain-reaction: Can be a diagnostic or a confirmative test for HIV infection and can provide information of the viral load.

**Skin changes in AIDS.** Skin conditions are often the first clue to the presence of AIDS. The following are important:

1. *Kaposi's sarcoma* is the initial presentation in a decreasing percentage of AIDS patients, particularly homosexual men. The lesions of classical Kaposi's sarcoma are multiple purplish patches or nodules. In AIDS the lesions may be atypical, sometimes looking like bruises or pyogenic granulomata. The diagnosis can easily be missed and the mouth must always be examined.

2 *Seborrheic eczema* and folliculitis are seen in at least 50% of patients, often starting at an early stage of immunosuppression. The underlying cause may be an overgrowth of *Pityrosporum* yeasts. An itchy folliculitis of the head, neck and trunk,

and an eosinophilic folliculitis, possibly as a result of the multiplication of *Demodex folliculorum*, have also been described.

3. *Skin infections* - florid, unusually extensive or atypical examples of common infections may be seen with one or more of the following: herpes simplex, herpes zoster, molluscum contagiosum, oral and cutaneous candida, tinea, pityriasis versicolor, scabies and staphylococci. Facial and perianal warts are common. Hairy leukoplakia, often on the sides of the tongue, may be caused by proliferation of the Epstein–Barr virus. Bacillary angiomatosis may look like Kaposi's sarcoma and is caused by the bacillus that causes cat-scratch fever. Syphilis can coexist with AIDS, as can mycobacterial infections.

4. Other manifestations - dry skin is common in AIDS; so is pruritus. Psoriasis may start or worsen with AIDS. Diffuse alopecia is not uncommon. Drug eruptions are often seen in AIDS patients.

**Management.** The clinical diagnosis of HIV infection is confirmed by a positive blood test for antibodies to the virus. Patients should be counselled before and after testing for HIV antibody. Sexual contacts of infected individuals should be traced. Modern drugs for HIV infections increase life expectancy, but are not 'cures' in the usual sense. They reduce the viral load but are expensive and sometimes toxic. Guidelines on how to use them change constantly, and so the drug treatment of HIV infections should be directed by specialists in the field, who will monitor the plasma viral load and CD4 count regularly. Difficult decisions to be made include the timing of treatment, the benefits of starting early have to be balanced against the risk of toxicity and choosing the right drug combination of highly active antiretroviral treatment (HAART) a usually triple therapy with two nucleoside reverse transcriptase inhibitors plus either a non-nucleoside reverse transcriptase inhibitor or a protease inhibitor. The regimen will be changed if there is clinical or virological deterioration, or if the patient becomes pregnant, although the teratogenic potential of most of these drugs is still not known.

Treatment otherwise is symptomatic and varies according to the type of opportunistic infection detected. Prophylactic treatment against a number of life-threatening infections is also worthwhile, and prolongs life expectancy. Educating the public to avoid risky behaviour, such as unprotected sexual intercourse, is still hugely important.

#### **Treatment / Management.**

Antiretrovirals are drugs used to treat HIV infections/AIDS, and they are used in various combinations commonly referred to as highly active retroviral therapy (HAART). The antiretrovirals agent include nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs), NRTI fixed-dose combinations, integrase inhibitors, non-nucleoside reverse transcriptase inhibitors (NNRTIs), protease inhibitors and CCR5 inhibitors. All patients with HIV regardless of what level of CD4 should be started on HAART, which is a treatment for life. This therapy has been shown to reduce morbidity and mortality plus lower the risk of transmitting the infection to others, as long as the individual has low or undetectable viral load.

#### ***Single Tablet Regimens.***

1. *Efavirenz/emtricitabine/tenofovir disoproxil* is a tablet comprising 600-mg efavirenz, 200-mg emtricitabine, and 245-mg tenofovir disoproxil. It should be taken as a single pill once a day. It can cause sleep disturbances, tiredness, dizziness, rash, nausea, vomiting, diarrhea, abnormal dreams, impaired concentration, headache, anxiety, depression, raised creatine kinase levels, skin darkening, low blood phosphate levels, weakness, stomach pains, bloating and flatulence.

2. *Rilpivirine/emtricitabine/tenofovir disoproxil* is a tablet comprising 25-mg rilpivirine, 200-mg emtricitabine, and 245-mg tenofovir disoproxil. It should be taken as a single pill once a day. Side-effects include nausea, vomiting, diarrhea, dizziness, insomnia, headache, fatigue, weakness, rash, stomach pains, flatulence, changes in kidney function, raised creatine kinase levels, low blood phosphate levels, skin darkening, mood changes, and depression.

3. *Rilpivirine/tenofovir alafenamide/emtricitabine* is a tablet comprising 25-mg rilpivirine, 25-mg tenofovir alafenamide, and 200-mg emtricitabine. It should be taken as a single pill once a day. It can cause reduced white, red blood cell and platelet count, raised lipids, tiredness, headache, dizziness, insomnia, depression, nausea, abdominal pain, vomiting, flatulence, liver enzymes, dry mouth, raised amylase levels, and bilirubin.

4. *Elvitegravir /cobicistat/emtricitabine/tenofovir alafenamide* is a tablet comprising 150-mg elvitegravir, 150-mg cobicistat, 200-mg emtricitabine, and 10-mg tenofovir alafenamide. It should be taken as a single tablet once a day. Side-effects of this regimen include nausea, abnormal dreams, diarrhea, vomiting, stomach pain, headache, dizziness, rash, and tiredness.

5. *Elvitegravir/cobicistat/emtricitabine/tenofovir disoproxil* is a drug comprising 150-mg elvitegravir, 150-mg cobicistat, 200-mg emtricitabine, 245-mg tenofovir disoproxil. It should be taken as a single tablet once a day. It can cause nausea, headache, fatigue, diarrhea, dreams, dizziness, insomnia, rash, flatulence and sleepiness.

6. *Dolutegravir/abacavir/lamivudine* is an antiretroviral comprising 50-mg dolutegravir, 600-mg abacavir, and 300-mg lamivudine. It should be taken as a single tablet once a day. Side-effects include insomnia, headache, diarrhea, stomach pain, drowsiness, dizziness, hair loss, nausea, fatigue, rash, itching, vomiting, depression, flatulence, muscle pain and discomfort, an irritated or a runny nose, indigestion and loss of appetite.

### ***Integrase Inhibitors.***

1. *Dolutegravir* 50-mg tablet: Taken 50 mg once a day or 50 mg twice a day if taken with efavirenz, nevirapine or tipranavir. It can cause nausea, diarrhea, headache, rash, itching, vomiting, dizziness, abnormal dreams, fatigue, flatulence, stomach pain or discomfort, insomnia, an increase in liver and muscle enzymes.

2. *Raltegravir* 400- mg tablet: It should be taken 400 mg twice a day. Its side-effects include a headache, insomnia and rarely severe rash, hypersensitivity reaction, and extreme thirst.

### ***Non-Nucleoside Reverse Transcriptase Inhibitors (NNRTIs)***

1. *Etravirine* 100- and 200-mg tablets: It should be taken as a 200-mg tablet twice daily. The side-effects are rash and peripheral neuropathy. Nevirapine 200-mg tablet is taken once a day for two weeks, then 200mg twice a day. It can cause liver toxicity, rash, nausea, headache, allergic reaction, fatigue, stomach pain, and diarrhea.

2. *Rilpivirine* 25-mg tablet is taken once a day. Its significant side-effects are insomnia, headache, rash, stomach pains, raised liver enzymes, depression, dizziness, and vomiting.

CCR5 Inhibitor.

3. *Maraviroc* 150- and 300-mg tablets: This tablet should be taken at a dose of 300 mg twice a day. It can cause diarrhea, fatigue, and headache and rarely liver disease.

### **Protease Inhibitors**

1. *Atazanavir* 150-, 200- and 300-mg capsules: The 300-mg formula also comes with 100-mg ritonavir and should be taken once a day. It can cause nausea, diarrhea, rash, stomachache, headache, insomnia, hyperbilirubinemia, lipodystrophy, vomiting, liver toxicity and diabetes.

2. *Darunavir* 600- and 800-mg tablet: It should be taken as an 800-mg tablet with 100-mg ritonavir once a day. Its common side-effects include diarrhea, nausea, rash, stomach pain, headache, lipodystrophy, diabetes, and liver toxicity.

3. *Lopinavir /ritonavir* tablet is comprised of 20-mg lopinavir and 50-mg ritonavir that is taken as 2 tablets twice a day or 4 pills once a day. It may cause lipodystrophy, raised liver enzymes, nausea, abdominal pain, weakness, vomiting heartburn, headache, diarrhea, increased lipids, liver toxicity, and diabetes.

4. *Atazanavir /cobicistat* tablet is comprised of 300-mg atazanavir and 150-mg cobicistat. It should be taken once a day. It can cause jaundice, hyperglycemia, dry mouth, headache, dizziness, vomiting, diarrhea, sleep problems, hyperbilirubinemia, rash, fatigue, and lipodystrophy.

### **Differential Diagnosis**

- Burkitt lymphoma
- Candidiasis
- Cryptococcosis
- Cryptosporidiosis
- Coccidioidomycosis and valley fever
- Cytomegalovirus (CVM)
- High grade malignant immunoblastic lymphoma
- Herpes simplex
- Mycobacterium avium complex (MAC)
- Toxoplasmosis

**Staging.** Patients with HIV and a CD4 counts greater than 200, but less than 500 do not have AIDS but can develop chronic infections as well as noninfectious conditions. Diseases such as chronic candidiasis of the mouth or recurrent vaginal candida may occur. Patients may develop severe bouts of herpes simplex or herpes zoster (shingles). Patients are also at a higher risk for cancers that are much more

difficult to treat than in healthy people. Patients with normal CD4 counts (greater than 500) tend to have a good quality of life with a lifespan within 4 years of someone without HIV. Patients with a CD4 count less than 200 have AIDS and are susceptible to opportunistic infections. They usually have a lifespan of 2 years if they are started on HAART. If these patients are treated with antiretroviral agents and achieve a CD4 count greater than 500, they will have a normal life expectancy.

**Prognosis.** The prognosis of a patient with HIV and a CD4 count greater than 500 (normal) results in a life expectancy as someone without HIV. A person with untreated AIDS has a life expectancy of about 1 to 2 years after the first opportunistic infection. Antiretroviral treatment can increase CD4 counts and change the patient's status from AIDS to someone with HIV.

**Complications.** Complication of HIV disease is its progression to acquired immunodeficiency syndrome (AIDS). The physician should suspect it once opportunistic infections and/or low CD4 count are present in an individual who is HIV positive. AIDS occurs when lymphocyte count falls below a level (less than 200 cells per microliters) and is characterized by one or more of the following:

- Tuberculosis (TB)
- Cytomegalovirus
- Candidiasis
- Cryptococcal meningitis
- Cryptosporidiosis
- Toxoplasmosis
- Kaposi's sarcoma
- Lymphoma
- Neurological complications (AIDS dementia complex)
- Kidney disease

**Deterrence and Patient Education.** Principal facts for HIV prevention are patient education which includes the following:

- Inform all sexual partners if the individual is HIV positive.
- Use a clean needle to inject drugs and dispose of it. It is imperative that one should do not share it with anybody.
- Male circumcision reduces the likelihood of HIV infection. Discuss it with the primary care provider.
- Use a clean condom at all times when having sexual intercourse. Preferably use a condom that contains a water-based lubricant, which is more protective.
- The HIV-positive female must be treated during pregnancy.
- Use emtricitabine/tenofovir disoproxil to reduce the risk of a sexually transmitted HIV infection. It must be taken every day, and the individual can still be involved in safe sex practices. It does not prevent other sexually transmitted diseases like syphilis.

## Test to control the FINAL LEVEL OF KNOWLEDGE

1. What are the clinical features of herpes simplex in AIDS patients?
  - A. Localization: the oral mucosa, genitals
  - B. Localization: the extremities
  - C. Sharp pain
  - D. Erosion formation
  - E. Frequent recidives
  
2. The clinical picture of Kaposi's sarcoma in AIDS is characterized by:
  - A. Localization: the lower extremities
  - B. Localization: the face, oral mucosa
  - C. Young age of patients
  - D. Damages of the internal organs
  - E. Lymphadenopathy
  
3. A 28-year-old male patient was hospitalized with diarrhea (3-4 times a day), weight loss, rapid fatigability, breathing problems, cough. A clinical examination of this patient showed pneumocystic pneumonia. The patient has had multiple sexual contacts with stranger women. What disease can be suspected in this case?
  - A. Nonspecific ulcerative colitis
  - B. Tuberculous mesenteric lymphadenitis
  - C. Dysenteric diarrhea
  - D. AIDS
  - E. Tertiary syphilis
  
4. A patient complains of moderately painful rash on the surface of the tongue. He has been suffering for the last 2 months. The patient has had multiple sexual contacts with stranger women. Objective data: gray-white plaque on the lateral surface of the tongue. It is covered with thin hair-like processes. What is a preliminary for this patient?
  - A. Pemphigus vulgaris
  - B. Candidiasis of the tongue
  - C. Herpes simplex
  - D. AIDS: cobblestone tongue
  - E. Secondary syphilis
  
5. Which are the skin symptoms of microbial AIDS?
  - A. Diffuse alopecia
  - B. Seborrhoeic eczema
  - C. Skin infections
  - D. All are correct
  - E. No correct answer

6. Which medicines are recommended for the treatment of AIDS patients?
- A. Abacavir
  - B. Acyclovir
  - C. Amlodipine
  - D. Loratadine
  - E. Valacyclovir
7. 32-years old female patient with HIV consulted the dermatologist complaining of some rash on the scalp and chest, accompanied by itching. What kind of skin disease can be thought of in this case:
- A. Alopecia
  - B. VZV
  - C. Seborrhoeic eczema
  - D. Simple contact dermatitis
  - E. Atopic dermatitis
8. Which are the complications of AIDS patients?
- A. Tuberculosis
  - B. Cytomegalovirus
  - C. Candidiasis
  - D. Cryptococcal meningitis
  - E. All are correct
9. Chronic HIV infection is characterized by:
- A. Fever
  - B. Fatigue
  - C. Diarrhea
  - D. Weight loss
  - E. All are correct
10. A 29-year-old man is evaluated in an urgent care clinic with a 3-day history of fever, fatigue, and lymphadenopathy. After an extensive work-up, he is diagnosed with acute HIV infection; has an initial HIV RNA level of 887,000 copies/mL. Additional baseline HIV laboratory studies are ordered that include CD4 cell count and HIV genotypic drug resistance testing. Which one of the following strategies is recommended regarding the timing of initiating antiretroviral therapy in this man who is diagnosed with acute HIV infection?
- A. Promptly initiate antiretroviral therapy
  - B. Wait until the CD4 count decreases to less than 500 cells/mm<sup>3</sup>
  - C. Wait 12 weeks and reevaluate after determining whether spontaneous clearance of HIV occurs
  - D. Wait 6 months for the viral set point to be established and this will determine whether he needs antiretroviral therapy

Standards of answers: 1 – E, 2 – C, 3 –D, 4 –D, 5 – D, 6 – A, 7 – C, 8 – E, 9 – E,  
10 – A.

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**SELF-WORK**  
**of the 4th year higher medical education applicants**  
**on the topic of the practical lesson**

1. To provide curation of patients with a detailed history taking and complaints.
2. To give interpretation to the obtained laboratory methods of research.
3. To give interpretation to the obtained instrumental research methods.
4. Set a preliminary diagnosis during the patient's curation.

**Recommended literature**

**Basic:**

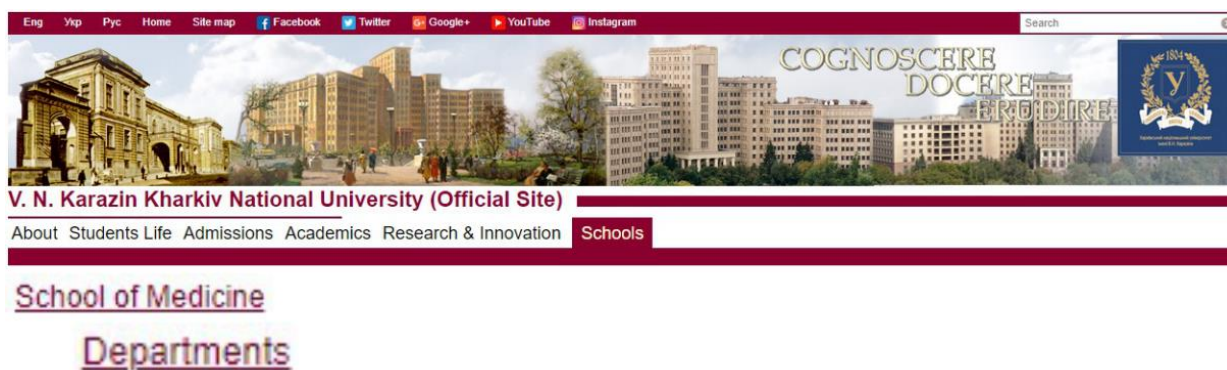
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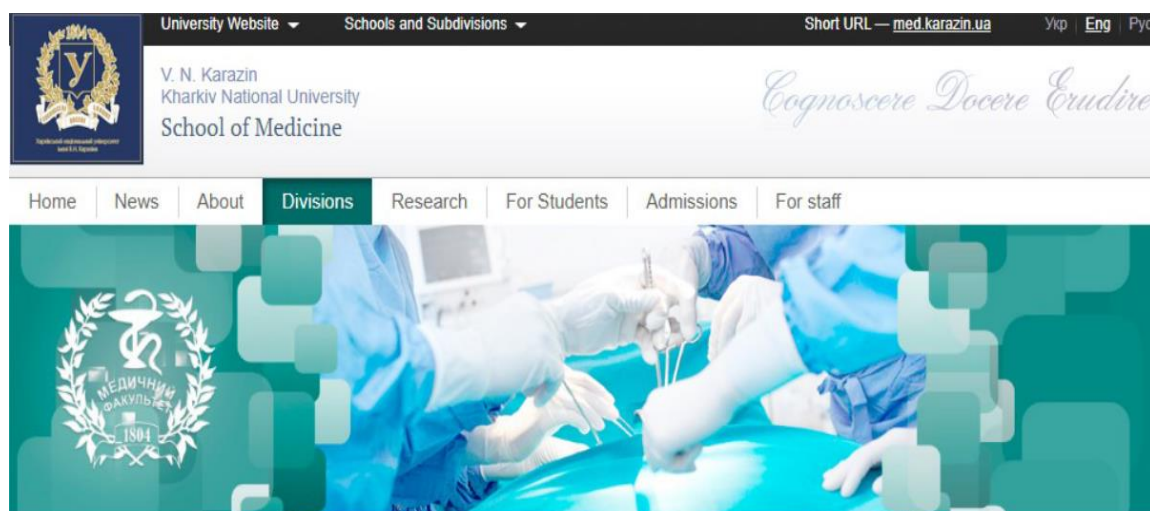
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