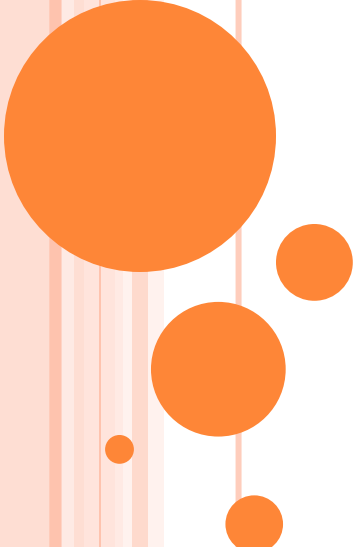




KRONİK VIRAL HEPATİTLERDE PATOLOJİ

Dr. İlyas Sayar

**ERZİNCAN ÜNİVERSİTESİ TIP
FAKÜLTESİ
TIBBİ PATOLOJİ**

NEDEN KC BIYOPSISI

- Kronik KC hastalıklarında tanı, takip ve tedavi için KC biyopsisi altın standarttır.
- HBV ve HCV'nin takibi
- Otoimmün hepatit ve PBS'de
- KC yağlanması
- Methotrexate alan hastaların takibi
- HSK şüphesi veya kitle



ÖNCELİKLE

- **KLİNİKTE KC BİYOPSİSİ NASIL GÖNDERİLİR?**
- KC biyopsi parçası %10 luk tamponlu formaldehit içinde ve miktar 1/10 olmalıdır.

PATOLOJİDE TAKİP VE BLOKLAMA SONRASI

- H-E, Retikulum, M. Trikrom, Prusya mavisi için kesitler yapılır.
- İmmunohistokimya çalışmaları gerekirse yapılır.
- HBsAg, CK7 Vb...



- KC biyopsisinde yeterlilik kriteri:
- En az 5-6 olmak üzere 11-12 portal alan
- En az 10 mm olmak üzere 15-25 mm uzunluğunda doku fibrozis değerlendirmek için yeterli
- Subkapsuler alan değerlendirme dışı bırakılmalıdır.



- Bir KC iğne biyopsisi, karaciğerin yaklaşık 1/50000-100000 lik bir kısmını temsil eder.
- Patoloğun klinik doktoruyla aynı terminolojiyi kullanması ve hastalığın zaman içindeki değişikliklerinin takibi için hepatitlerin skorlamaları yapılır.
- Daha kullanışlı hale getirme çalışmaları sürmektedir.



KRONİK HEPATİTİN MORFOLOJISİNDE GENEL OLARAK PATOLOG NELERE BAKAR

Portal alan değişiklikleri:

- İltihabi infiltrasyon: Lenfosit, plazma hücreleri, PNL (safra duktus hasarı), histiyositler
- Portal alanda sınırlı
- Parankime taşan iltihap ve arayüzey (interface) hepatiti
- Köprüleşen iltihap ve nekroz: Portoportal, portosantral
- Safra duktus hasarı ve proliferasyonu



- **Lobüler değişiklikler**

Nekroz, Hepatosit hasarı, Apoptozis vb.



○ **Fibrozis:**

Portal fibrozis

Portal ve periportal fibrozis

Köprüleşen fibröz bantlar



- Kronik viral hepatitlerin tedavi planlanmasında yardımcı skor, ilk kez 1981 yılında Knodell tarafından önerilmiş ve uygulanmış
- İltihap ve zedelenmeyi derecelendiren HAI ve fibrozis evresi



HEPATITIN DERECELEME VE EVRELEMESİ

KNODELL'İN HISTOLOJİK AKTIVİTE İNDEKSİ

1. Periportal nekroz + köprüleşme nekrozu

- Yok - SKOR0
- Hafif piecemeal nekroz (PN) – SKOR 1
- Orta PN (çevrenin $\frac{1}{2}$ 'si) – SKOR 3
- Şiddetli PN ($>$ Çevrenin $\frac{1}{2}$ 'si) – SKOR 4
- Orta derecede PN+ köprüleşme nekrozu –SKOR 5
- Şiddetli PN+ KN- SKOR 6
- Multilobüler nekroz- SKOR 10

2. İntralobüler dejenerasyon ve fokal nekroz

- Yok-SKOR 0
- Hafif (lobüllerin $\frac{1}{3}$ 'ü) – SKOR 1
- Orta (lobüllerin $> \frac{1}{3}$ - $< \frac{2}{3}$ 'ü) -SKOR 3
- Şiddetli (lobüllerin $\frac{2}{3}$ 'ü) -SKOR 4



3. Portal iltihap

- Yok – SKOR 0
- Hafif (portal alanların $1/3$ 'ü) – SKOR 1
- Orta (portal alanların $>1/3$ - $2/3$ 'ü) – SKOR 3
- Şiddetli (portal alanların $2/3$ 'ü) – SKOR 4



4. Fibrozis

- Yok – SKOR 0
- Portal alanların fibröz genişlemesi – SKOR 1
- Köprüleşen fibrozis – SKOR 3
- Siroz – SKOR 4



YENİ YAKLAŞIM

- 1. Kronik hepatitin tanımlanması
- 2. Etyoloji
- 3. Hastalığın aktivite derecesi (grade)
- 4. Hastalığın gelişme evresi (stage)



KRONİK VIRAL HEPATİT

TANIM:

İyileşmeden en az 6 ay devam eden veya alevlenmelerle seyreden hepatit, çeşitli sebeplerle ortaya çıkan, değişen derecelerde hepatoselüler nekroz ve iltihabi infiltrasyonla karakterize klinik ve patolojik bir durum.



ETYOLOJİ

- HBV, HDV, HCV
- Kombine enfeksiyonlar: B+D, B+C, C+HIV vb.
- Diğer viruslar: EBV (infeksiyöz mononükleoz), CMV, sarı humma, rubella, adenovirus, herpes, enterovirus...



HASTALIĞIN AKTIVITE DERECESİ (GRADE) MODIFIYE HISTOLOJİK AKTIVITE İNDEKSİ: ISHAK

I. Nekroinflamatuvar Skor

- A) Periportal veya periseptal arayüzey (interface)hepatiti (Piecemeal nekroz)
- Yok 0
- Hafif (fokal, birkaç portal alanda) 1
- Hafif/Orta (fokal, portal alanların çoğunda) 2
- Orta (Portal alanların veya septaların < %50 çevresinde devam eden) 3
- Şiddetli (Portal alanların veya septaların > %50 çevresinde devam eden) 4





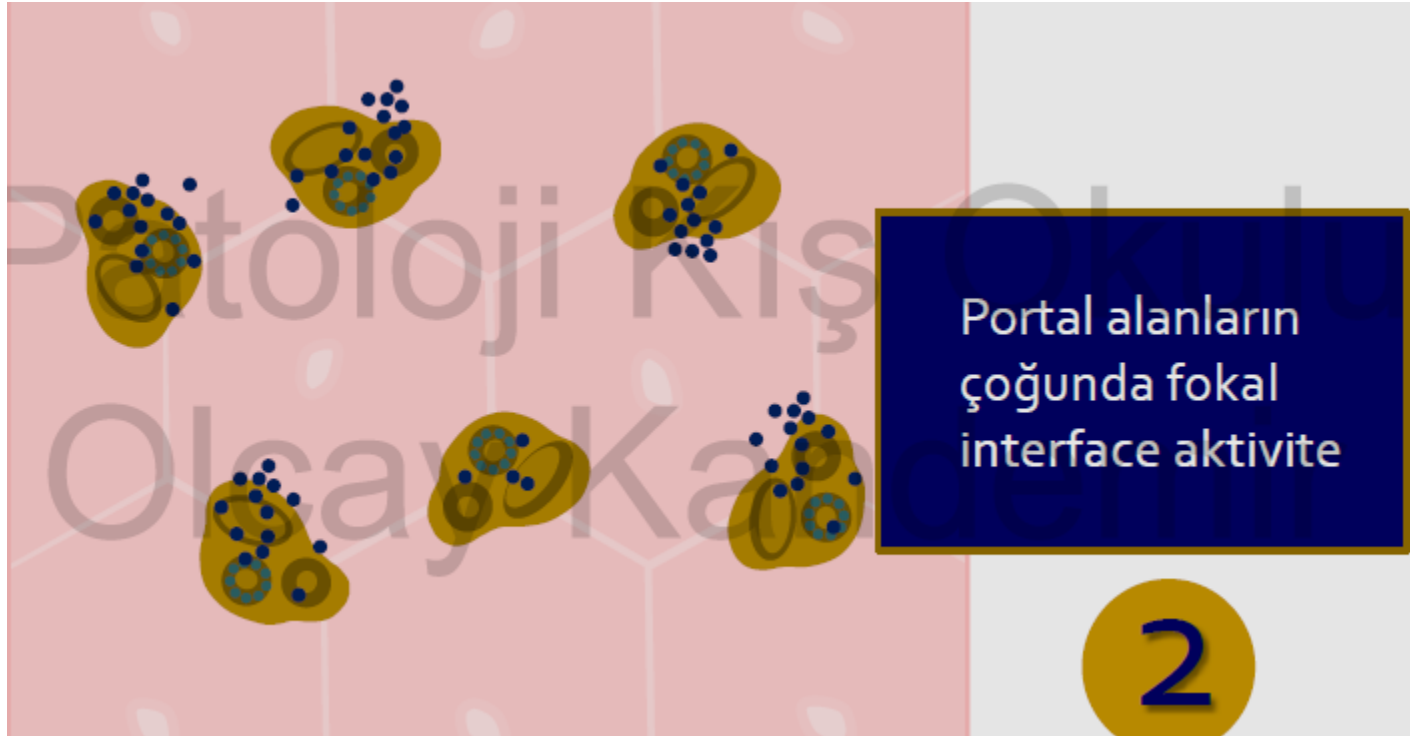


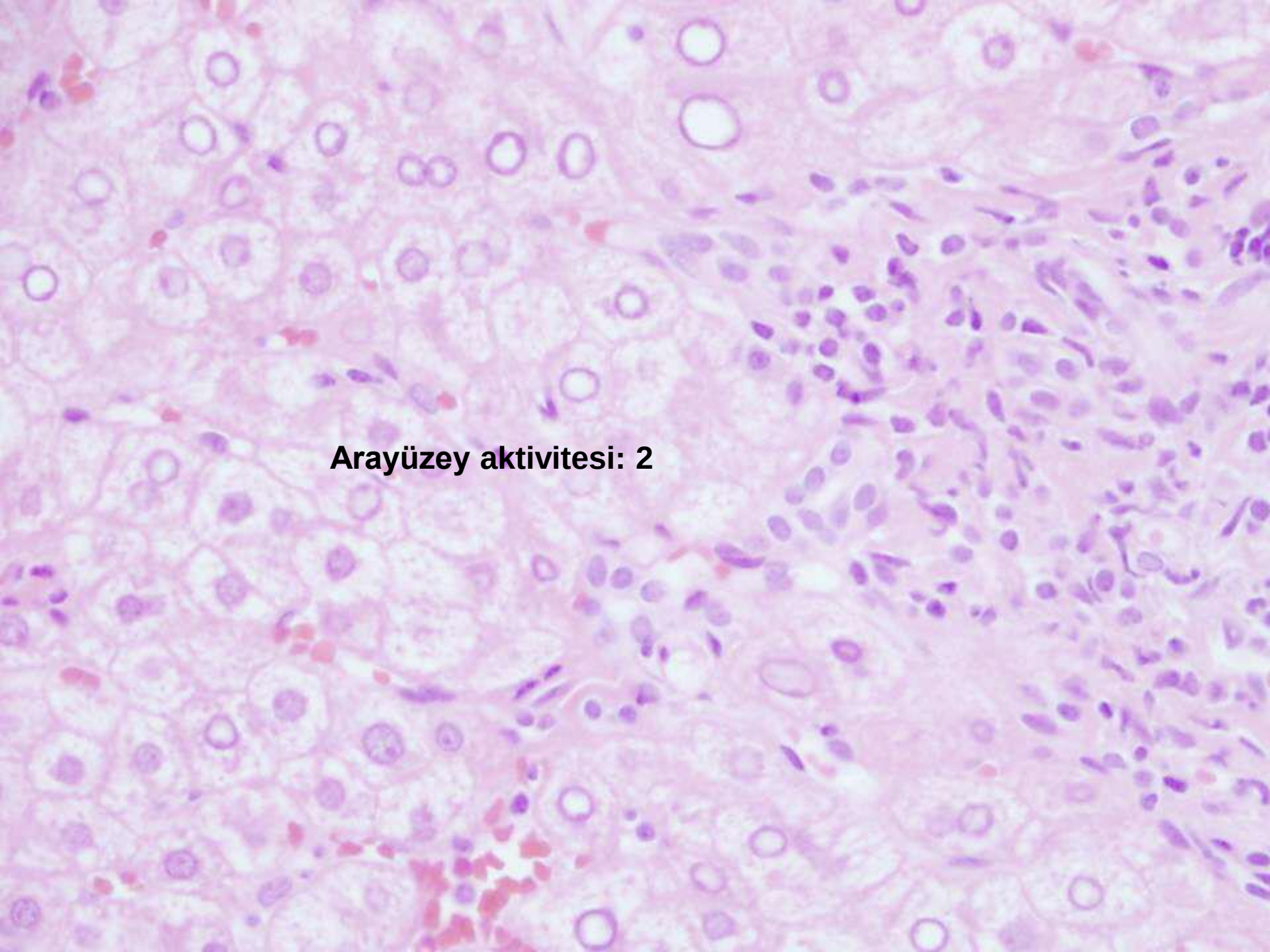


Kronik arayüzey B hepatiti
Arayüzey aktivitesi: 1

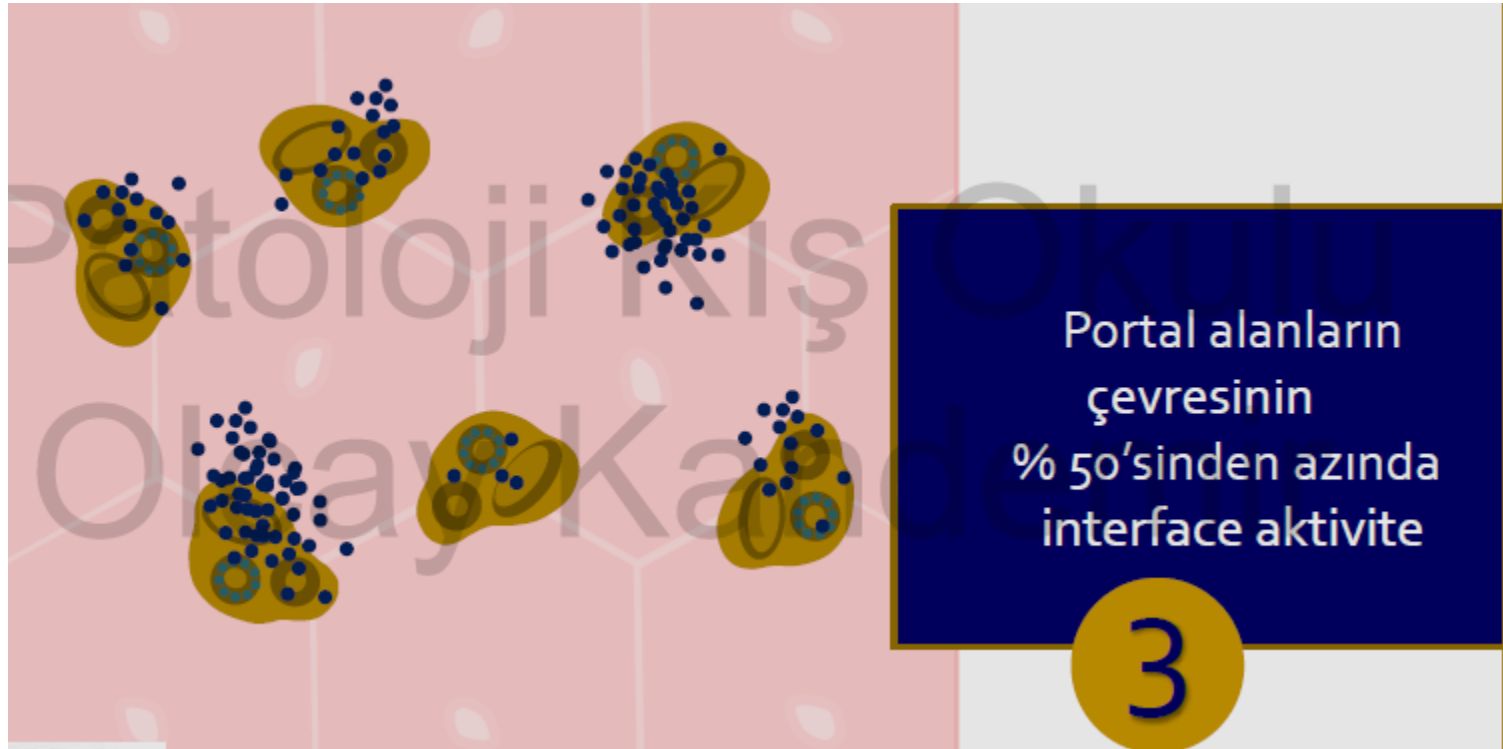
This histological slide shows liver tissue with chronic hepatitis B. The image displays a dense population of hepatocytes with prominent nuclei and some inflammatory cell infiltration, characteristic of the disease. The text overlay indicates a portal tract activity score of 1.

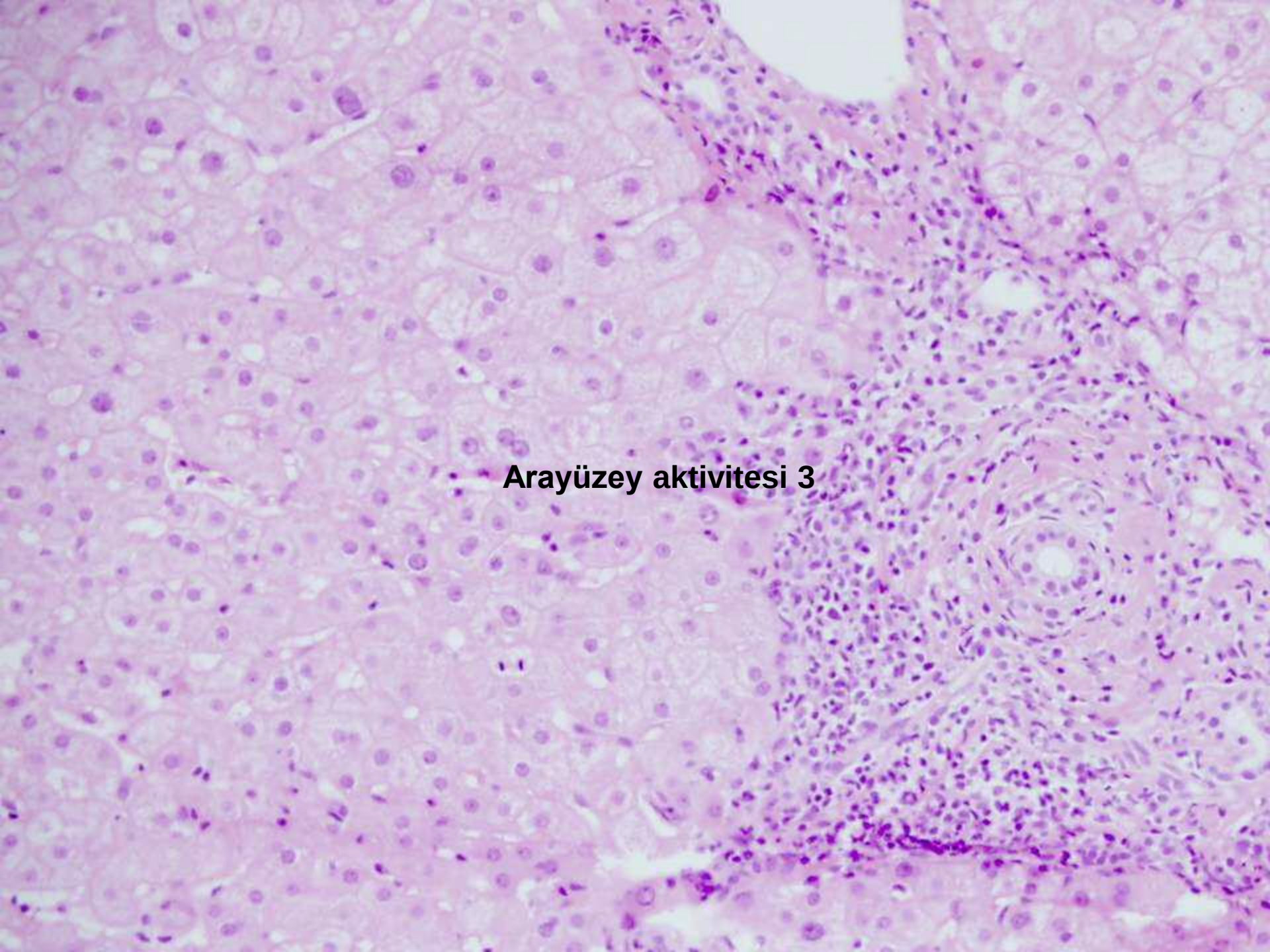




A histological section of testis tissue stained with hematoxylin and eosin (H&E). The image shows numerous seminiferous tubules, which are the structures where sperm is produced. The tubules are filled with developing sperm cells at various stages. The interstitial space between the tubules contains various cells, including Leydig cells and fibroblasts. The overall color is a mix of pink (eosin) and purple (hematoxylin).

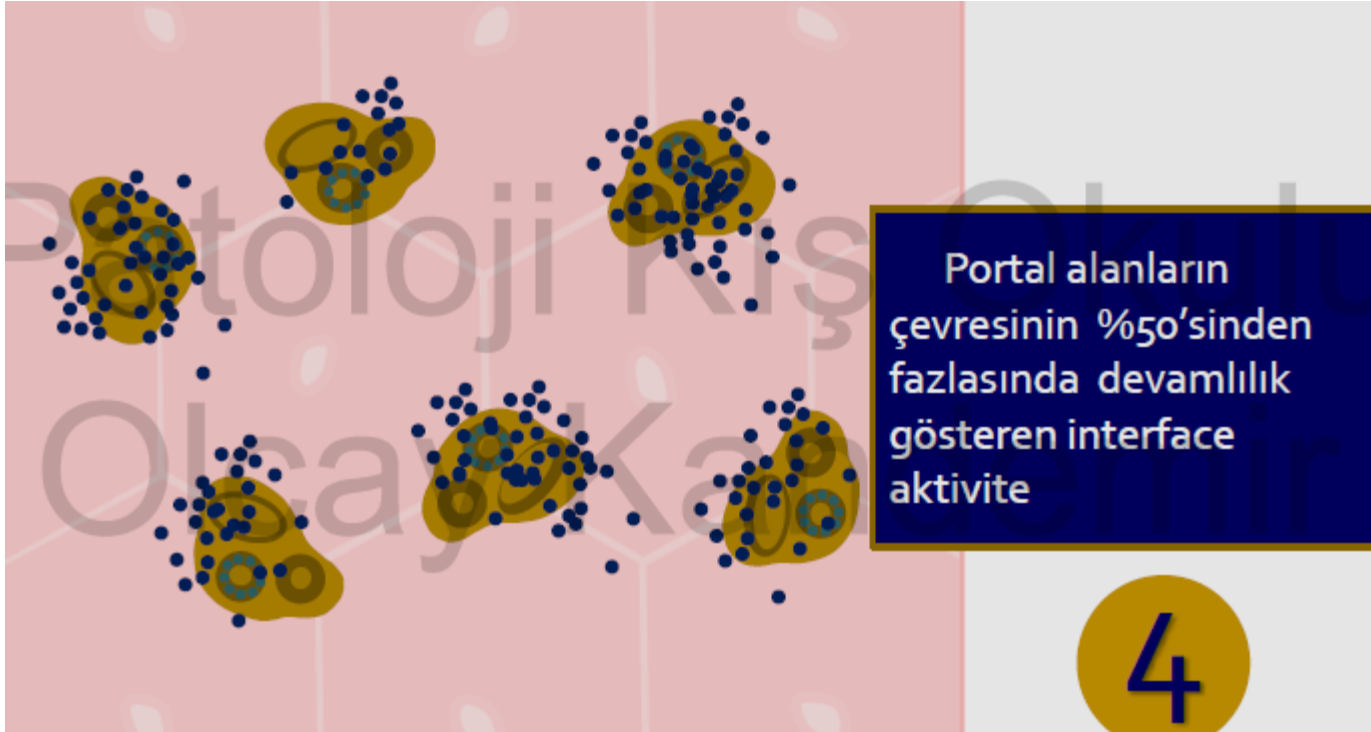
Arayüzey aktivitesi: 2

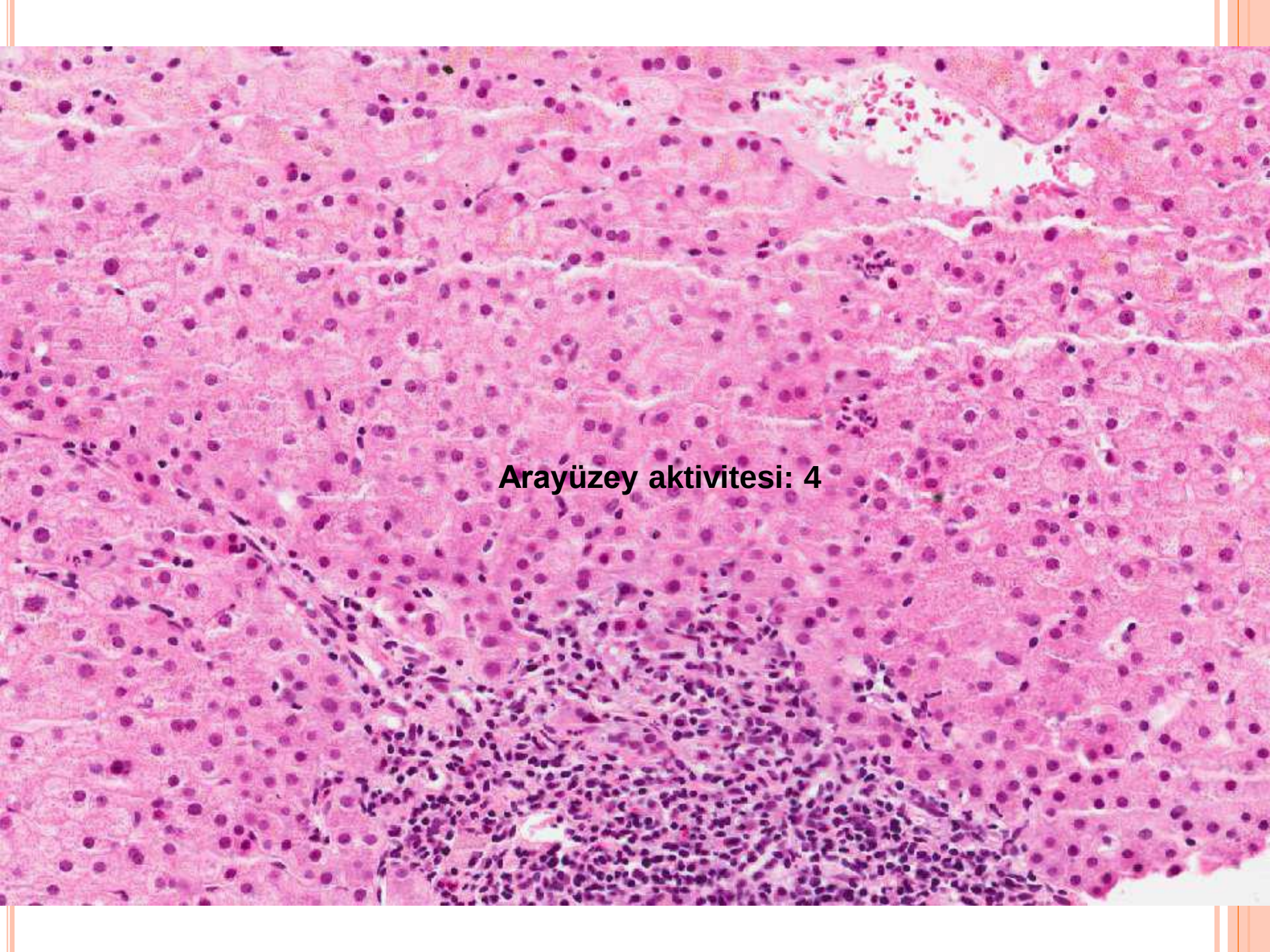




A histological section of testis tissue stained with hematoxylin and eosin (H&E). The image shows several seminiferous tubules, which are the structures where sperm is produced. The tubules are filled with developing sperm cells at various stages. The interstitial space between the tubules contains various cells, including Leydig cells and fibroblasts. The overall structure is organized into a regular pattern of tubules.

Arayüzey aktivitesi 3





A histological section of liver tissue stained with hematoxylin and eosin (H&E). The image shows a portal tract in the lower-left quadrant, characterized by a dense cluster of inflammatory cells, including lymphocytes and possibly some larger cells, indicating an active inflammatory process. The surrounding liver parenchyma consists of hepatocytes with visible nuclei and some cytoplasmic detail. The overall architecture shows a typical lobular pattern with the portal tract acting as a boundary between different lobules.

Arayüzey aktivitesi: 4

- **B) Birleşen nekroz**

- Yok 0

- • Fokal birleşen nekroz 1

- • Bazı alanlarda 3. zon nekrozu 2

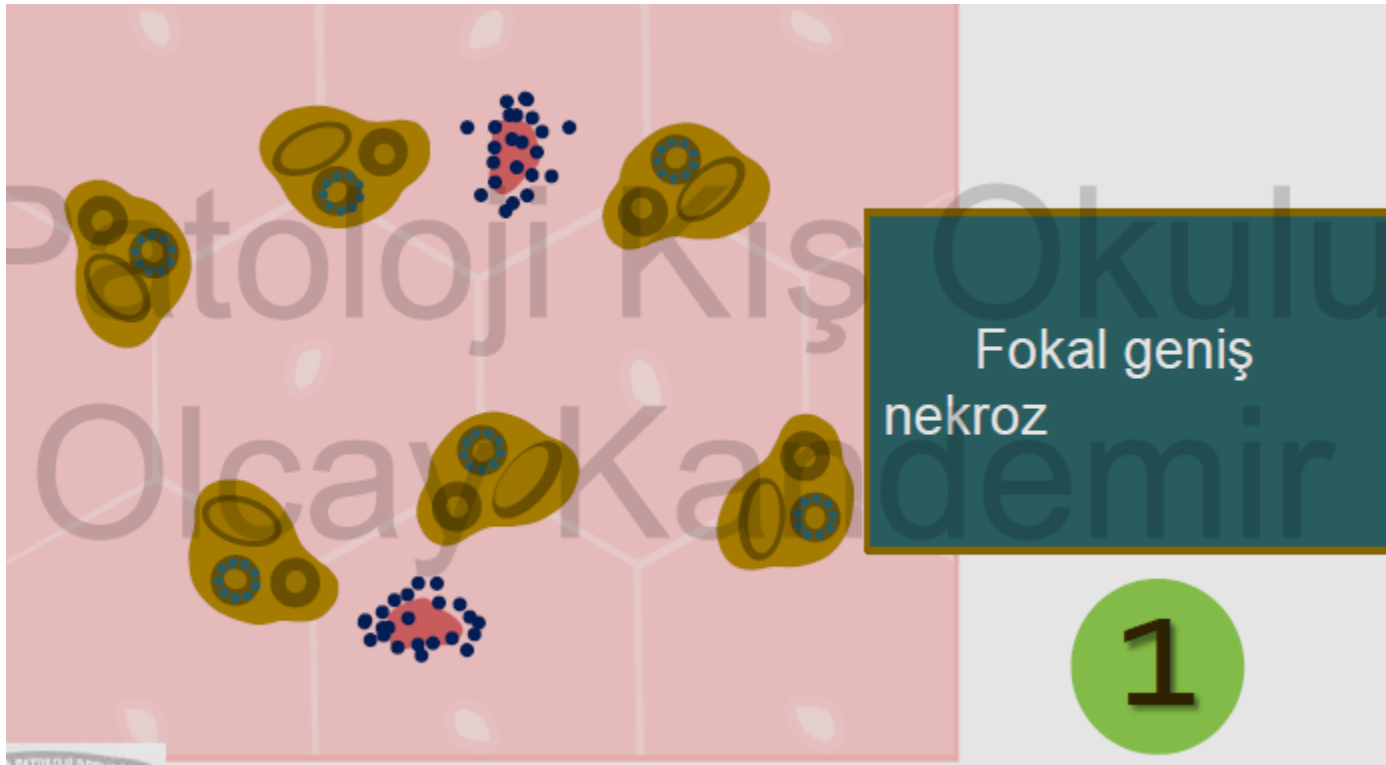
- • Çoğu alanda 3. zon nekrozu 3

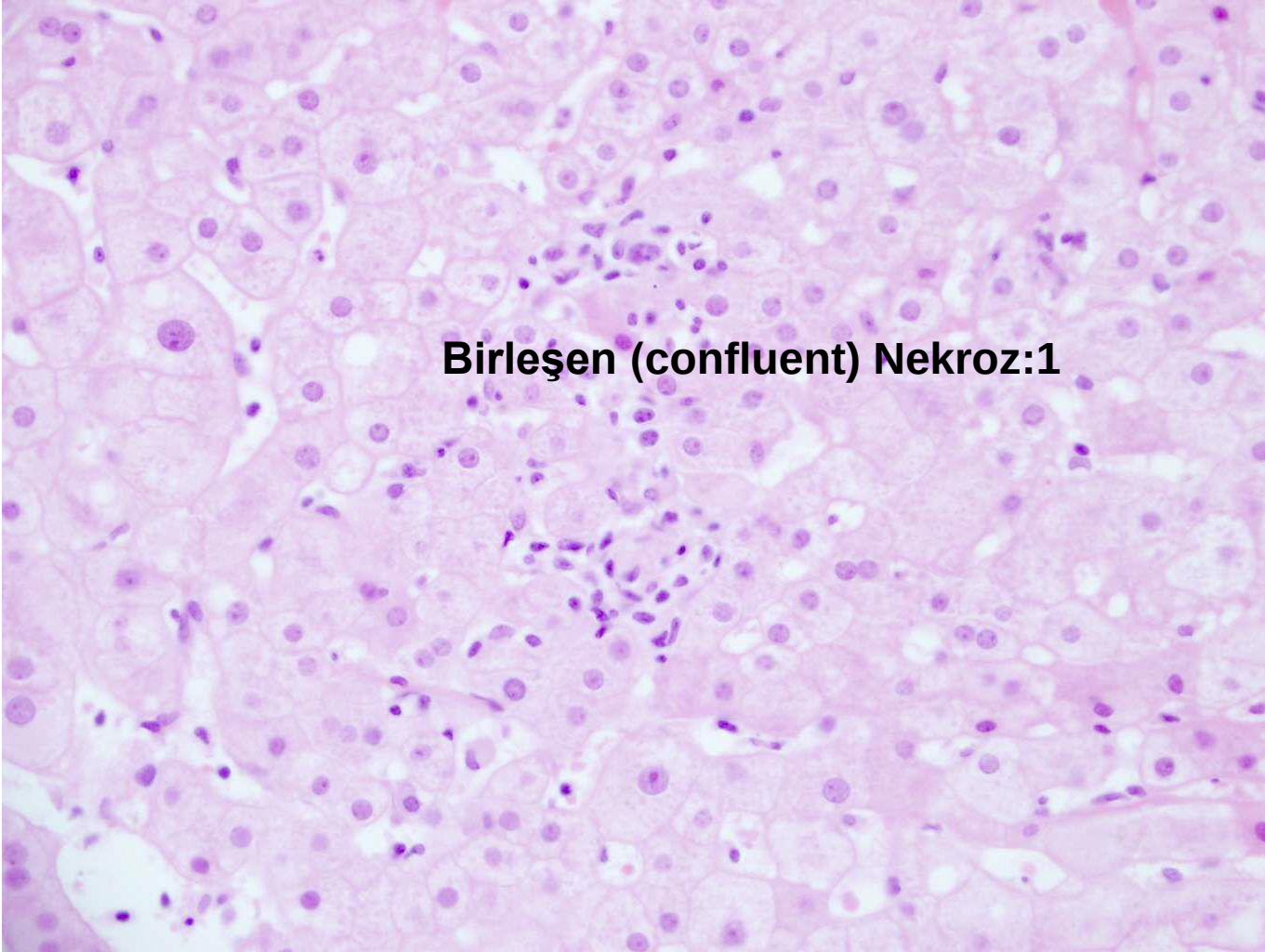
- • 3. zon nekrozu + nadir portal-santral körüleşme 4

- • 3. zon nekrozu + çok sayıda portal-santral körüleşme 5

- • Panasiner veya multiasiner nekroz 6

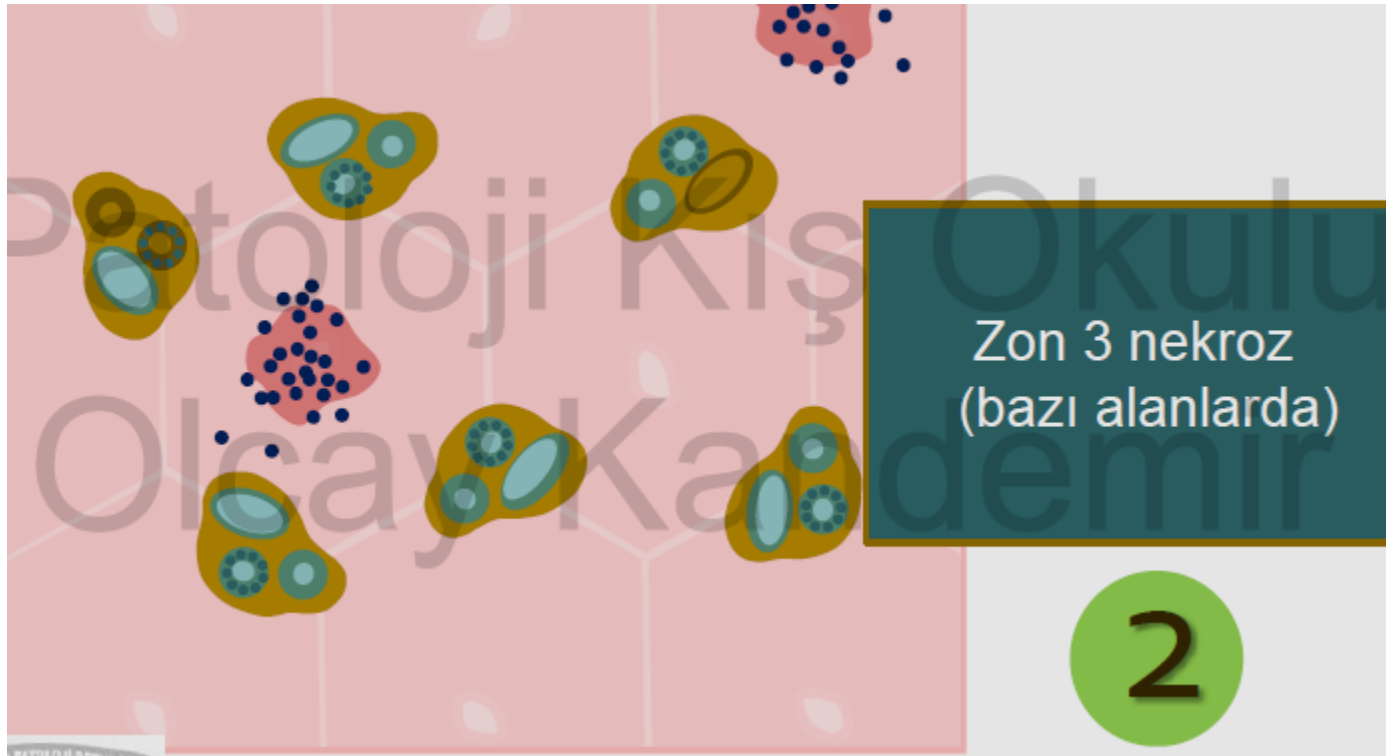






Birleşen (confluent) Nekroz:1

This histological image displays liver tissue with a central area of confluent necrosis. The necrotic region is characterized by a loss of normal cellular architecture, with numerous pyknotic and fragmented nuclei. Surrounding this central area, there is a dense infiltration of inflammatory cells, primarily lymphocytes, which are seen as small, dark-staining nuclei. The surrounding liver parenchyma shows relatively preserved hepatocytes with visible nuclei and cytoplasm, though some degree of cellular swelling and disorganization is evident near the necrotic zone.

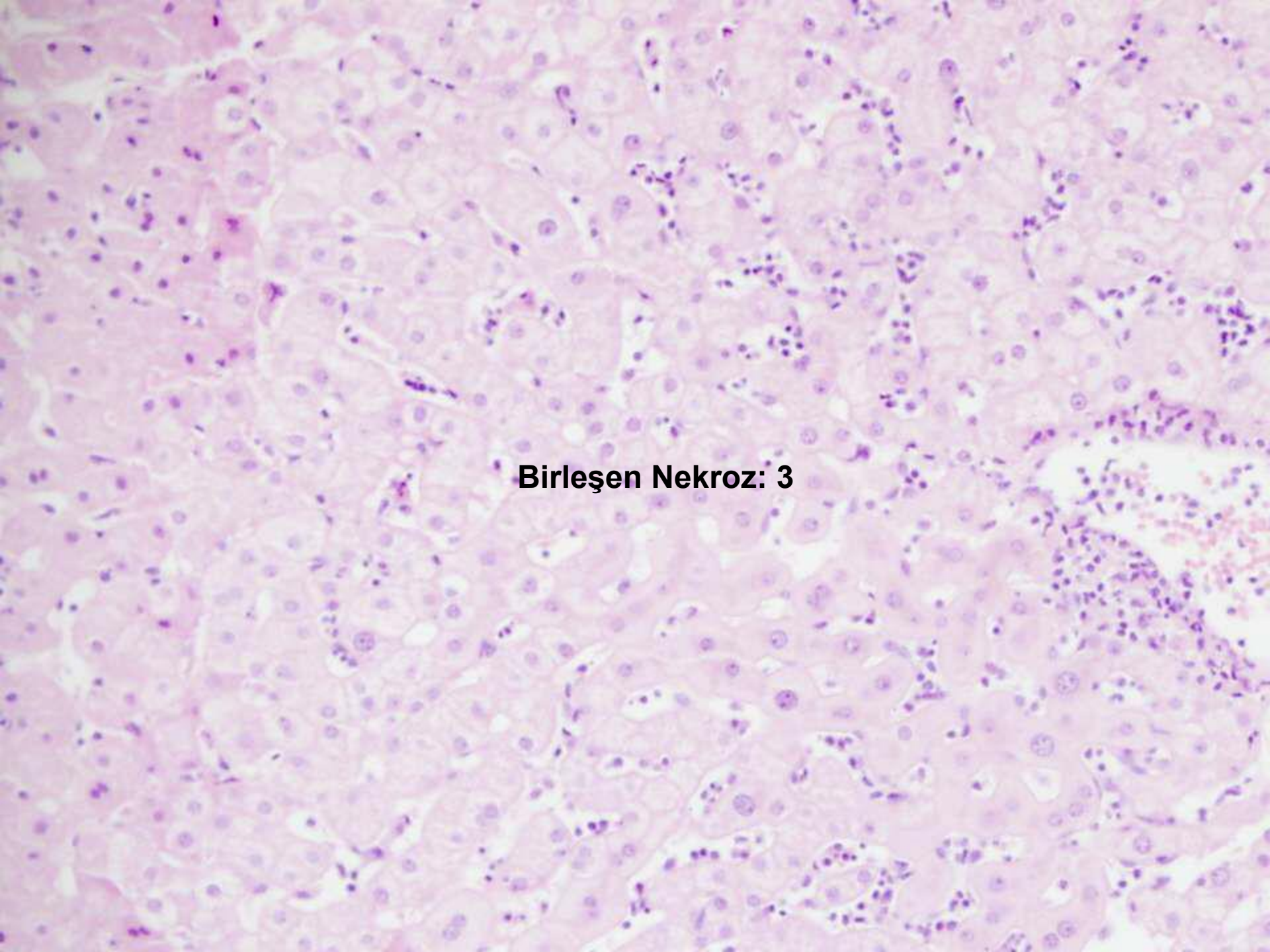




This histological image shows a section of liver tissue stained with hematoxylin and eosin (H&E). The tissue exhibits extensive confluent necrosis, where the normal architecture of the liver lobules is lost. The remaining hepatocytes are arranged in thin, irregular cords, and the nuclei are stained dark purple. The background is a pale pink, indicating the loss of normal cellular structure and the presence of necrotic debris.

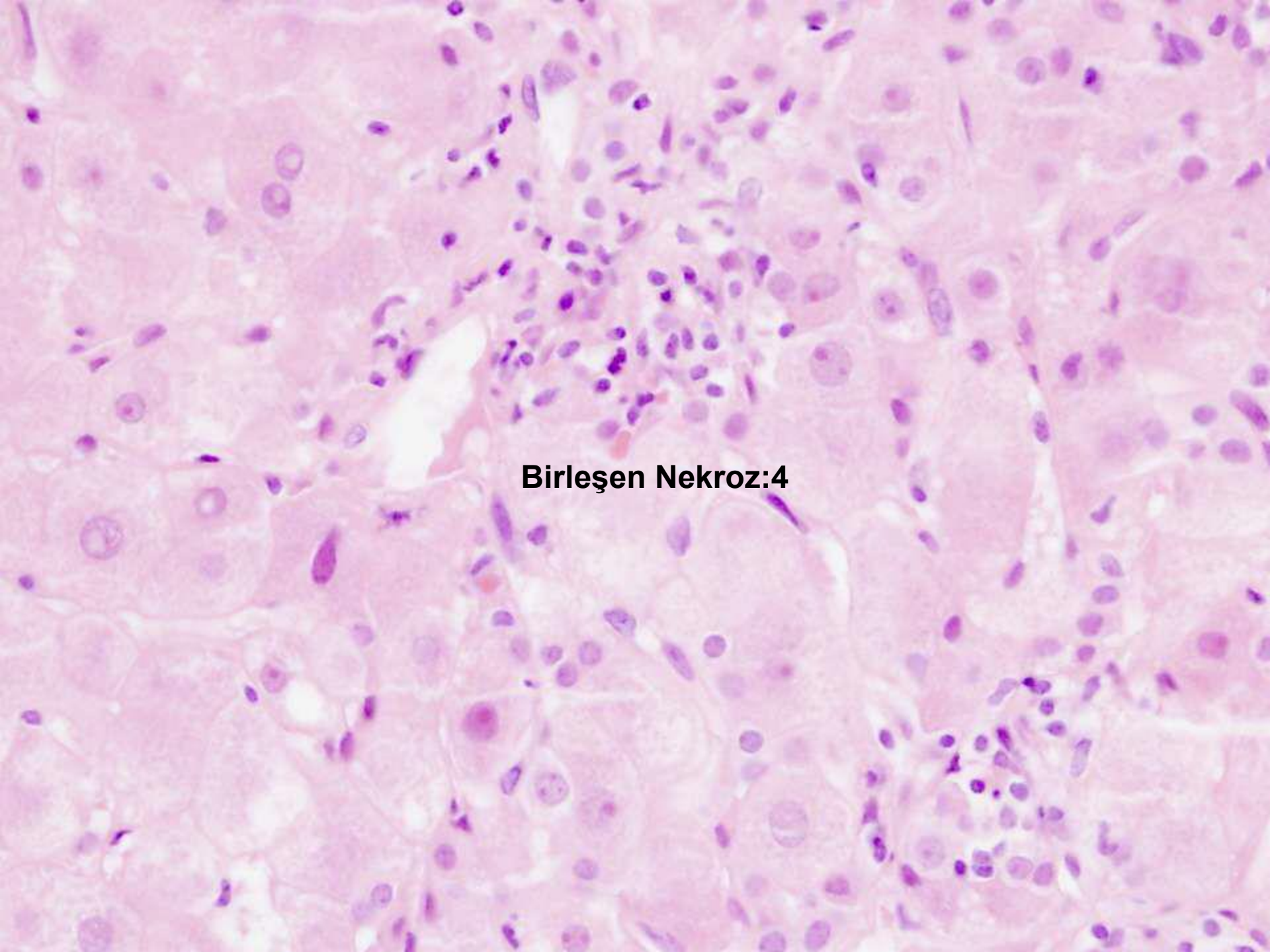
Birleşen Nekroz:2



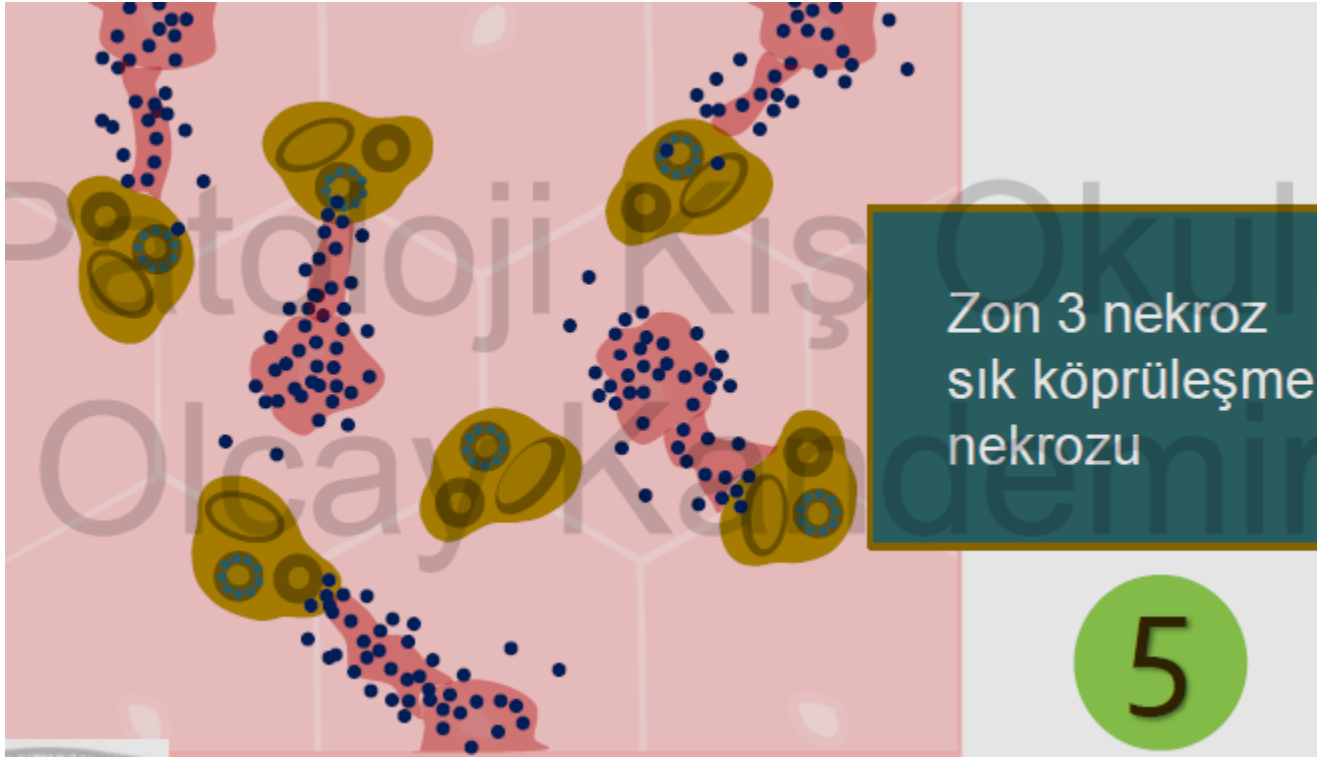


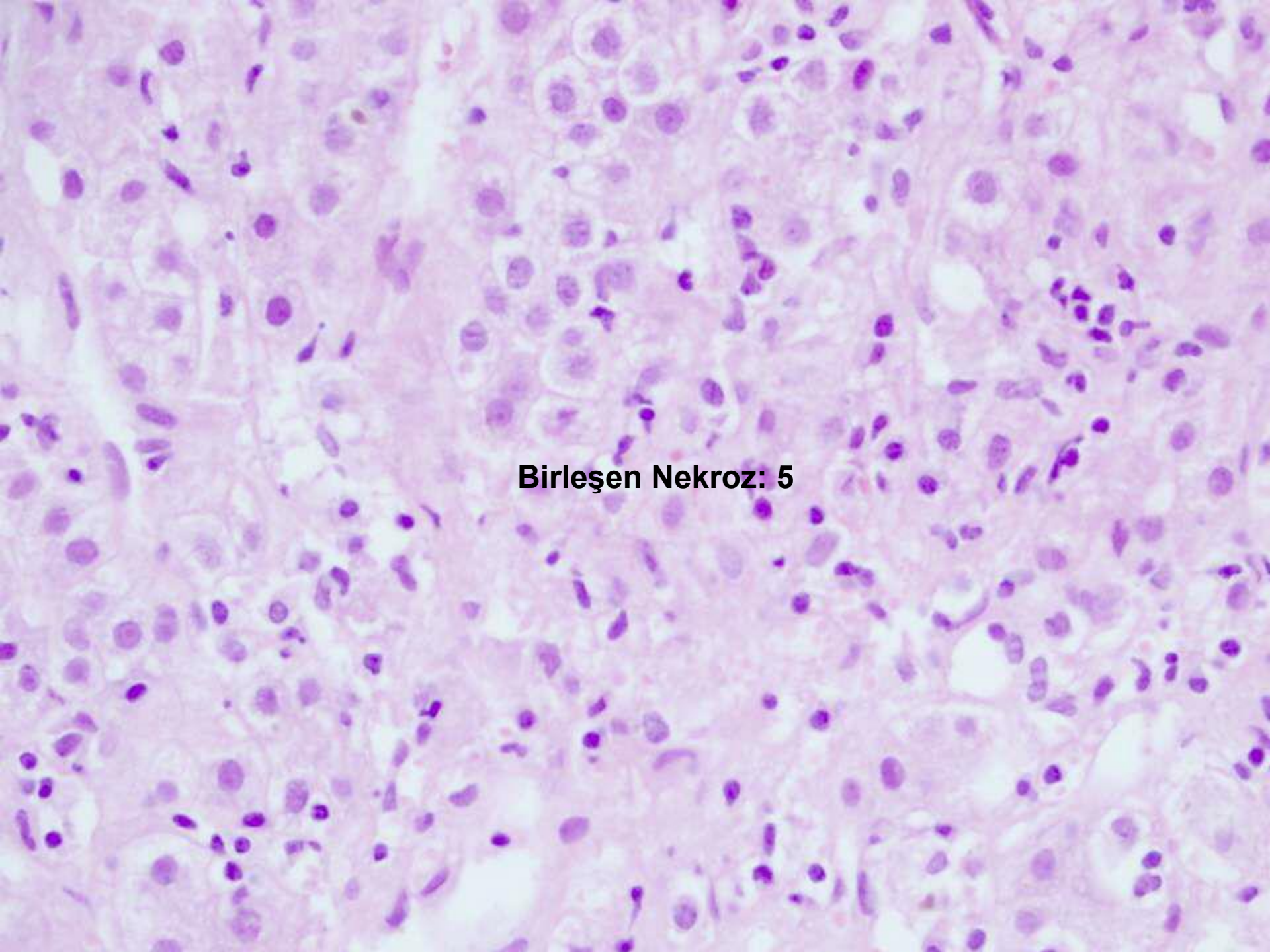
Birleşen Nekroz: 3



A histological slide stained with hematoxylin and eosin (H&E) showing a tissue section with extensive necrosis. The tissue is characterized by large, pale, eosinophilic areas of dead tissue (necrosis) interspersed with clusters of cells. The nuclei of the cells are stained dark purple (hematoxylin). The overall architecture is disrupted, with loss of normal cellular structure and organization. The text "Birleşen Nekroz:4" is overlaid on the image.

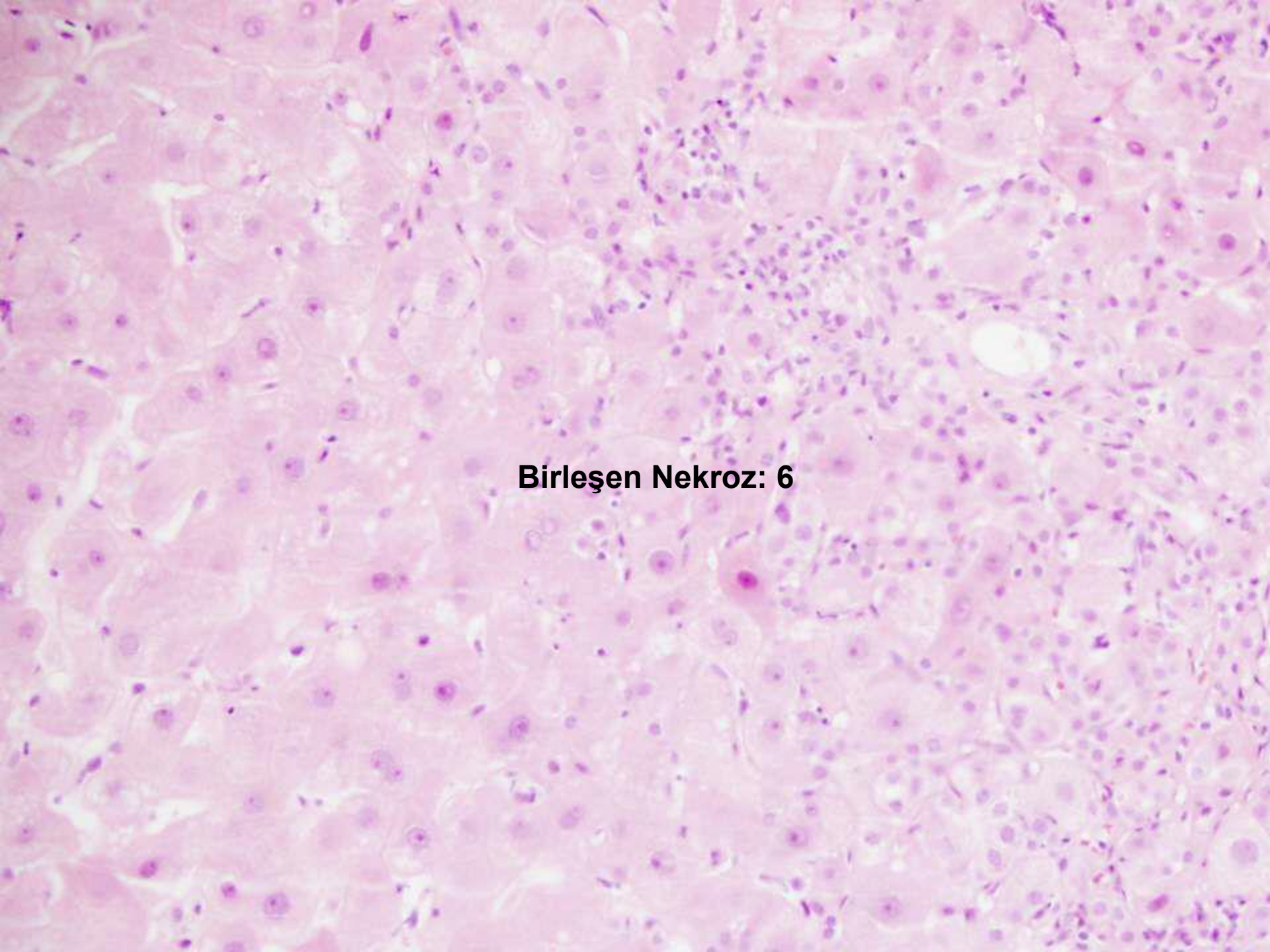
Birleşen Nekroz:4





Birleşen Nekroz: 5

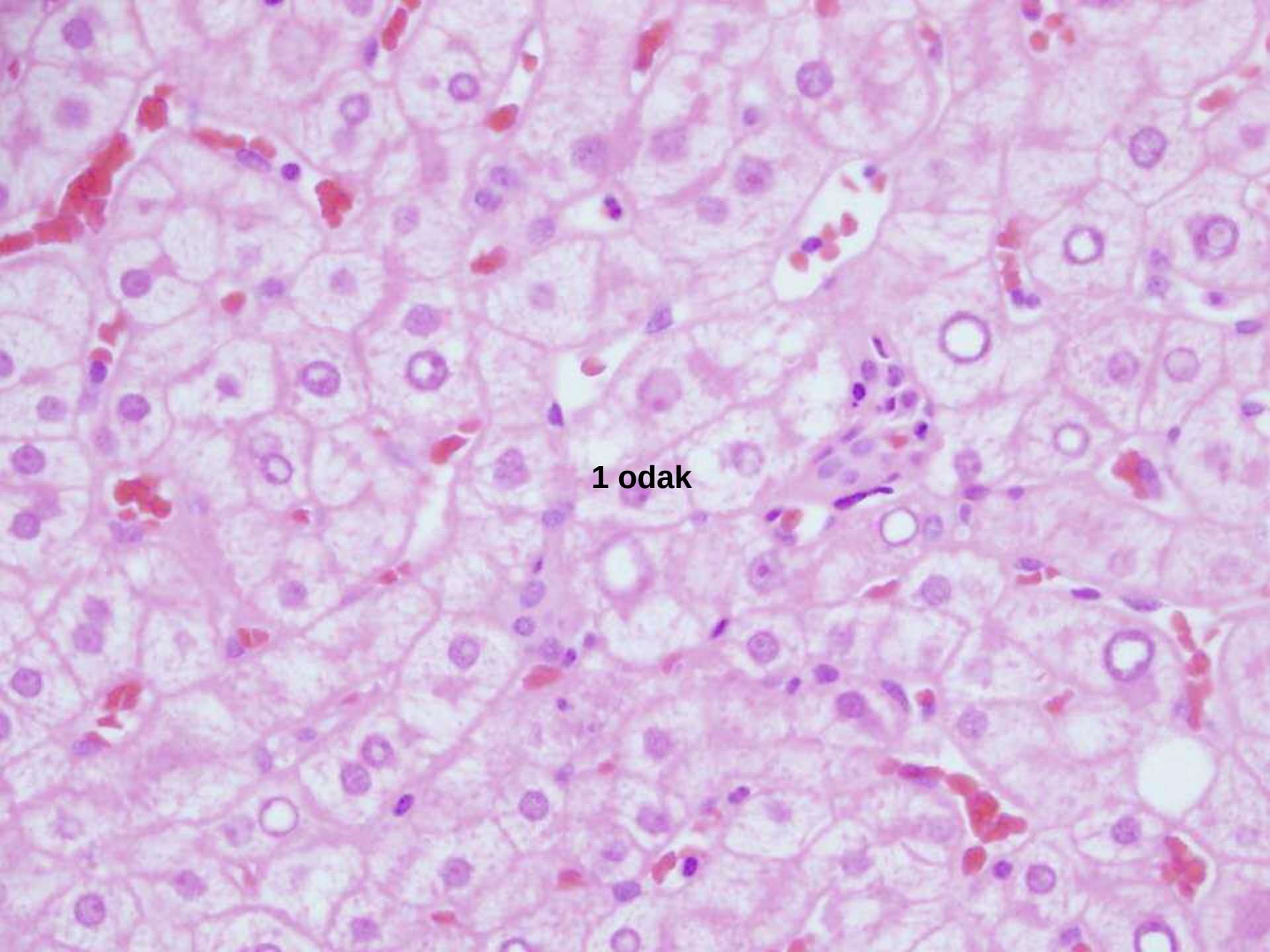


A histological slide of liver tissue stained with hematoxylin and eosin (H&E). The image shows a dense population of hepatocytes with pink cytoplasm and purple nuclei. There are several areas of confluent necrosis, where the normal architecture of the liver is lost, and the cells are replaced by a mass of dead cells. The text "Birleşen Nekroz: 6" is overlaid on the image, indicating the type and extent of the necrosis.

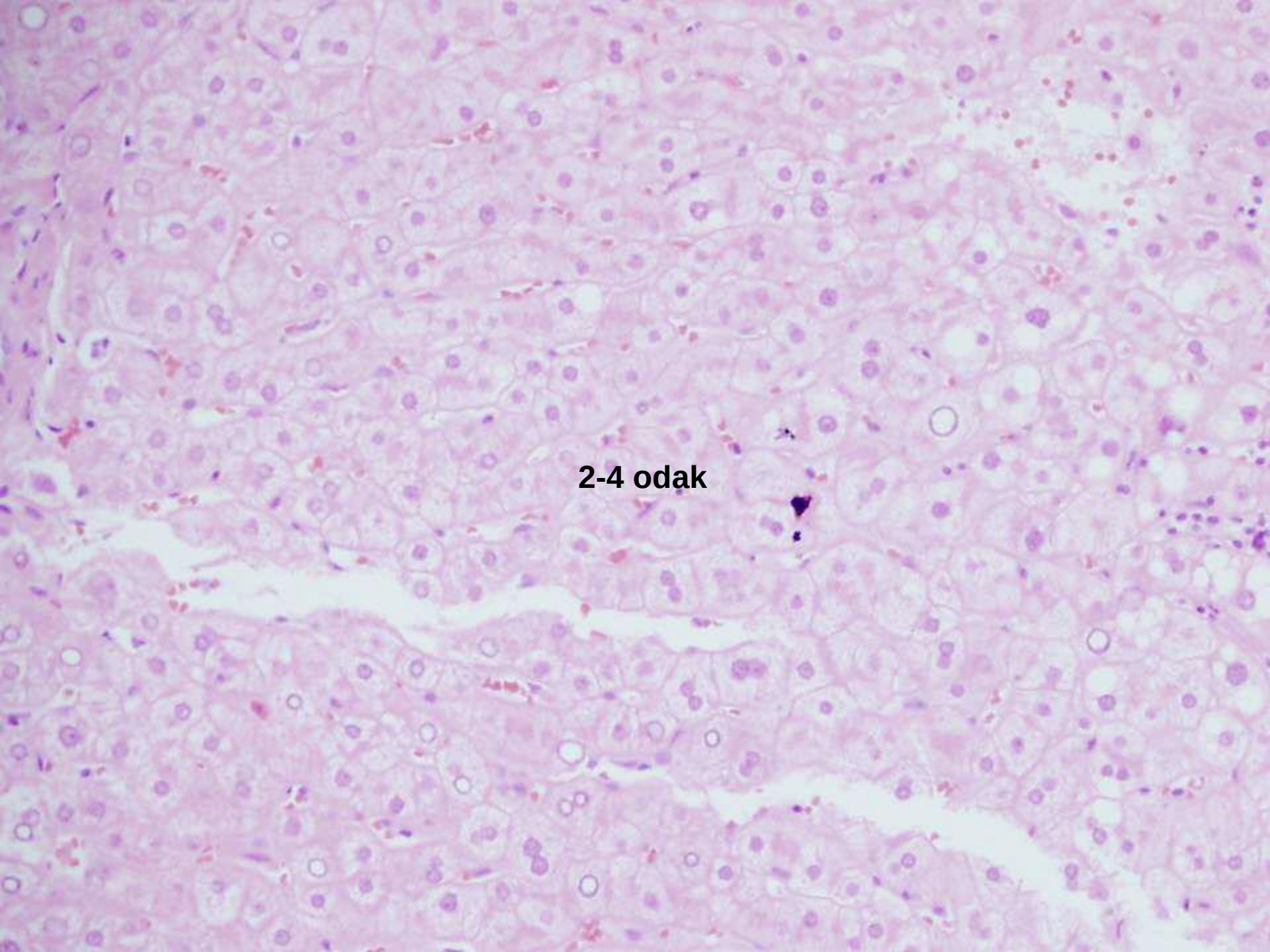
Birleşen Nekroz: 6

- **C) Fokal (spotty) litik nekroz, apoptozis ve fokal iltihap**
- Yok 0
- Her X10 mikroalanda 1 odak veya daha az 1
- Her X10 mikroalanda 1-4 odak 2
- Her X10 mikroalanda 5-10 odak 3
- Her X10 mikroalanda 10'dan fazla odak 4

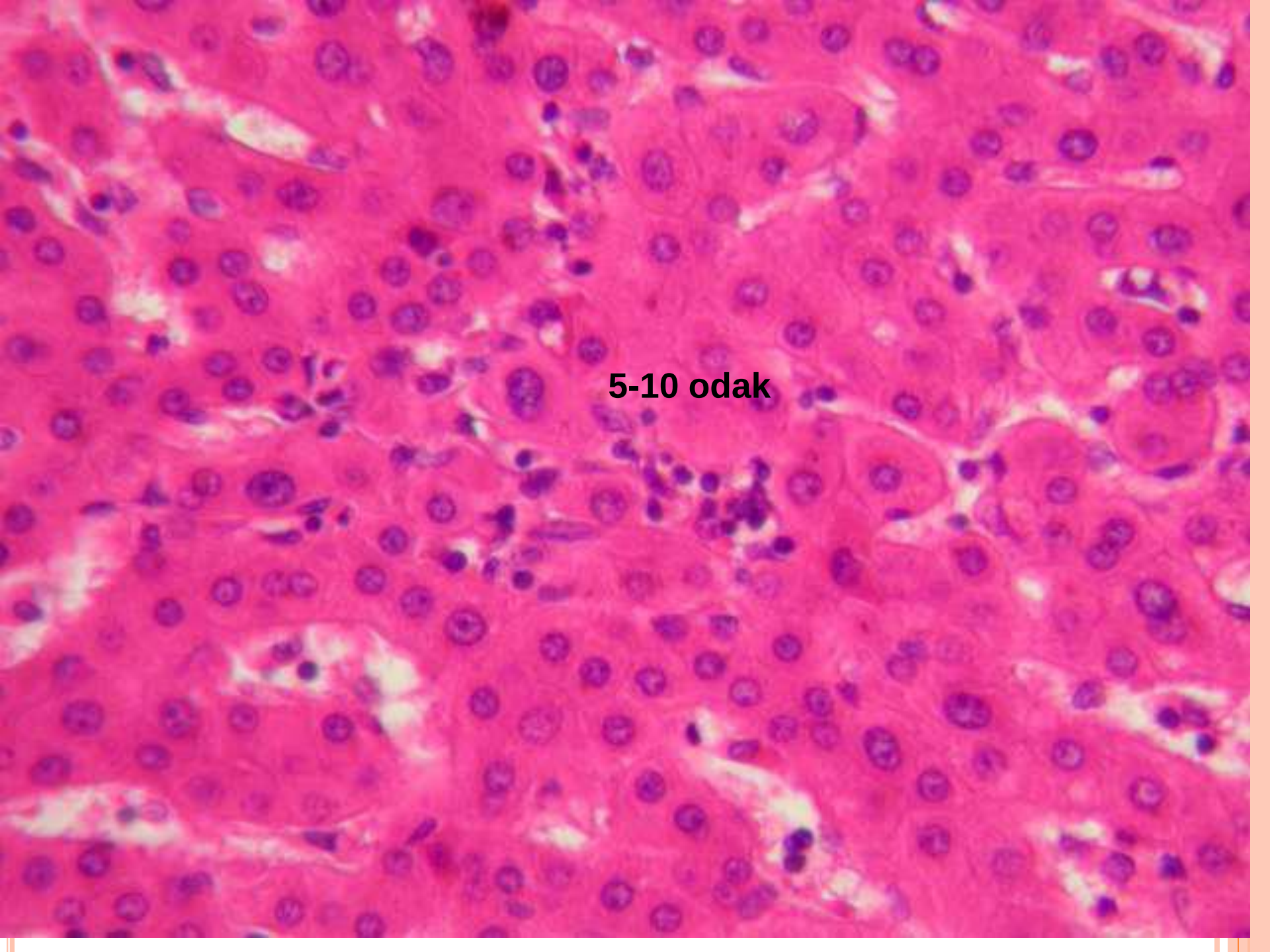




1 odak

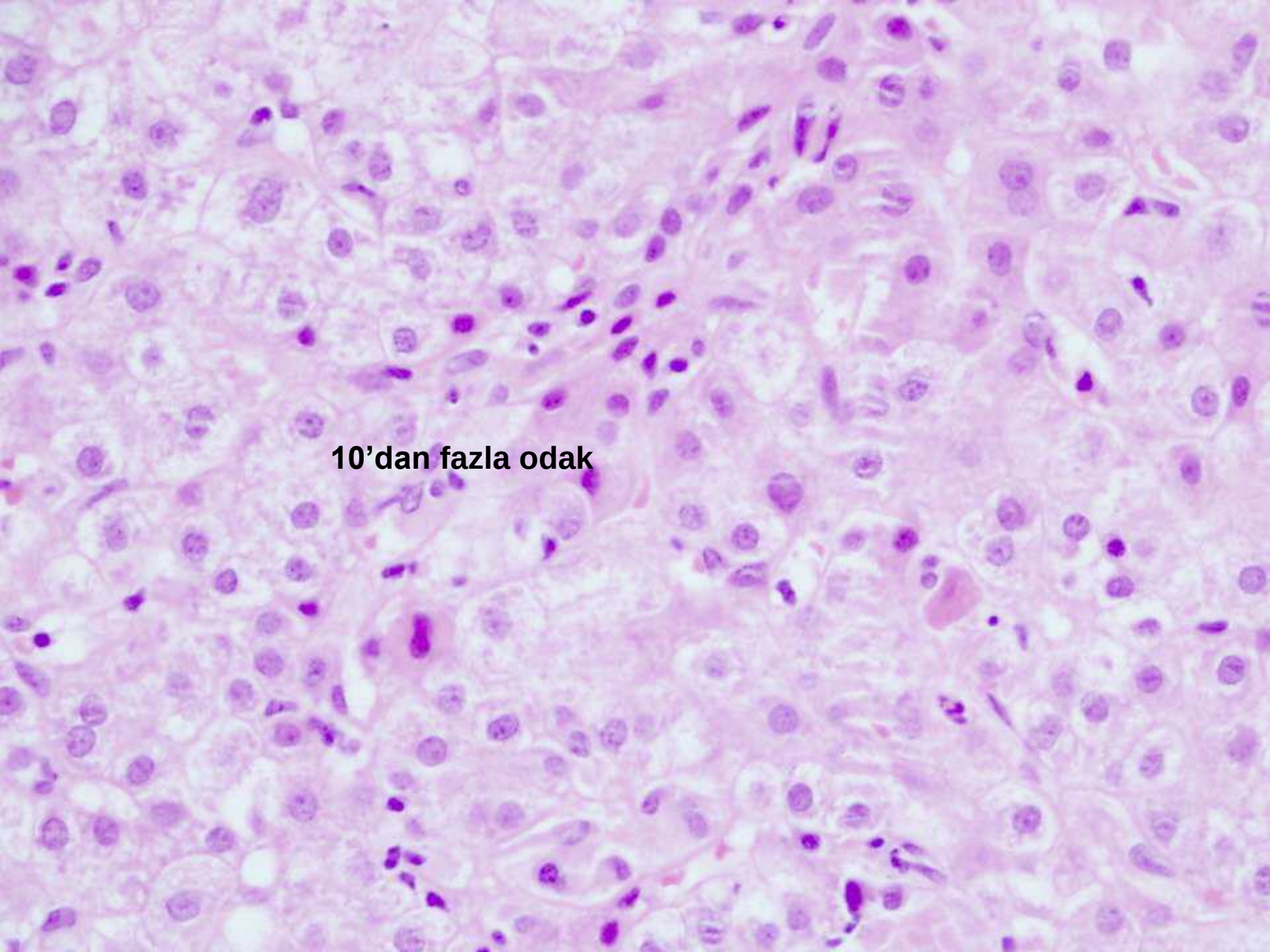
A histological section of liver tissue stained with hematoxylin and eosin (H&E). The image shows a dense population of hepatocytes with prominent nuclei and surrounding sinusoidal spaces. The text "2-4 odak" is overlaid in the center.

2-4 odak



5-10 odak

This histological image shows a cross-section of testis tissue. The seminiferous tubules are densely packed with germ cells at various stages of development. The tubules are lined by a single layer of germ cells, with the most mature sperm cells (spermatozoa) located near the lumen. The interstitial space between the tubules contains Leydig cells and blood vessels. The overall structure is organized into a regular, repeating pattern of tubules.



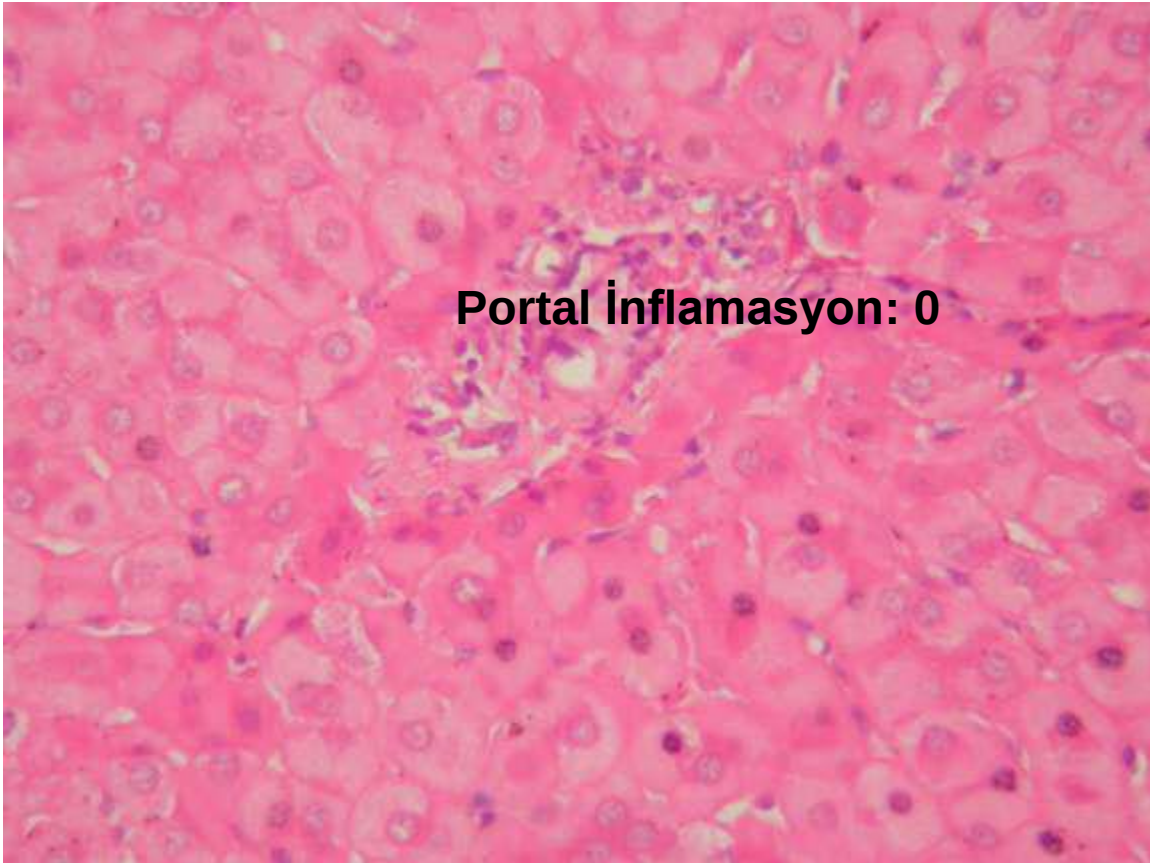
10'dan fazla odak

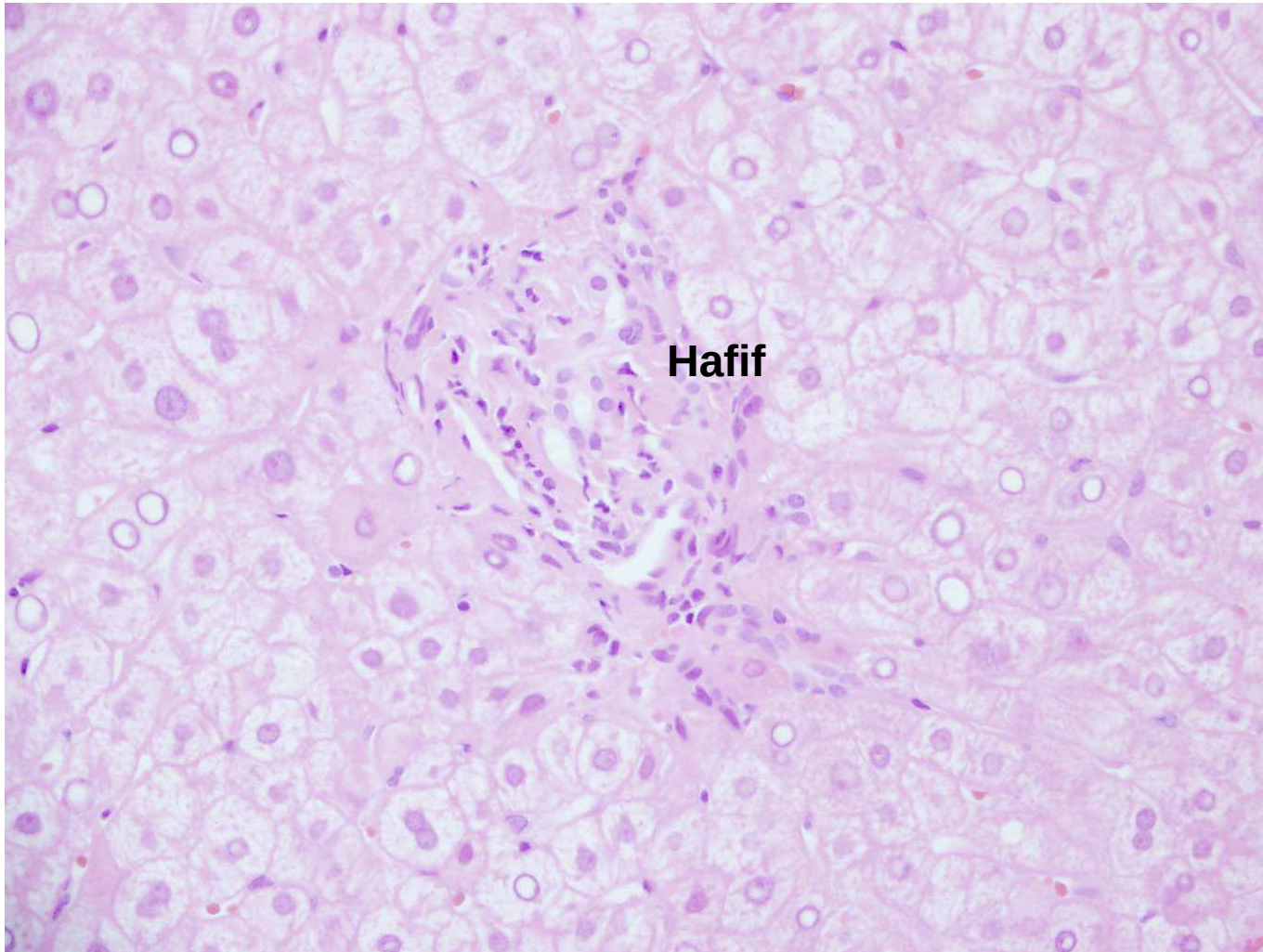
This histological image shows a cross-section of testis tissue. The field is filled with numerous seminiferous tubules, which are the sites of sperm production. Each tubule contains developing sperm cells at various stages of maturation, appearing as small, dark, oval nuclei. The tubules are separated by a thin layer of connective tissue. The overall appearance is a dense, organized array of these tubular structures.

D) Portal İltihap

- Yok 0
- Bazı veya bütün portal alanlarda hafif 1
- Bazı veya bütün portal alanlarda orta 2
- Bütün portal alanlarda orta/belirgin 3
- Bütün portal alanlarda belirgin 4

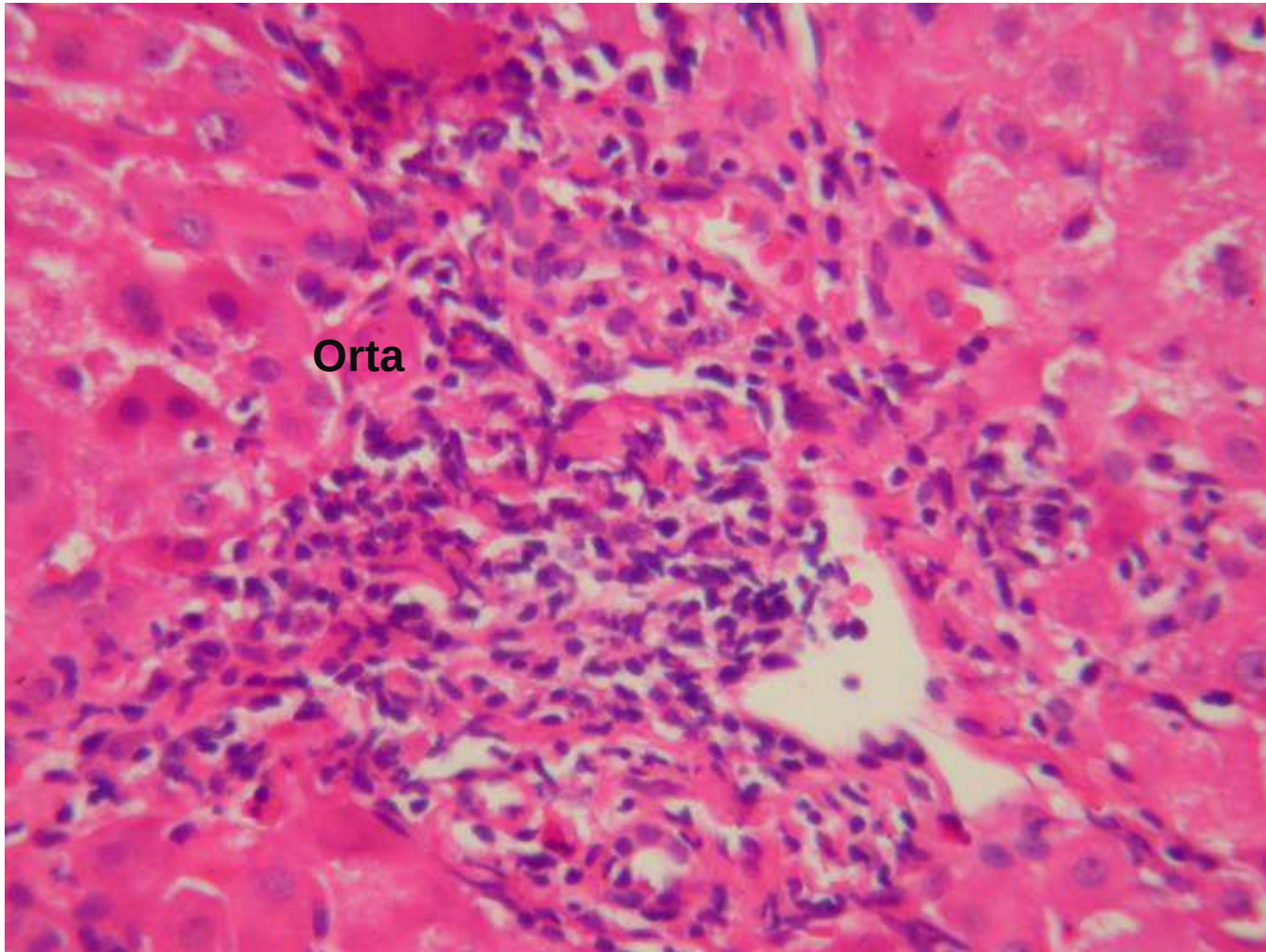


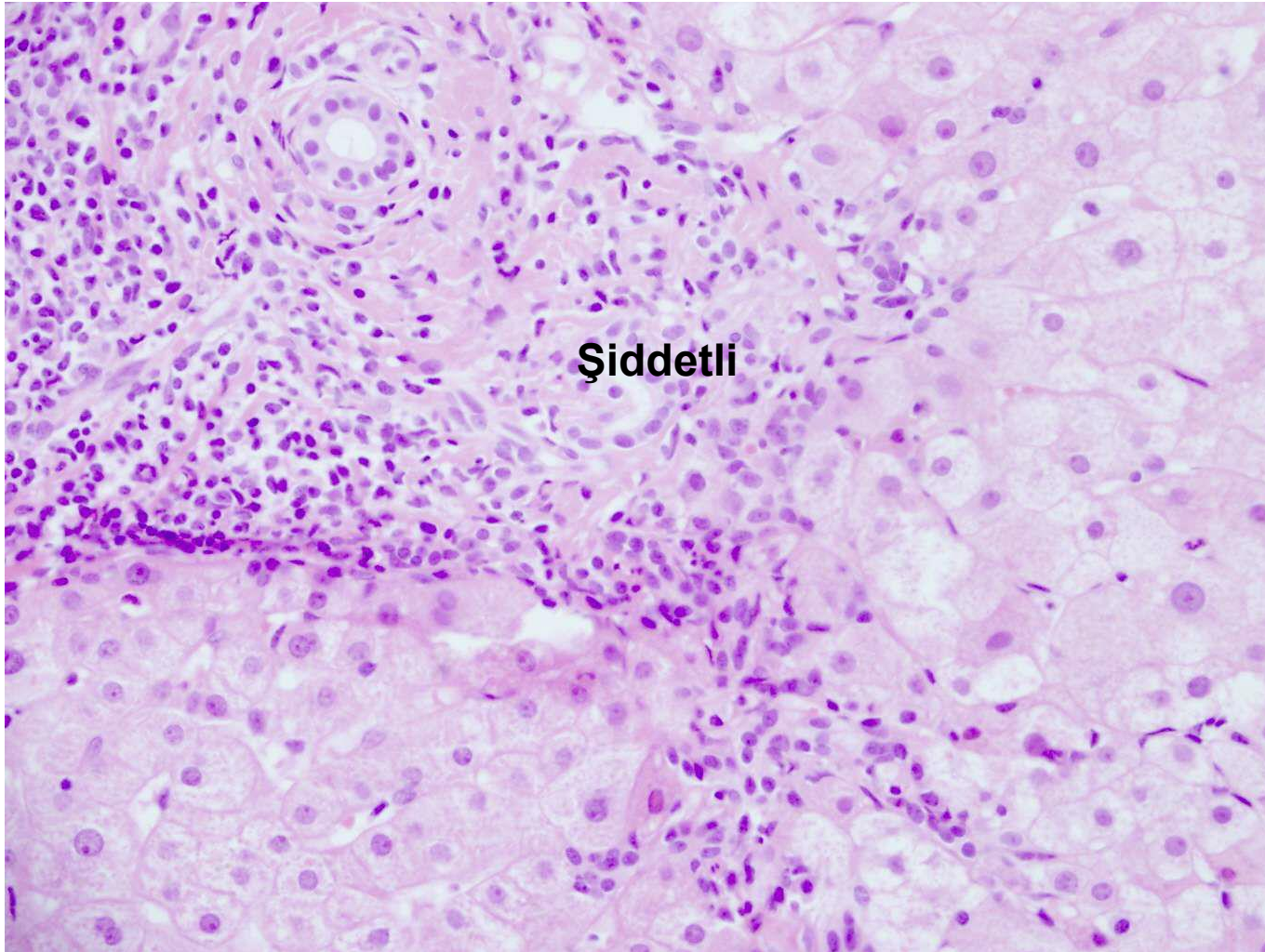




Hafif

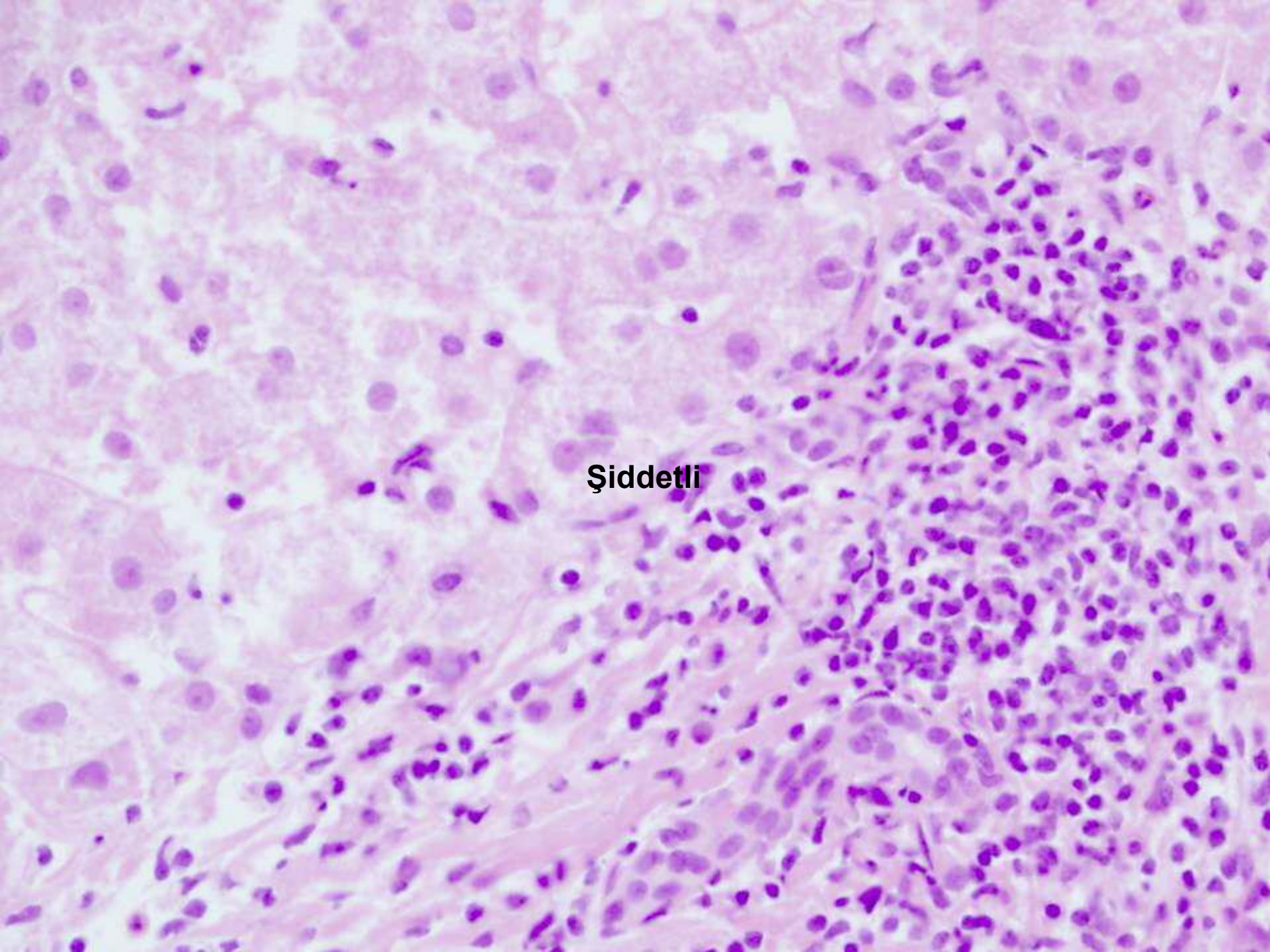






Şiddetli





Şiddetli

Modifiye Histoloji Aktivite İndeksi:

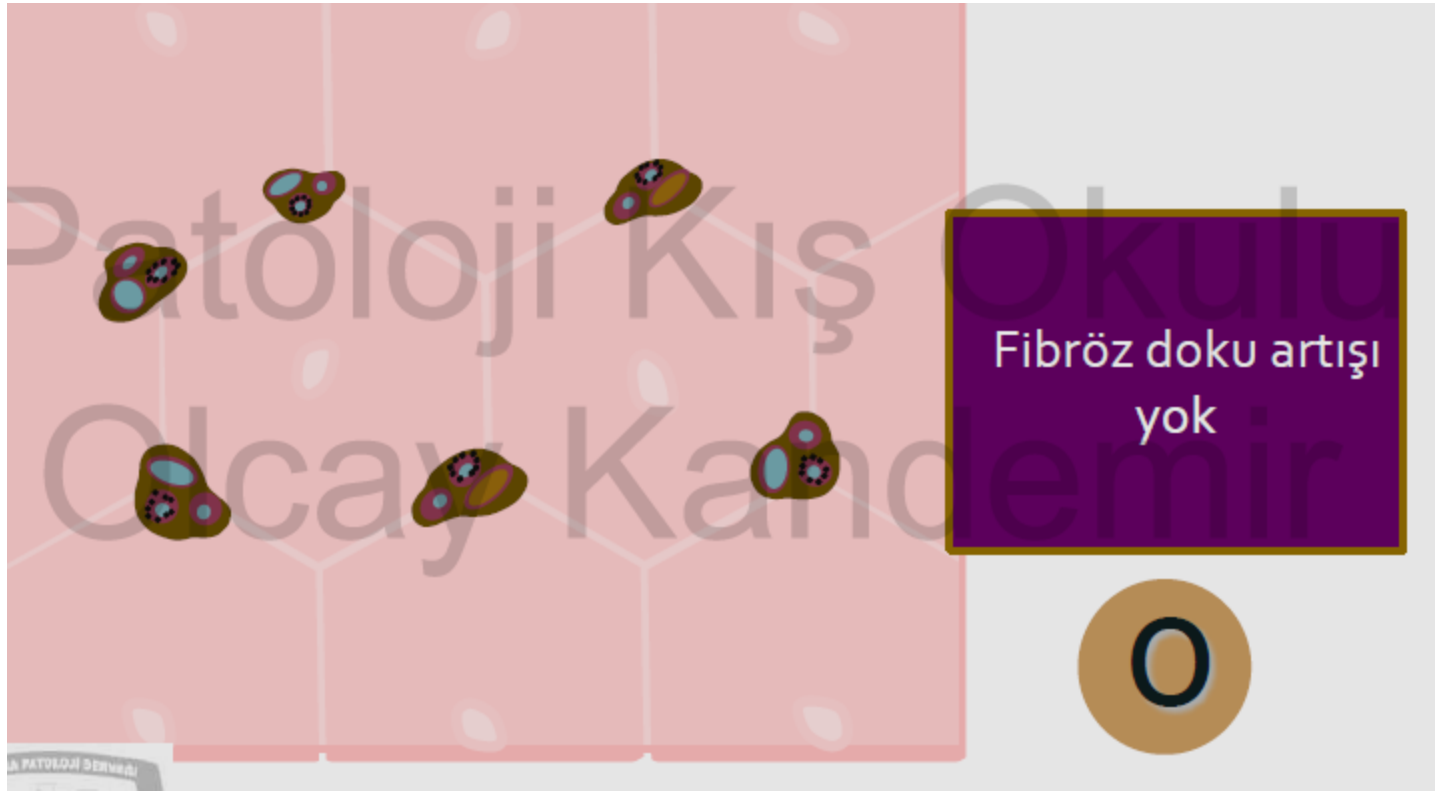
II. Yapısal değişiklikler, fibrozis



Fibrozis

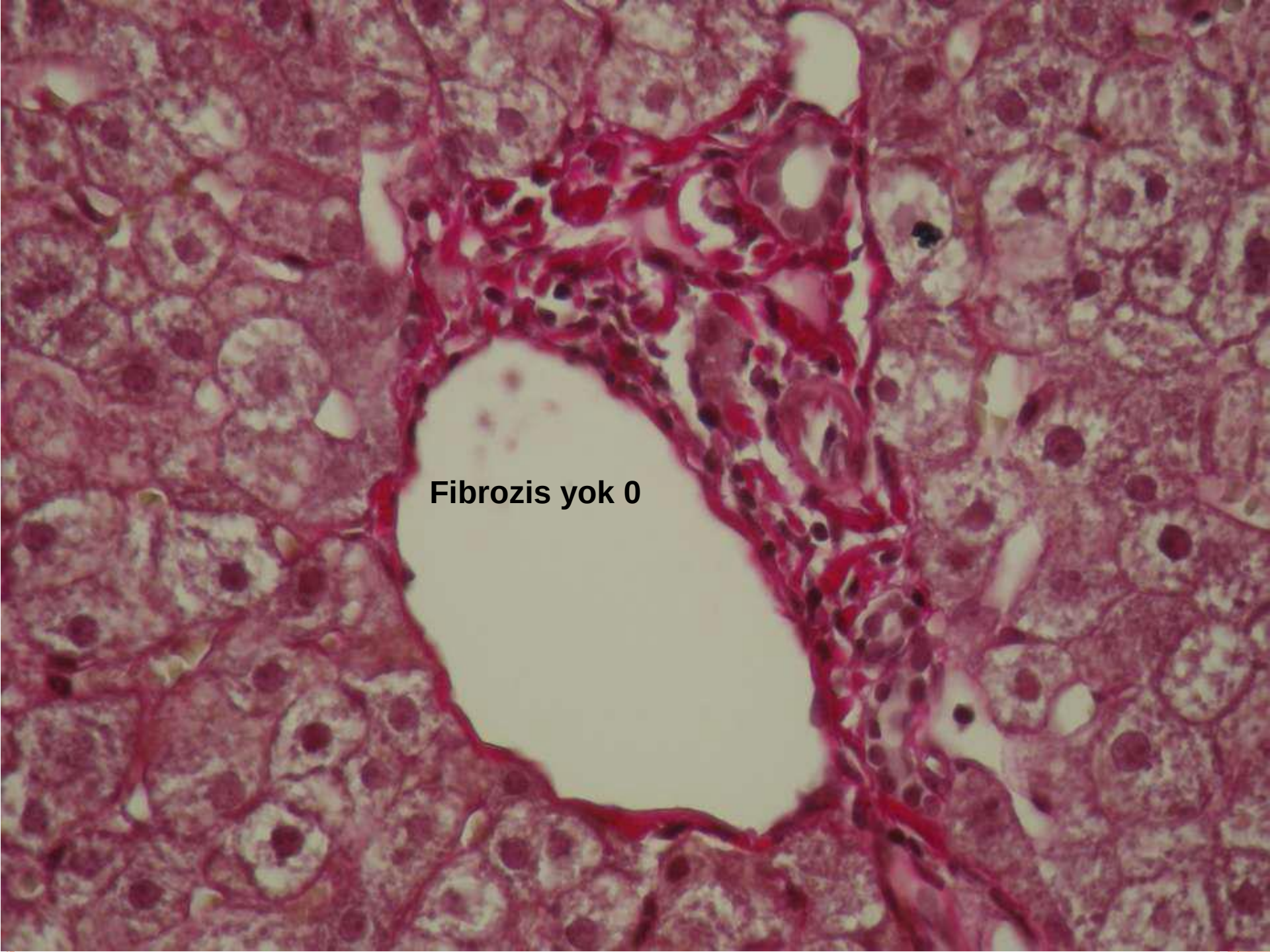
- ✓ Yok: SKOR 0
- ✓ Bazı portal alanlarda fibröz genişleme
+/- kısa fibröz septalar: SKOR 1
- ✓ Çoğu portal alanlarda fibröz genişleme
+/- kısa fibröz septalar: SKOR 2
- ✓ Portal alanların çoğunda fibröz genişleme
ile nadir portal - portal köprüleşme: SKOR 3
- ✓ Portal alanlarda fibröz genişleme ile
sık köprüleşmeler (P-P ve P-S) : SKOR 4
- ✓ Sık köprüleşme ile nadir nodüller : SKOR 5
(inkomple siroz)
- ✓ Siroz muhtemel veya kesin: SKOR 6





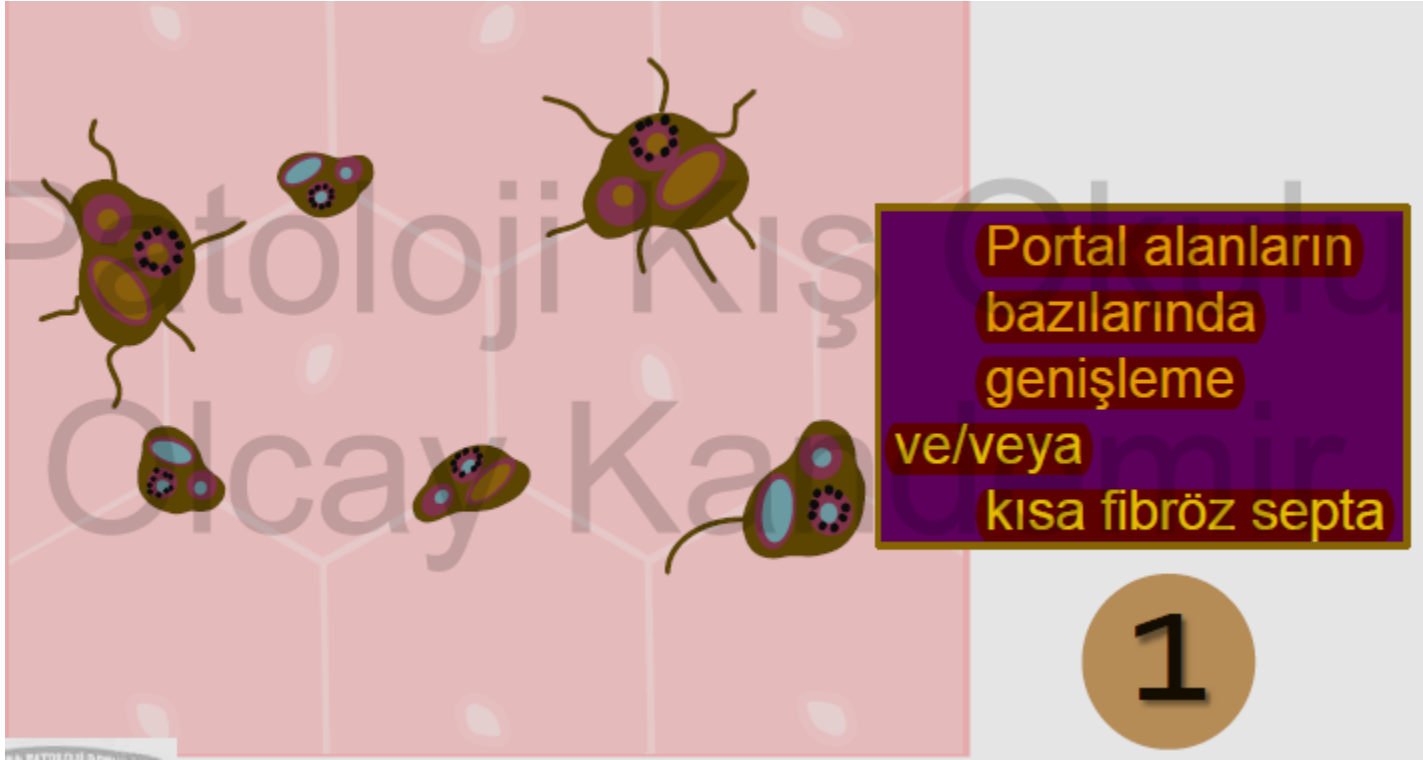
Fibröz doku artışı
yok

O



Fibrozis yok 0

This histological image shows a cross-section of a seminiferous tubule from a testis. The tubule is filled with developing sperm cells at various stages of maturation. The lumen of the tubule is clear, indicating no fibrosis. The surrounding interstitial space contains various cells, including fibroblasts and blood vessels, which are stained pink. The overall structure is well-organized, with a clear boundary between the tubule and the interstitium.

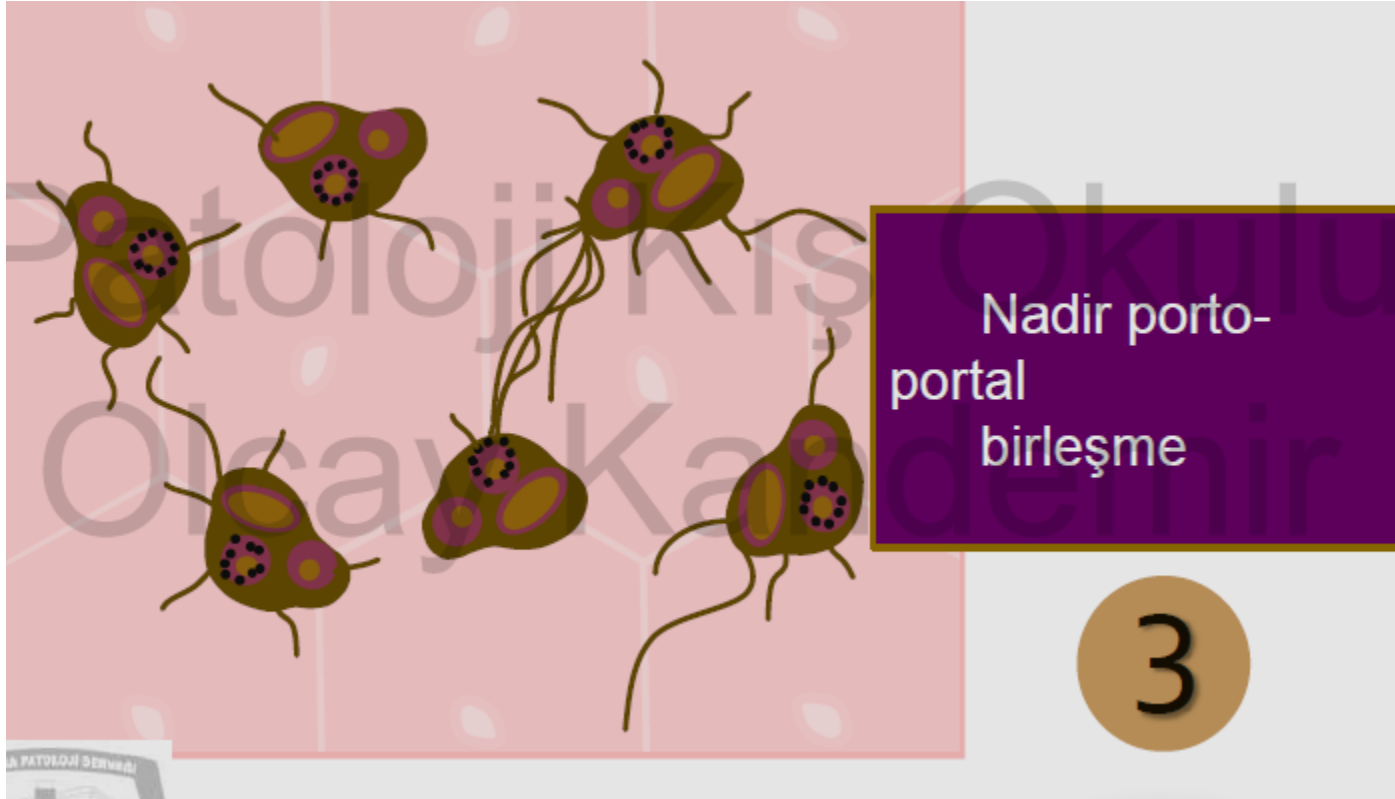




Portal alanların
çoğunda
genişleme
ve/veya
kısa fibröz septa

2







Sık porto-portal
birleşme

4

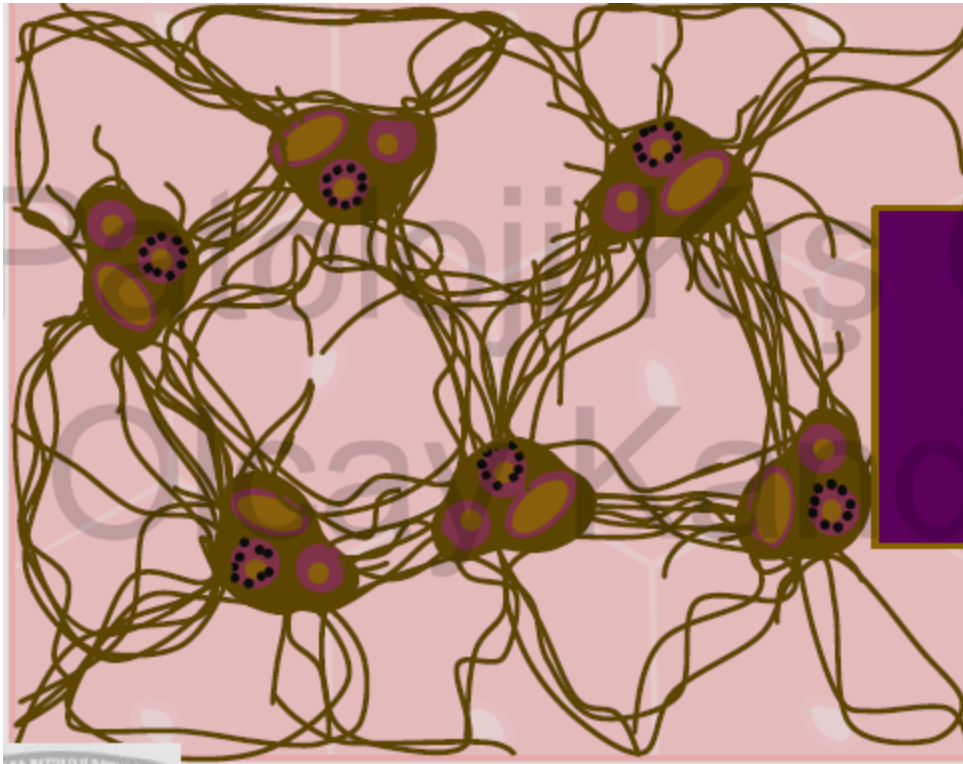




Nadir nodül
oluşumu
(inkomplet siroz)

5



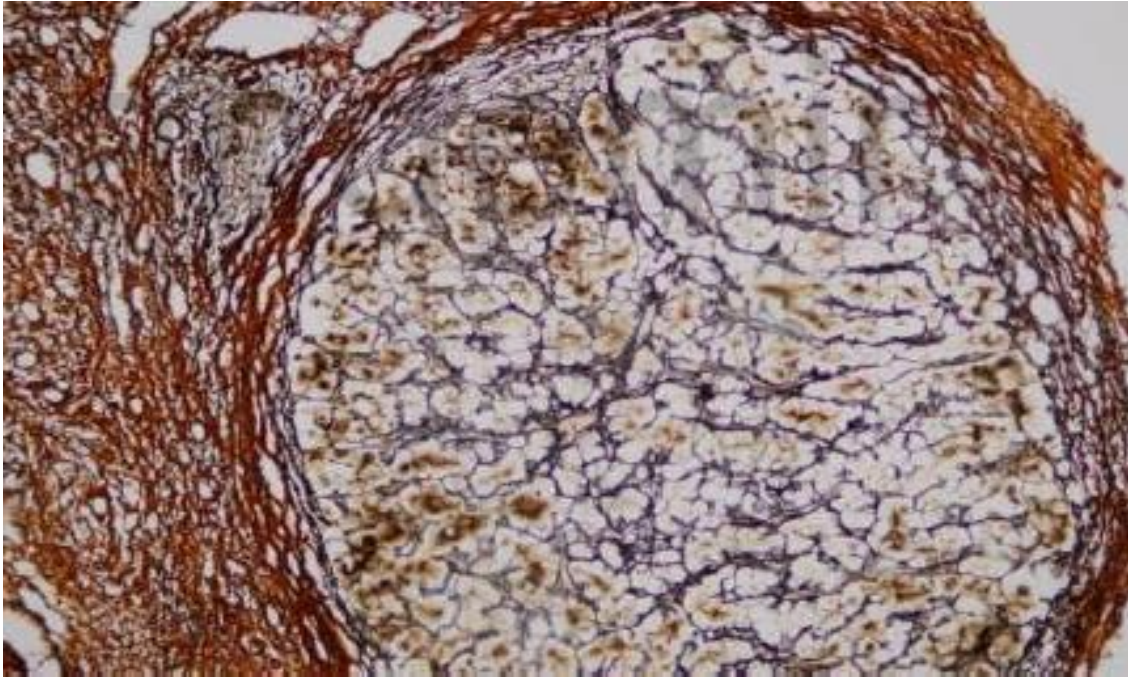


ASA PATOLOJİ SERVİSİ

Siroz

6







Katkılarından dolayı
PROF. DR OLCAY KANDEMİR' E
TEŞEKKÜRLER.

