

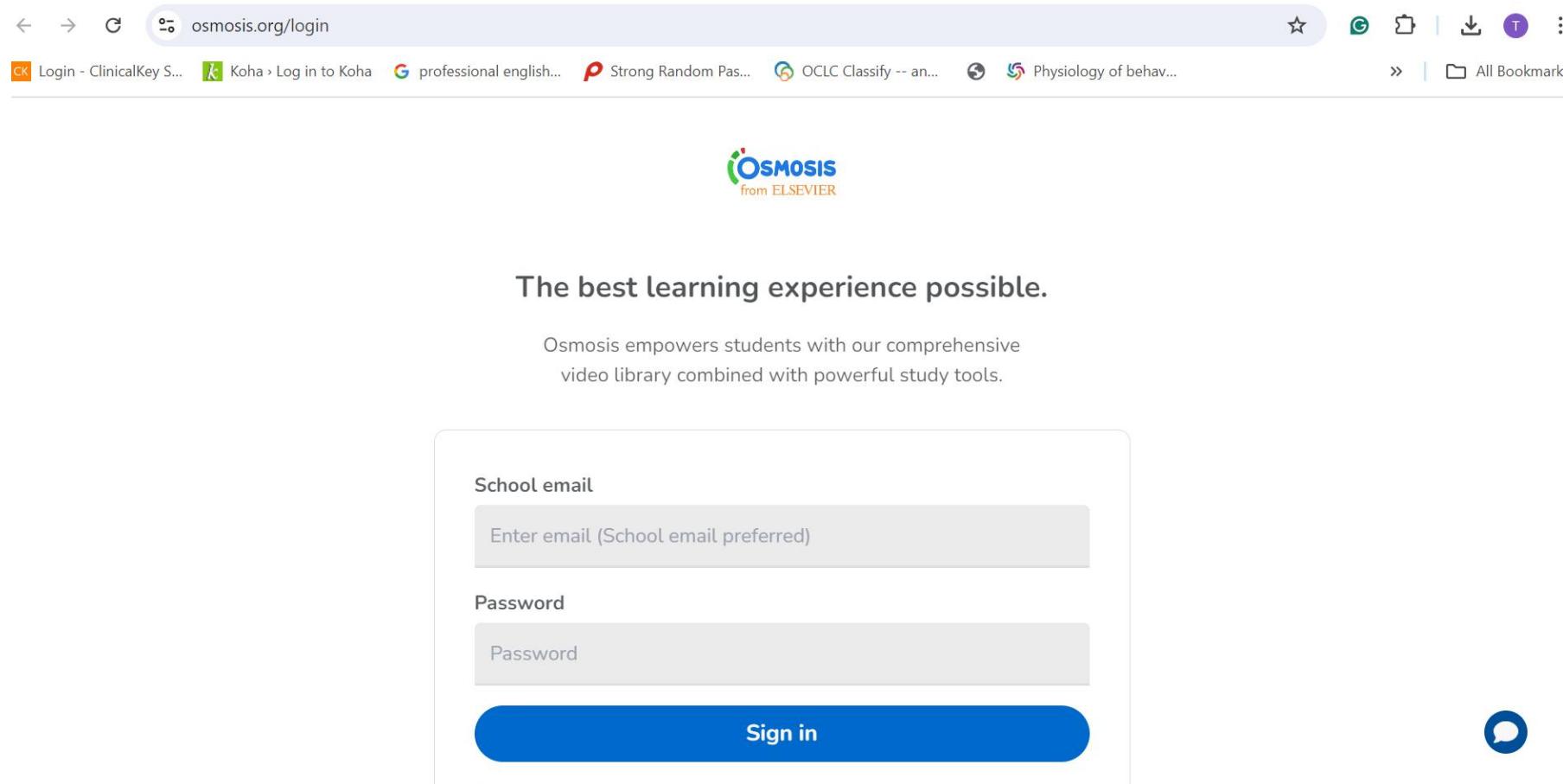
# Osmosis from Elsevier

<https://www.osmosis.org/login>

## Osmosis-მიმოხილვა.

- **Osmosis** არის Elsevier-ის პროდუქტებს შორის უახლესი სასწავლო პლატფორმა, რომელიც სამედიცინო დარგის სტუდენტებსა და პედაგოგებს სთავაზობს, უმოკლეს დროში, ინფორმაციაზე წვდომას ვიდეოებისა და ფლეშ ბარათების საშუალებით.
- **Osmosis** მოიცავს 1700-ზე მეტ ვიდეოს, 15000-ზე მეტ ფლეშ ბარათს და ათასობით კითხვა-პასუხს ანატომიის, ფიზიოლოგიის, პათოლოგიის, ფარმაკოლოგიისა და სხვა სამედიცინო დარგის შესახებ.
- **Osmosis** არის შესანიშნავი რესურსი მათთვის ვისაც სურს USMLE გამოცდისთვის მომზადება.

Osмosis-ზე წვდომისთვის საჭიროა გაიაროთ რეგისტრაცია წინასწარ მიღებული მეილით და პაროლით.



The screenshot shows a web browser window with the URL [osmosis.org/login](https://osmosis.org/login) in the address bar. The page itself is the Osmosis login interface. At the top, the Osmosis logo is displayed, followed by the tagline "The best learning experience possible." Below this, a descriptive text states: "Osmosis empowers students with our comprehensive video library combined with powerful study tools." The login form contains two fields: "School email" and "Password", each with a corresponding input box. A large blue "Sign in" button is centered below the fields. In the bottom right corner of the page, there is a small blue speech bubble icon. The browser's toolbar and a list of recent tabs are visible at the top of the screen.

osmosis.org/login

Login - ClinicalKey S... Koha > Log in to Koha professional english... Strong Random Pas... OCLC Classify -- an... Physiology of behav...

All Bookmark:

**OSMOSIS**  
from ELSEVIER

The best learning experience possible.

Osmosis empowers students with our comprehensive video library combined with powerful study tools.

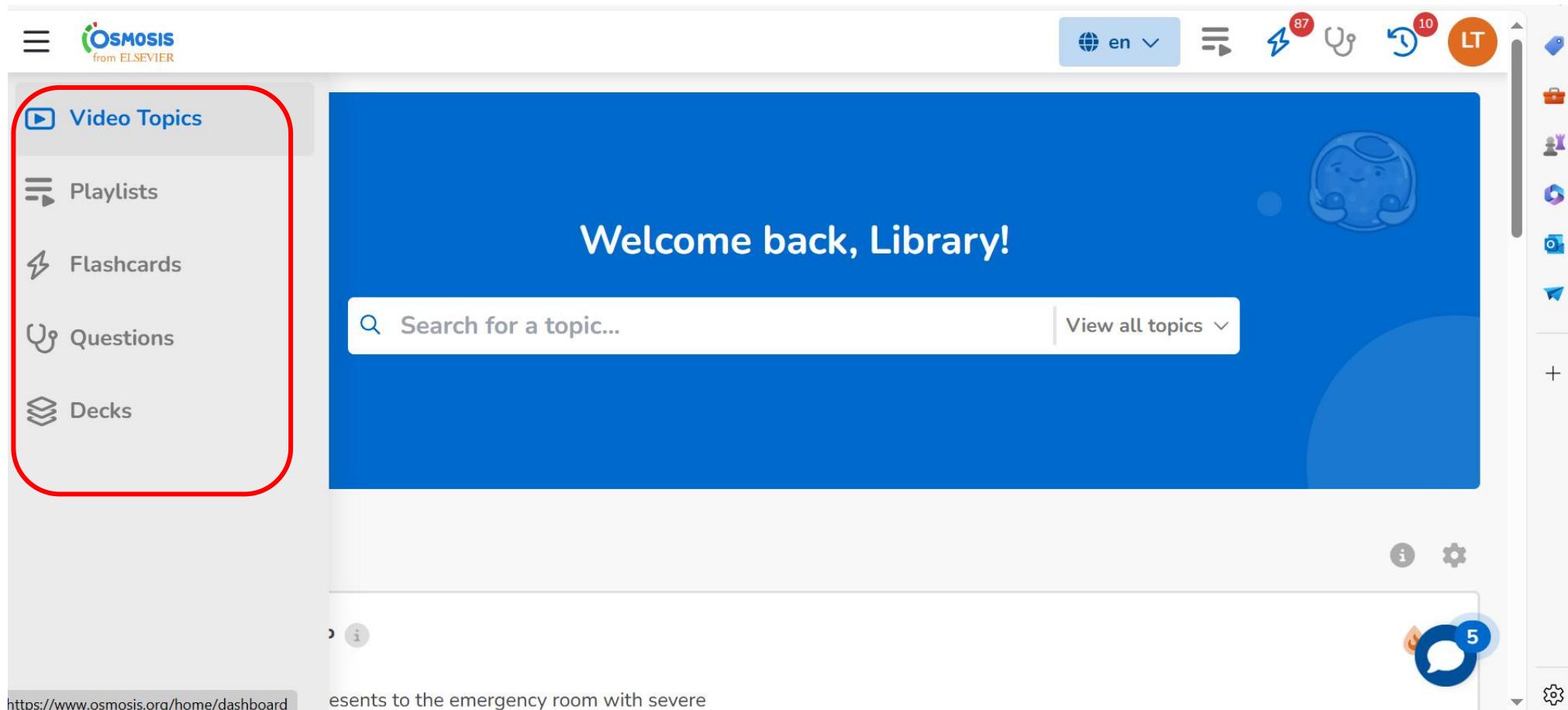
School email

Enter email (School email preferred)

Password

Sign in

საწყისი გვერდის მარცხენა ნაწილში წარმოდგენილია მენიუ.



**Video topics**-ზე გადასვლით პროგრამა გამოგიტანთ ძირითადი და კლინიკური მეცნიერებების განყოფილებებში წარმოდგენილ ვიდეოების ჩამონათვალს, რომლებიც შეიგნით ჩაშლილია სისტემებისა და საგნების მიხედვით.

The screenshot shows the Osmosis video topics interface. At the top, there is a navigation bar with the Osmosis logo, language selection (en), notification counts (87 and 10), and a 'LT' button. The main content area is titled 'All video topics' and features a hierarchical navigation tree. The tree is organized into three main categories: 'Basic Sciences' (green box), 'Foundational Sciences' (blue box), and 'Clinical Sciences' (yellow box). 'Basic Sciences' branches into 'Organ Systems' and 'Clinical Rotations'. 'Organ Systems' includes: Blood and lymphoreticular system, Cardiovascular system, Endocrine system, Gastrointestinal system, Immune system, Musculoskeletal system, Nervous system and special senses, Renal and urinary system, and Reproductive system and breast. 'Clinical Rotations' includes: Emergency medicine, Family medicine, Internal medicine, Neurology, Obstetrics and gynecology, Pediatrics, Psychiatry, and Surgery. The 'Foundational Sciences' category is expanded, showing: Anatomy (selected, highlighted in blue), Behavioral health, Biochemistry and nutrition, Biostatistics, epidemiology, population health, and interpretation of the medical literature, Cellular and molecular biology, Embryology, Genetics, and Histology. The 'Clinical Rotations' section has a 'NEW' badge. The sidebar on the right contains icons for a briefcase, user profile, group, search, and a gear. A cartoon character is visible on the right side of the interface.

All video topics

Basic Sciences

Foundational Sciences

Anatomy

Behavioral health

Biochemistry and nutrition

Biostatistics, epidemiology, population health, and interpretation of the medical literature

Cellular and molecular biology

Embryology

Genetics

Histology

Organ Systems

Blood and lymphoreticular system

Cardiovascular system

Endocrine system

Gastrointestinal system

Immune system

Musculoskeletal system

Nervous system and special senses

Renal and urinary system

Reproductive system and breast

Clinical Sciences

Clinical Rotations

Emergency medicine

Family medicine

Internal medicine

Neurology

Obstetrics and gynecology

Pediatrics

Psychiatry

Surgery

NEW

NEW

NEW

https://www.osmosis.org/library/oh/foundational-sciences/anatomy/

პროგრამა გაძლიერებული საშუალებას კონკრეტული ვიდეოს ყურების შემდეგ ვიდეოს ირგვლივ უპასუხოთ კითხვებს და შეამოწმოთ თქვენი ცოდნა.

OSMOSIS  
from ELSEVIER

Topics ▼

Search for videos and notes

en ▼

87 10 LT

▶ Anatomy clinical correlates: Spinal cord pathways

▶ Anatomy clinical correlates: Vertebral canal

**Assessments**

Anatomy clinical correlates: Spinal cord pathways

Preclinical questions

0 / 4 complete

Start

Clinical questions

0 / 4 complete

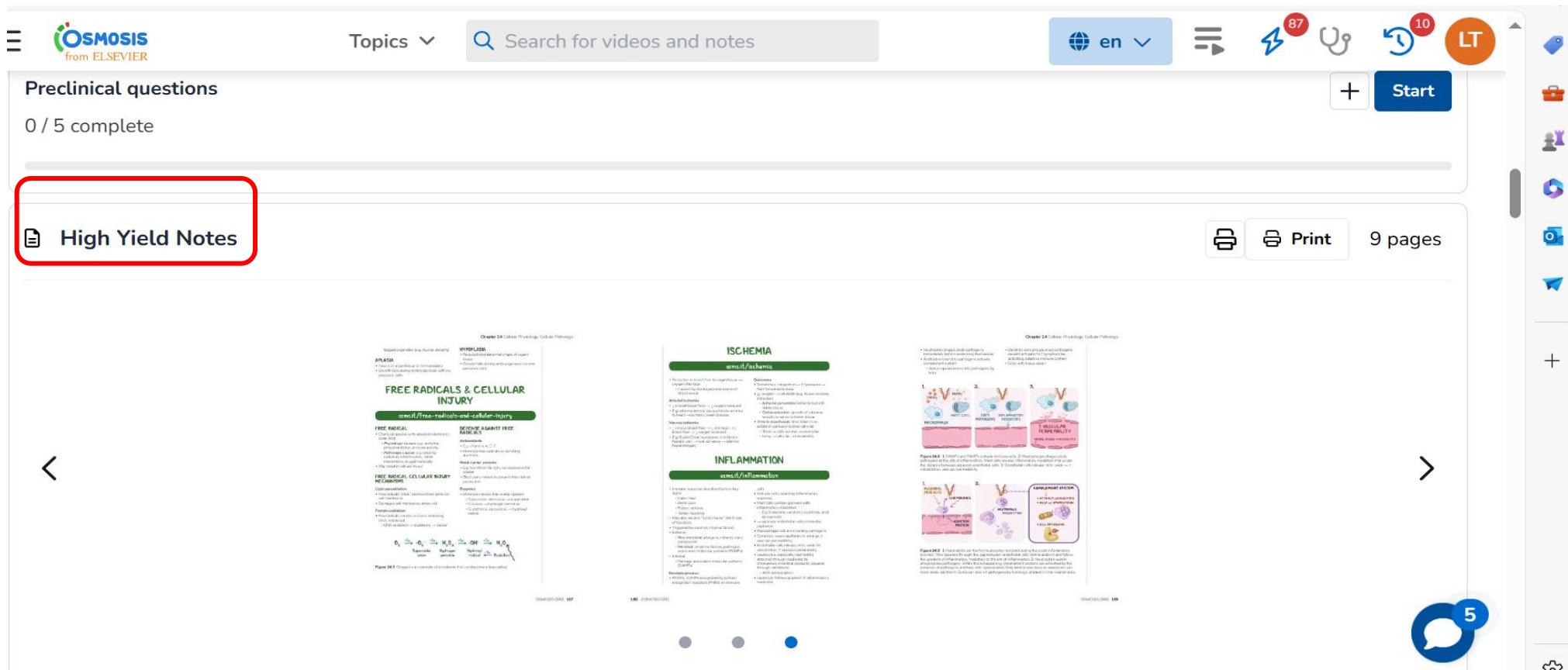
Start

Transcript

5

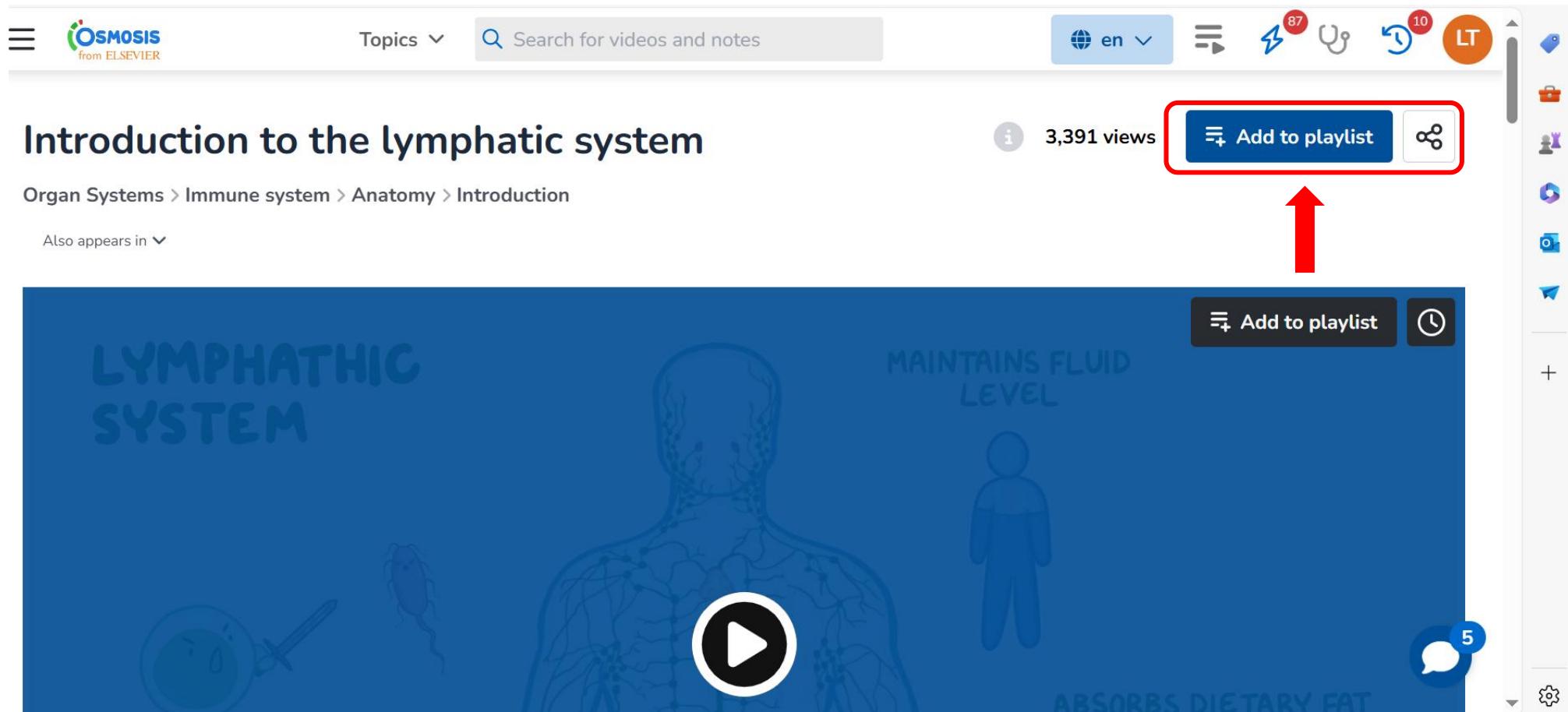
Content Details

**Osmosis High Yield Notes**-ში წარმოდგენილია ლაკონური და ადვილად ასათვისებელი გრაფიკული გამოსახულებები, ფოტოები, ცხრილები, რომლებიც დაგეხმარებათ ყველაზე რთული საკითხების გარკვევაში.



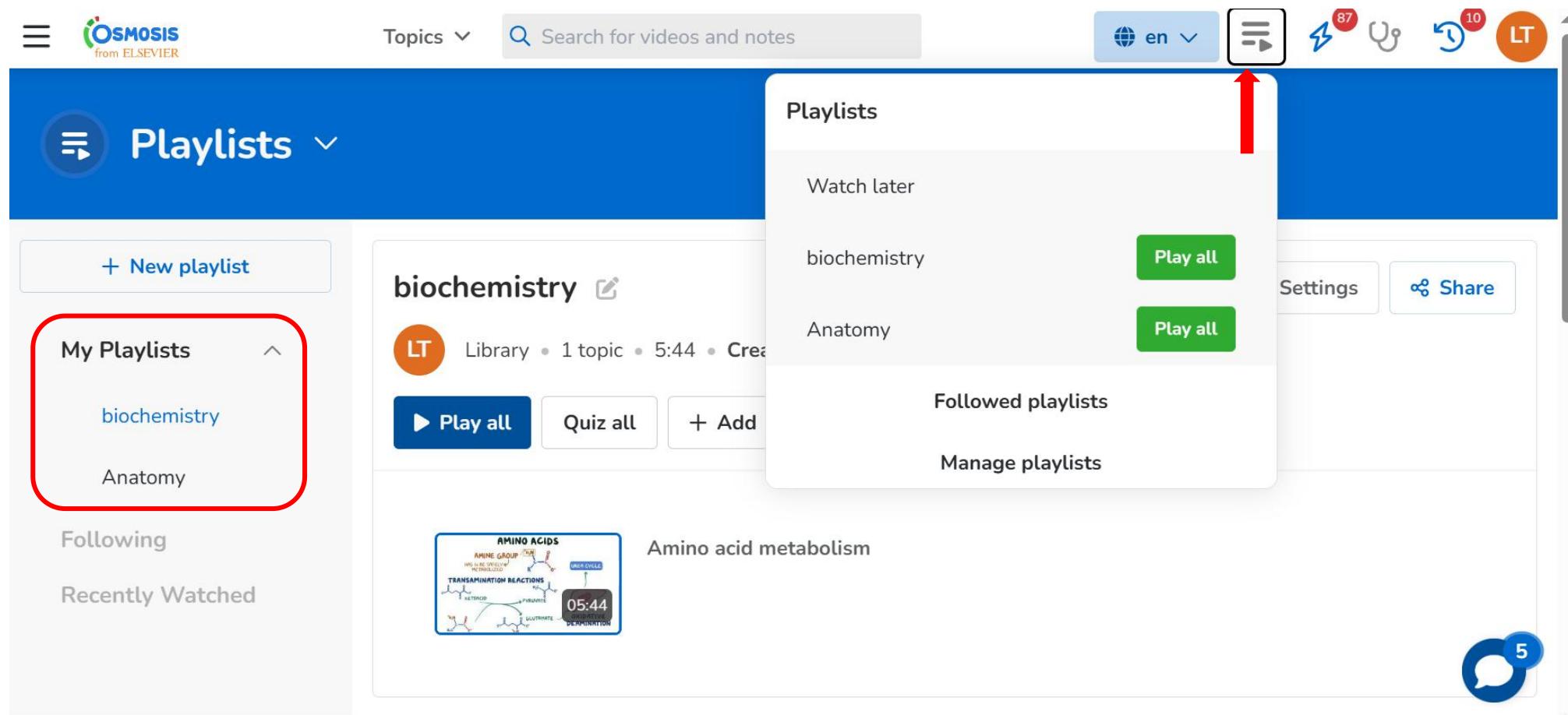
The screenshot shows a digital learning interface for medical students. At the top, there is a navigation bar with the Osmosis logo, a 'Topics' dropdown, a search bar containing 'Search for videos and notes', and various user interface icons including language selection (en), notification counts (87 and 10), and a 'Start' button. The main content area is titled 'Preclinical questions' and shows '0 / 5 complete'. Below this, there is a red box highlighting a 'High Yield Notes' button. The central part of the screen displays three panels of medical diagrams and text. The left panel is titled 'FREE RADICALS & CELLULAR INJURY' and includes a diagram of chemical structures. The middle panel is titled 'ISCHEMIA' and 'REPERFUSION' and includes a diagram of a blood vessel with labels. The right panel is titled 'INFLAMMATION' and 'IMMUNE SYSTEM' and includes a diagram of a cell with various organelles. At the bottom of the screen, there are navigation arrows, a page number indicator (5), and a settings gear icon.

**Playlists**-ში შეგიძლიათ დაამატოთ, შეინახოთ და გააზიაროთ 30დეოები.



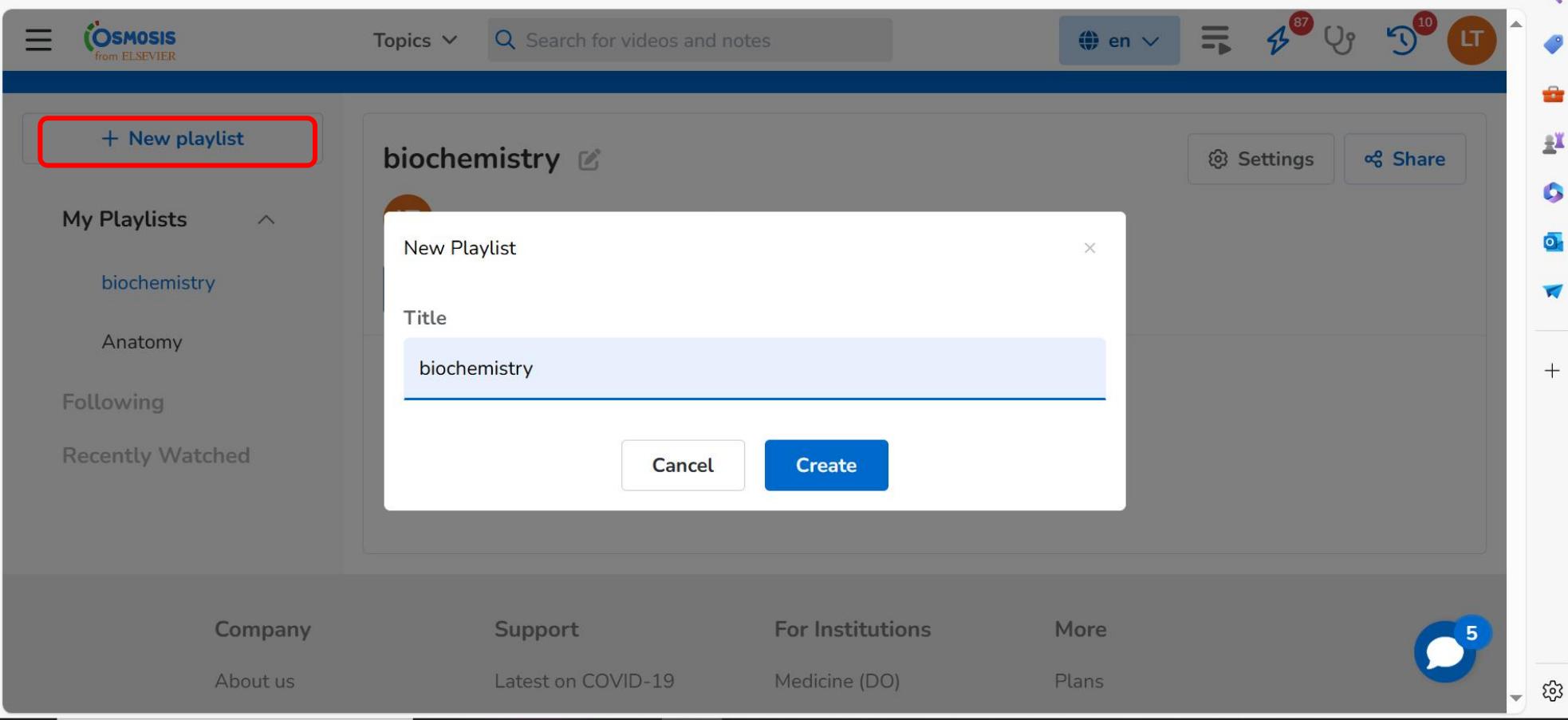
The image shows a screenshot of the Osmosis video player interface. At the top, there is a navigation bar with the Osmosis logo, a 'Topics' dropdown, a search bar, and language and notification icons. Below the navigation bar, the video title is 'Introduction to the lymphatic system'. The video has 3,391 views. On the right side of the video player, there are two 'Add to playlist' buttons. The top one is highlighted with a red box and a red arrow points to it. The bottom one is also labeled 'Add to playlist'. The video thumbnail features a blue-toned illustration of the human body with the text 'LYMPHATIC SYSTEM', 'MAINTAINS FLUID LEVEL', and 'ABSORBS DIETARY FAT'. A play button icon is in the center of the thumbnail. The right side of the video player has a sidebar with various icons and a settings gear icon at the bottom.

Playlists სანახავად მენიუდან ჩამოშალეთ ღილაკი. აირჩიეთ **watch later** ან შექმენით ახალი.



The screenshot shows the Osmosis platform interface. At the top, there is a navigation bar with the Osmosis logo, a 'Topics' dropdown, a search bar ('Search for videos and notes'), language selection ('en'), and a navigation menu icon. To the right of the menu icon is a red arrow pointing upwards towards the 'Watch later' icon in the top right corner of the main content area. The main content area is titled 'Playlists' and contains sections for 'My Playlists' (with 'biochemistry' and 'Anatomy' listed), 'Following', and 'Recently Watched'. On the right, a sidebar titled 'Playlists' shows 'Watch later' items: 'biochemistry' and 'Anatomy', each with a 'Play all' button. Below this is a 'Followed playlists' section with a 'Manage playlists' button. At the bottom, there is a video thumbnail for 'Amino acid metabolism' with a duration of 05:44. The bottom right corner features a blue speech bubble icon with the number '5'.

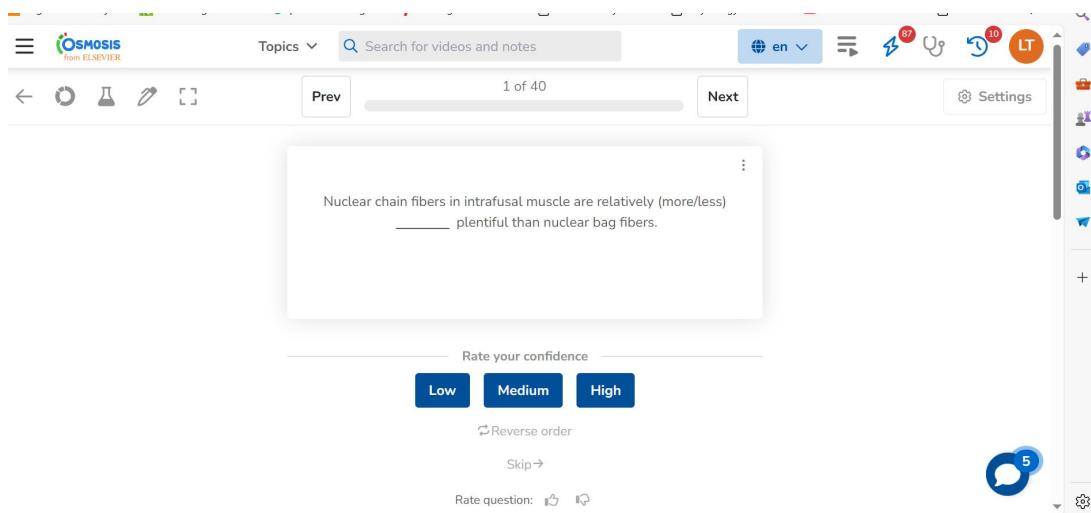
შეგიძლიათ შექმნათ იმდენი playlist რამდენიც დაგჭირდებათ.



The screenshot shows the Osmosis platform interface. At the top, there is a navigation bar with the Osmosis logo, a 'Topics' dropdown, a search bar containing 'Search for videos and notes', a language selector 'en', and various notification and user icons. A red box highlights the '+ New playlist' button on the left side of the screen. Below this, the 'My Playlists' section is visible, showing existing playlists like 'biochemistry' and 'Anatomy'. A modal window is open in the center, titled 'New Playlist', with a 'Title' field containing 'biochemistry'. At the bottom of the modal are 'Cancel' and 'Create' buttons. The footer of the page contains links for 'Company', 'Support', 'For Institutions', and 'More', along with social media icons and a message icon with a '5' notification.

# Flashcard vs Question

ფლეშბარათები არის მოკლე ლაკონური კითხვები, რომლებიც დაგეხმარებათ ცოდნის გაღრმავებაში.



Nuclear chain fibers in intrafusal muscle are relatively (more/less) \_\_\_\_\_ plentiful than nuclear bag fibers.

Rate your confidence

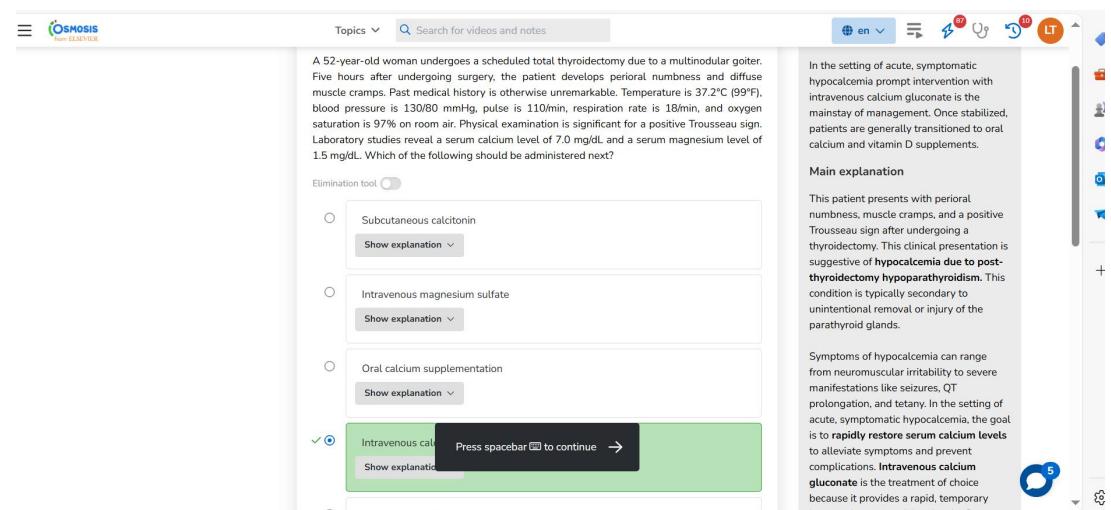
Low Medium High

Reverse order

Skip

Rate question: 5

კითხვები აგებულია კლინიკურ შემთხვევებზე და აქვს სავარაუდო პასუხები თავისი განმარტებებით.



Topics Search for videos and notes

Topics Search for videos and notes

A 52-year-old woman undergoes a scheduled total thyroidectomy due to a multinodular goiter. Five hours after undergoing surgery, the patient develops perioral numbness and diffuse muscle cramps. Past medical history is otherwise unremarkable. Temperature is 37.2°C (99°F), blood pressure is 130/80 mmHg, pulse is 110/min, respiration rate is 18/min, and oxygen saturation is 97% on room air. Physical examination is significant for a positive Troussseau sign. Laboratory studies reveal a serum calcium level of 7.0 mg/dL and a serum magnesium level of 1.5 mg/dL. Which of the following should be administered next?

Elimination tool

- Subcutaneous calcitonin
- Intravenous magnesium sulfate
- Oral calcium supplementation
- Intravenous calcium gluconate

Press spacebar to continue

Main explanation

In the setting of acute, symptomatic hypocalcemia prompt intervention with intravenous calcium gluconate is the mainstay of management. Once stabilized, patients are generally transitioned to oral calcium and vitamin D supplements.

Complications

This patient presents with perioral numbness, muscle cramps, and a positive Troussseau sign after undergoing a thyroidectomy. This clinical presentation is suggestive of hypocalcemia due to post-thyroidectomy hypoparathyroidism. This condition is typically secondary to unintentional removal or injury of the parathyroid glands.

Symptoms of hypocalcemia can range from neuromuscular irritability to severe manifestations like seizures, QT prolongation, and tetany. In the setting of acute, symptomatic hypocalcemia, the goal is to rapidly restore serum calcium levels to alleviate symptoms and prevent complications. **Intravenous calcium gluconate** is the treatment of choice because it provides a rapid, temporary

ფლეშბარათებით შეგიძლიათ ააგოთ ქვიზი თქვენთვის  
საინტერესო თემებზე.

The screenshot shows the Osmosis Flashcard Quiz Builder interface. At the top, there is a navigation bar with the Osmosis logo, a 'Topics' dropdown, and a language selector ('en'). Below the navigation bar is a blue header with the text 'Flashcard Quiz Builder' and a lightning bolt icon.

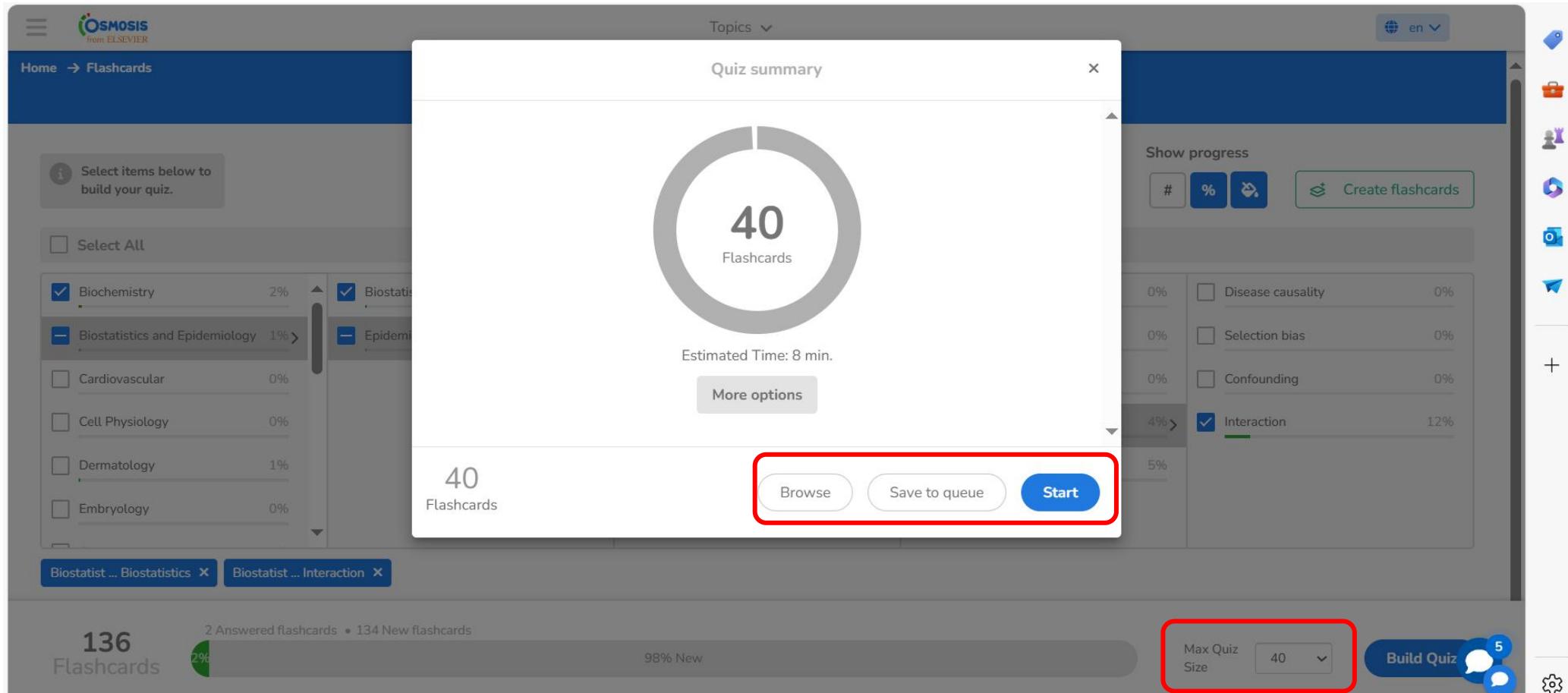
On the left, there is a sidebar with a message: 'Select items below to build your quiz.' and a 'Select All' checkbox. Below this are several topic categories with checkboxes and percentages: Biochemistry (2%), Physiology (2%), Metabolism (2%), Carbohydrate metabolism (3%), and Nucleotide metabolism (0%).

The main area is titled 'Select topic' and contains a grid of topics. The topics are arranged in a 4x3 grid:

Column 1	Column 2	Column 3
Biochemistry (2%)	Physiology (2%)	Metabolism (2%)
Biostatistics and Epidemiology (1%)		
Cardiovascular (0%)		
Cell Physiology (0%)		
Dermatology (1%)		
Embryology (0%)		

On the right side of the interface, there is a 'Show progress' section with buttons for '#', '%', and a magnifying glass icon. Below this is a 'Create flashcards' button. At the bottom, there is a summary: '158 Flashcards', '2 Answered flashcards • 156 New flashcards', '98% New', 'Max Quiz Size 40', a 'Build Quiz' button with a '5' badge, and a gear icon.

შეგიძლიათ აირჩიოთ კითხვების სასურველი რაოდენობა ასევე ჩამოტვირთოთ, შეინახოთ ან პირდაპირ დაიწყოთ ტესტი.



The screenshot shows the Osmosis platform interface. In the center, a 'Quiz summary' window is open, displaying a circular icon with '40 Flashcards' and an estimated time of '8 min.'. Below the icon are three buttons: 'Browse', 'Save to queue', and a redboxed 'Start' button. At the bottom of the page, there is a summary bar showing '136 Flashcards' and a progress bar at '2%'. A redboxed 'Max Quiz Size' dropdown is set to '40'. A 'Build Quiz' button with a '5' notification is also visible.

Topics

Quiz summary

40 Flashcards

Estimated Time: 8 min.

Biochemistry 2%

Biostatistics and Epidemiology 1%

Cardiovascular 0%

Cell Physiology 0%

Dermatology 1%

Embryology 0%

Biostatistics 12%

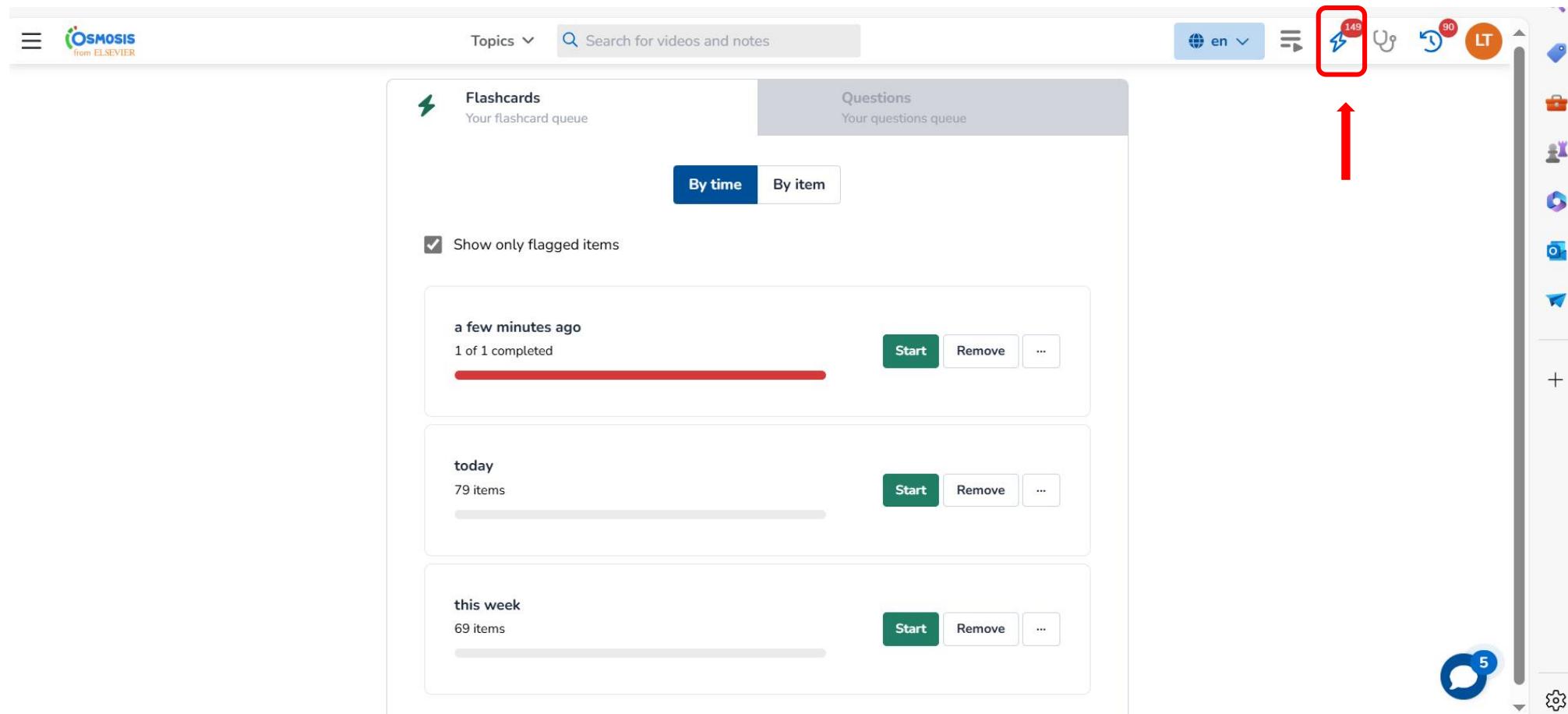
Interaction 12%

Start

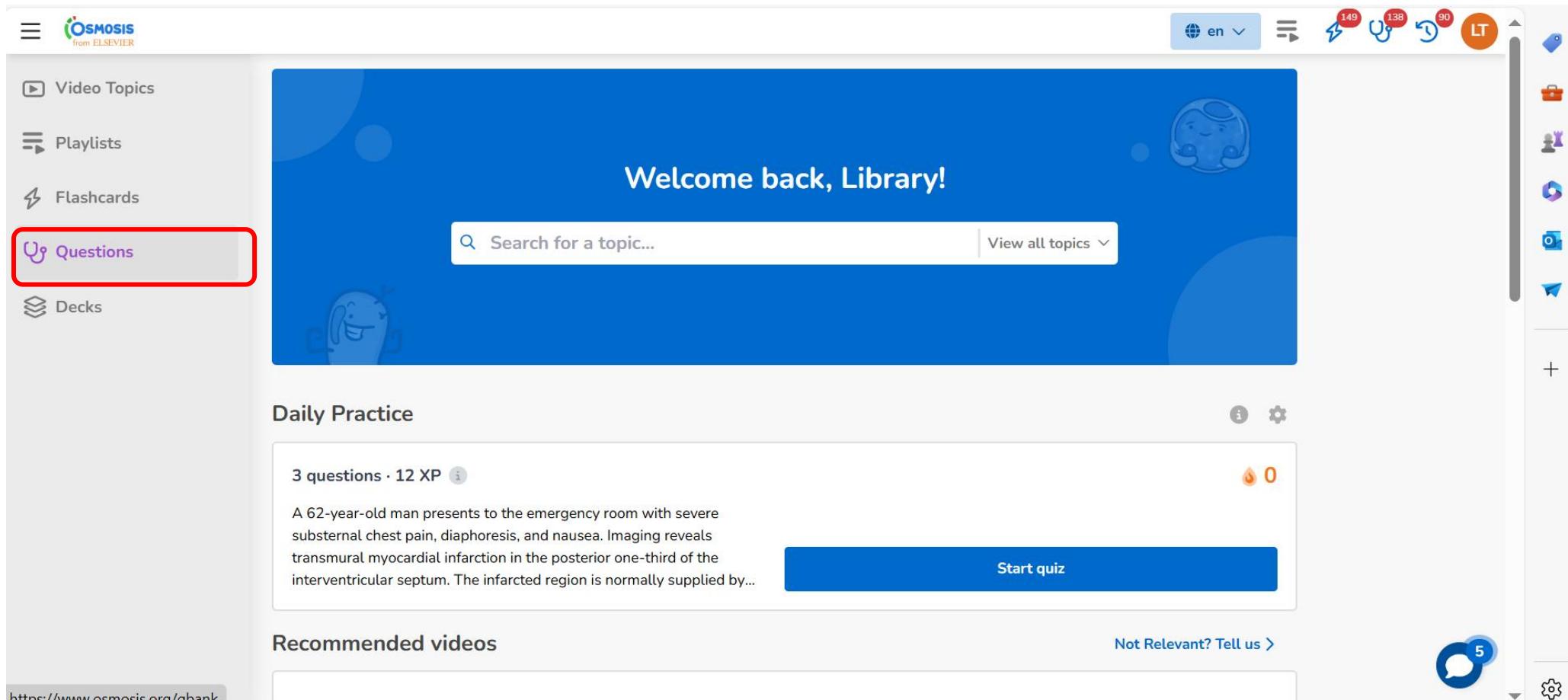
Max Quiz Size 40

Build Quiz 5

შენახული ფლეშბარათების ნახვა შესაძლებელია მარჯვენა ზედა კუთხეში მოთავსებულ ღილაკზე დაწკაპებით.

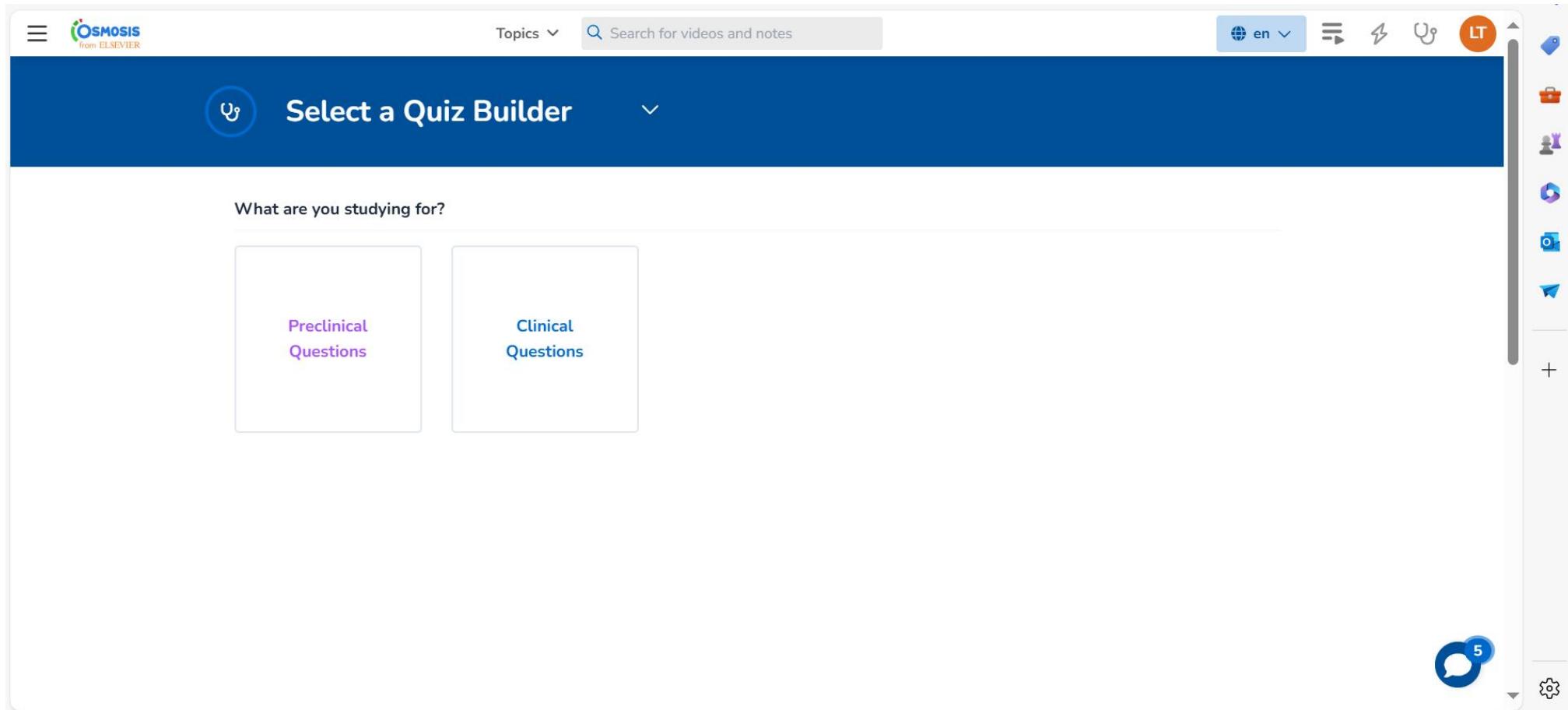


მენიუდან აირჩიეთ **Question** ღილაკი ტესტის დასაწყებად.



The screenshot shows the Osmosis app interface. On the left, a sidebar menu includes 'Video Topics', 'Playlists', 'Flashcards', 'Questions' (which is highlighted with a red box), and 'Decks'. The main content area features a blue 'Welcome back, Library!' banner with a search bar ('Search for a topic...') and a 'View all topics' button. Below this is a 'Daily Practice' section with a box containing '3 questions · 12 XP'. The text describes a clinical case of a 62-year-old man with chest pain, diaphoresis, and nausea, and asks for the normal blood supply to the infarcted region. A 'Start quiz' button is present. At the bottom, there's a 'Recommended videos' section and a 'Not Relevant? Tell us >' button. The top right shows user stats: 149 notifications, 138 messages, 90 notifications, and a 'LT' button. The bottom right shows a message icon with '5' notifications and a gear icon.

Question-ში წარმოდგენილია ორი განყოფილება პრეკლინიკური  
და კლინიკური კითხვებით.



The screenshot shows the Osmosis Quiz Builder interface. At the top, there is a navigation bar with the Osmosis logo, a 'Topics' dropdown, a search bar, and language and settings icons. The main title 'Select a Quiz Builder' is displayed with a dropdown arrow. Below this, a question 'What are you studying for?' is asked. Two options are presented: 'Preclinical Questions' and 'Clinical Questions'. On the right side of the interface, there is a vertical sidebar with various icons for managing study materials. At the bottom right, there is a circular icon with a '5' and a gear icon.

ტესტის აგება შეგიძლიათ თემებისა და ორგანოთა სისტემების მიხედვით. ასევე შეგიძლიათ აირჩიოთ კითხვების რაოდენობა და ბოლოს შეინახოთ უკვე შედგენილი ტესტი ან მაშინვე დაიწყოთ მისი შასრულება.

The screenshot shows the Osmosis app interface. At the top, there is a navigation bar with the Osmosis logo, a 'Topics' dropdown, a search bar, and language and notification icons. The main content area is divided into two sections: 'Foundational Sciences' and 'Organ Systems'. The 'Foundational Sciences' section is currently active, displaying a list of subjects with checkboxes and counts: Behavioral sciences/Psychiatry (152), Biostatistics and epidemiology (61), Genetics (55), Introduction to microbiology (11), Introduction to pharmacology (40), Biochemistry and nutrition (91), Cellular and molecular biology (61), Introduction to embryology (36), and Introduction to pathology (26). The 'Organ Systems' section is shown below, with a red box highlighting the 'Organ Systems' label. At the bottom, a configuration panel allows setting the number of questions (0 available), the maximum quiz size (75, with a red box around it), and the estimated time (0 minute). It also includes 'Save to queue' and 'Begin quiz' buttons, with a red arrow pointing to the 'Begin quiz' button. The bottom right corner shows a user icon with a '5' and a gear icon.

კითხვები ეფუძნება კლინიკურ შემთხვევებს. შესაძლებელია ნახოთ სწორი და არასწორი პასუხების განმარტებები.

The image shows a screenshot of the Osmosis app interface. At the top, there is a navigation bar with the Osmosis logo, a 'Topics' dropdown, a search bar, and language and notification icons. The main content area displays a clinical case of a 5-month-old male infant with failure to thrive, developmental delay, and seizures. The question asks which cellular process is affected by a mutation in the PEX gene. There are four options: 'Synthesis of ATP via oxidative phosphorylation', 'Clearance of bronchopulmonary secretions via ciliary oscillations', 'Synthesis of amino acid chains', and 'α-oxidation of branched-chain fatty acids'. The fourth option is marked with a green checkmark and highlighted in green, indicating it is the correct answer. A tooltip says 'Press spacebar ➡ to continue →'. To the right, there is a sidebar with a 'Peroxisomes' section, a 'Main explanation' section, and a '1. Neutralization of free radicals' section. The sidebar also features a vertical list of icons for user management and a message icon with a '5'.

A 5-month-old male infant is brought to a pediatrician for evaluation of failure to thrive. The patient was recently adopted and has never been evaluated by a physician as far as the new parents are aware. According to the parents, the infant cannot grab objects or roll from a prone to supine position. He has also experienced several episodes of generalized seizure activity. He is at the 10th percentile for length and 5th percentile for weight. Temperature is 37.0°C (98.6°F), blood pressure is 80/53 mmHg, and pulse is 92/min. Upon physical examination, the patient has a weak cry and diffuse hypotonia. Hepatomegaly is present with abdominal palpation. Genetic analysis reveals a mutation in the *PEX* gene. The organelle affected in this patient's condition is normally involved in which of the following cellular processes?

Elimination tool

- Synthesis of ATP via oxidative phosphorylation  
Show explanation
- Clearance of bronchopulmonary secretions via ciliary oscillations  
Show explanation
- Synthesis of amino acid chains  
Show explanation
- α-oxidation of branched-chain fatty acids  
Show explanation

Press spacebar ➡ to continue →

**Peroxisomes** are membrane-bound organelles that perform an array of functions including  $\alpha$ -oxidation and  $\beta$ -oxidation of fatty acids, neutralization of free radicals, and breakdown of toxic substances like alcohol. Zellweger syndrome is a peroxisomal disorder which presents with hypotonia, seizures, hepatomegaly, and a mutation in the *PEX* gene.

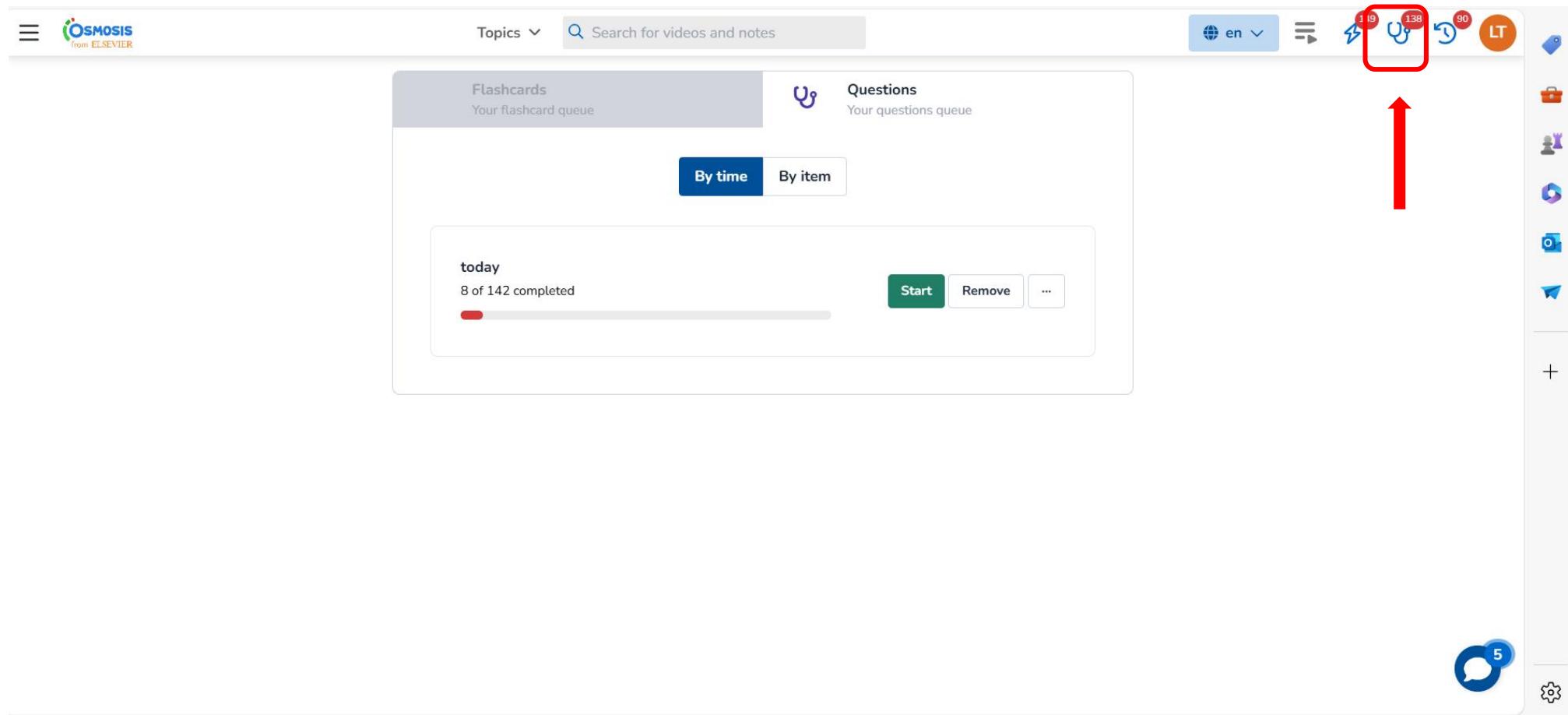
**Main explanation**

This young child presents with hypotonia, hepatomegaly, and a history of seizures. Genetic testing reveals a *PEX* gene mutation. Together, these findings are consistent with Zellweger syndrome—a disease that occurs secondary to peroxisomal defects.

**Peroxisomes** are membrane-bound organelles involved in several critical cellular processes, including:

1. Neutralization of free radicals, which in turn protects cellular components such as DNA, lipids, and proteins from oxidative damage.

შენახული კითხვების ნახვა შესაძლებელია მარჯვენა ზედა  
კუთხეში ღილაკზე დაჭრით.



**Daily repetition quiz**-ში ინახება ისეთი ფლეშბარათები რომლის სწორ პასუხში არ ხართ დარწმუნებული და მისი გამეორება გსურთ, თუ რამდენ ხანში უნდა გამეორდეს მითითებული კითხვა შეგიძლიათ წინასწარ მონიშნოთ.

The screenshot shows the Osmosis app interface. At the top, there is a navigation bar with icons for language (en), notifications (149), user stats (138), and a circular icon with a number (90). A red arrow points to the 'Daily repetition quiz' button in the top right corner of a floating menu. The menu also includes 'Daily spaced repetition' (90), a list of time intervals with checkboxes (1 day ago, 1 week ago, 2 weeks ago, 1 month ago, 2 months ago, > 2 months ago), and a 'Source' section with checkboxes for 'Osmosis' and 'School'. The main content area features a 'Welcome back, Library!' message, a search bar, and a 'View all topics' link. Below this is a 'Daily Practice' section with a box containing 3 questions (12 XP), a text description of a clinical case about a 62-year-old man with chest pain, and a 'Start quiz' button. To the right of this box is a small orange icon with the number 0. At the bottom, there are sections for 'Recommended videos' and 'Not Relevant? Tell us >'. On the far right, there is a sidebar with various icons and a gear icon for settings.

# საკონტაქტო ინფორმაცია

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