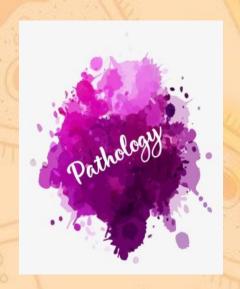
ИГХлогия в практике









By Dr. Altruist



Что это за слово?

• Иммуногистохимическое (ИГХ) исследование представляет собой метод идентификации специфичных антигенных свойств соответствующих

субстратов.





Antigen accorded accorded

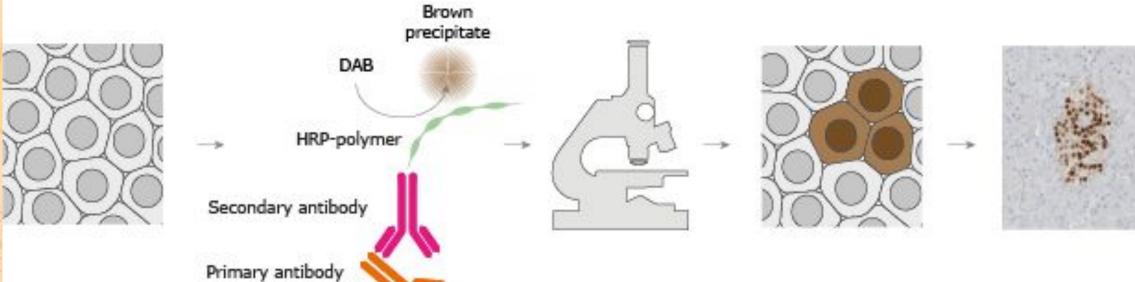
Cells in tissue

WHY R U RUNNING?

Stained cells and structures

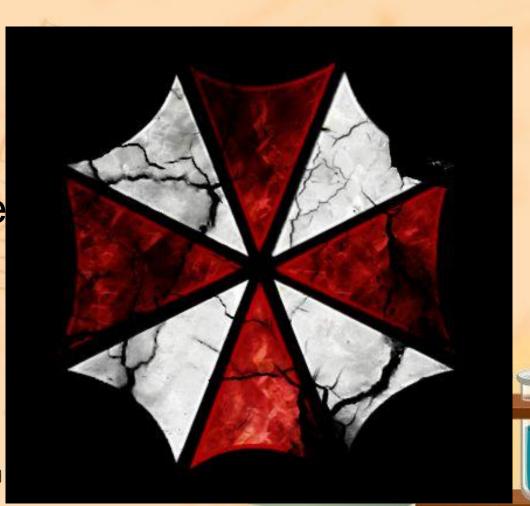
appear brown under the microscope

e. g. pancreatic islet cells

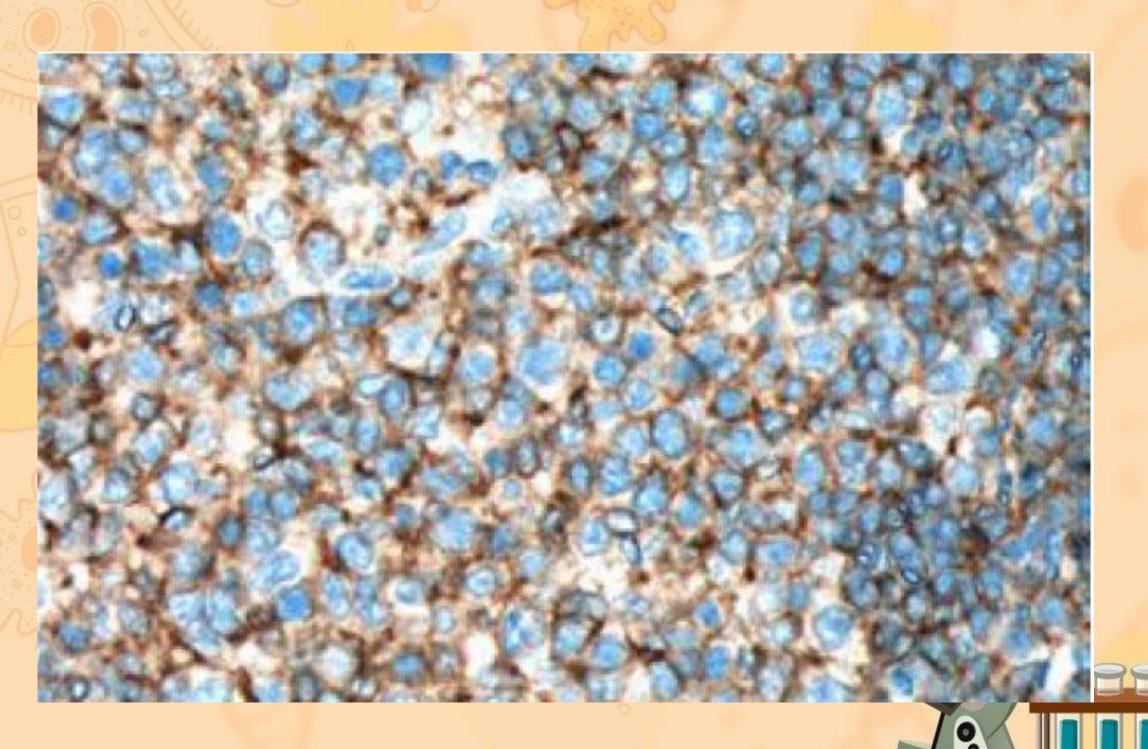


Что за субстраты?

- Опухоли
- Опухоли
- Злокачественные опухоли
- Доброкачественные опухоли
- Опухоли в промежуточной злокачественностю
- (Borderline type tumors)
- Генетическая патология
- Инфекционная патология
- Посмертная ИГХ в судебке

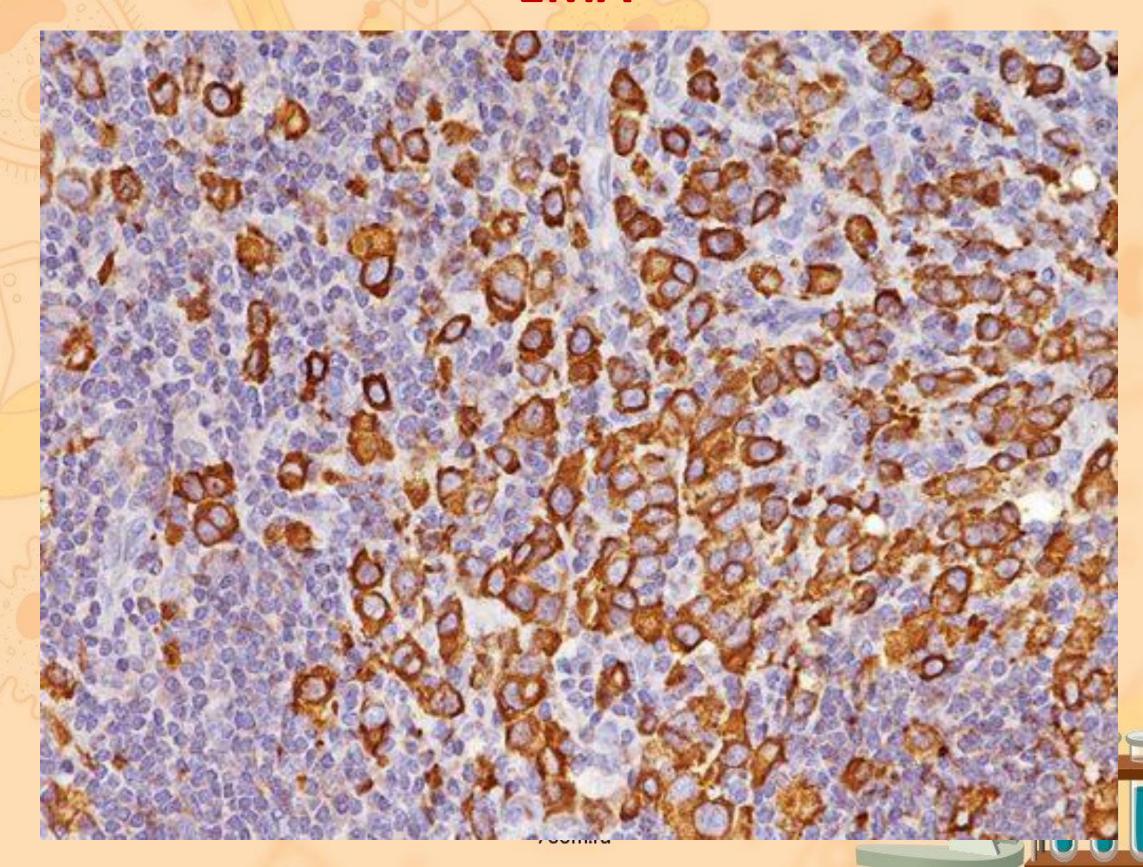


Какая экспрессия? CD45



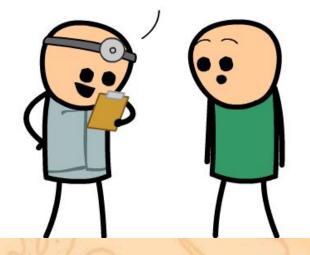


EMA

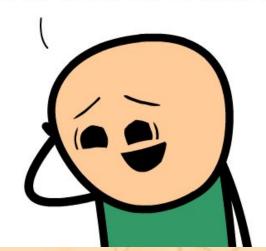


ИГХ В ОПУХОЛЯХ

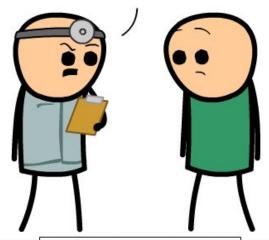
I'VE GOT THE RESULTS! IT LOOKS LIKE IT'S ALL IN YOUR HEAD.



OH MY GOD ... I'M SO RELIEVED!



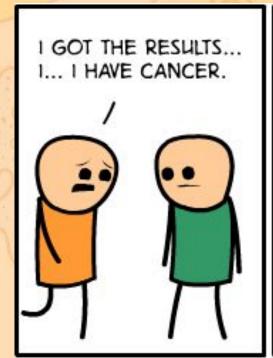
YOU'RE RELIEVED TO HAVE BRAIN TUMORS?

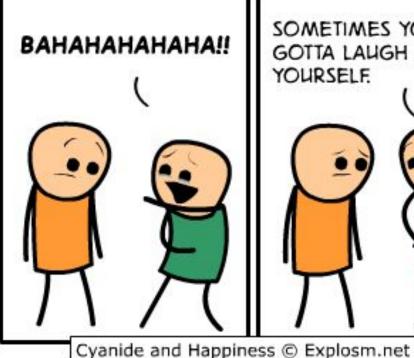


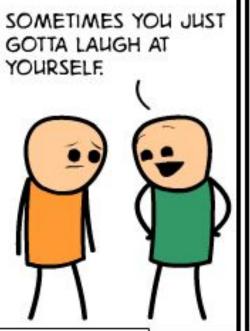


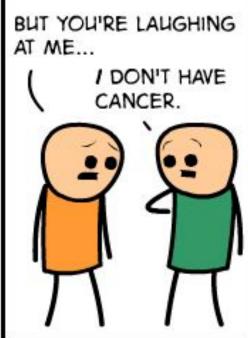
Группы опухолей

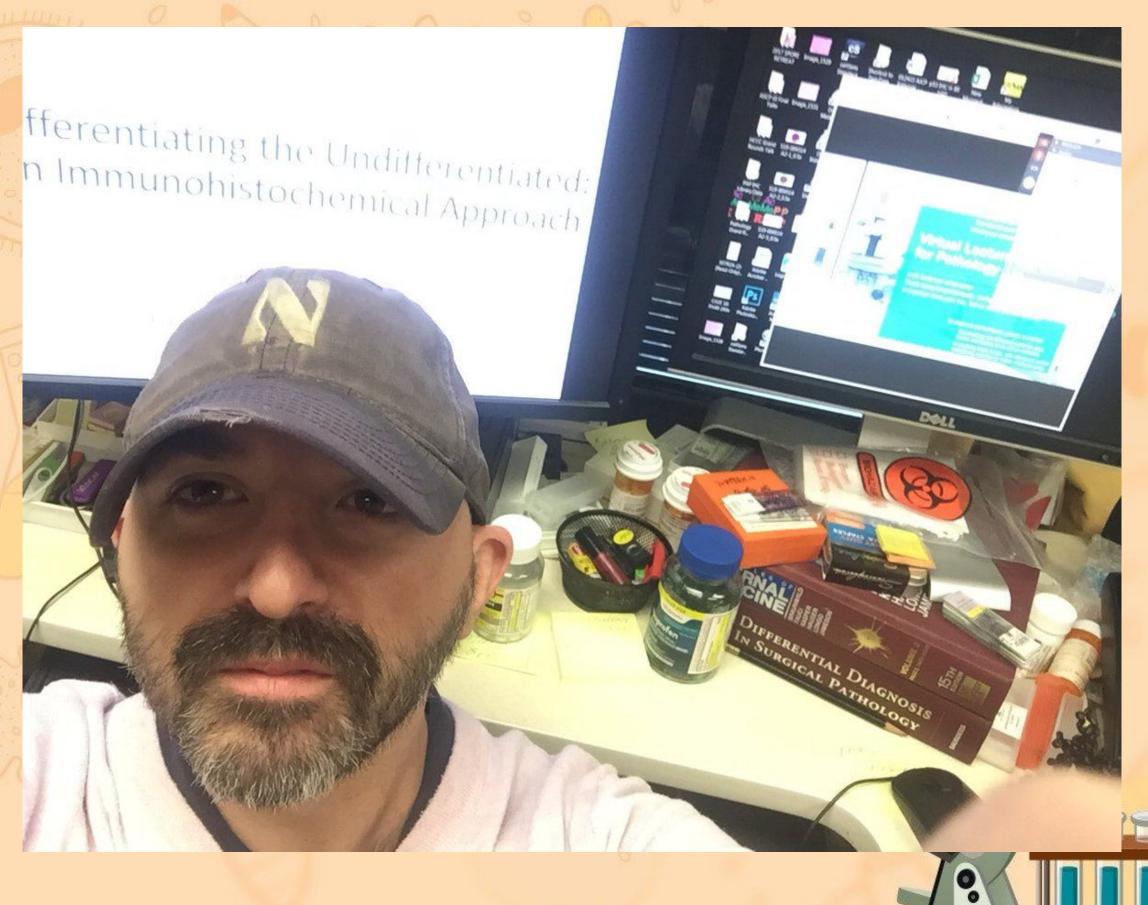
- Раки
- Мягкотканные опухоли
- Опухоли крови
- Герминативные опухоли
- Меланоцитарные опухоли Опухоли ЦНС











Pattern	Principal Diagnostic Considerations	Initial Screening Panel
Epithelioid	Carcinoma, melanoma, large cell lymphoma	Broad-spectrum keratin, CD45, SOX10
Round cell	Round cell sarcoma, lymphoma, small cell carcinoma	CD99, NKX2.2, desmin, myogenin, CD45, TdT, INSM1, broad-spectrum keratin, SOX10
Spindle cell	Sarcomatoid carcinoma, sarcoma, spindle cell/desmoplastic melanoma	Broad-spectrum keratin, p40, SMSA, desmin, SOX10
Anaplastic	Anything (usually not lymphoma)	Broad-spectrum keratin, CD45, SOX10

ИГХлогия раков





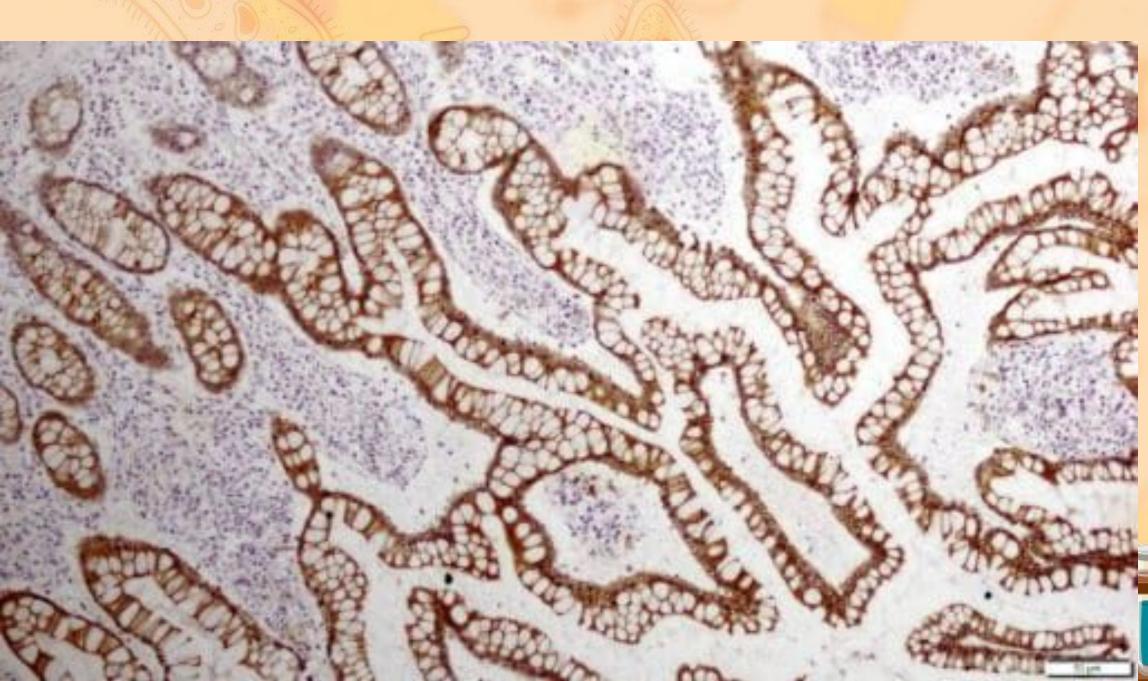






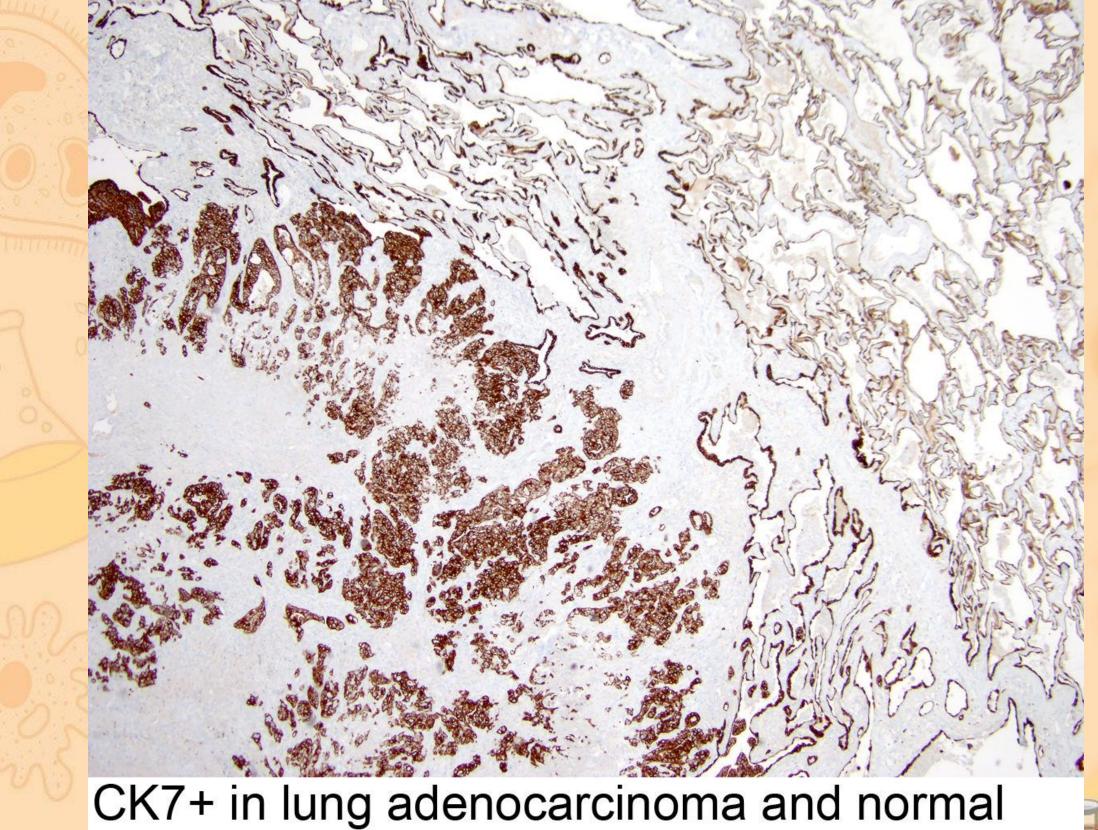
CK

- Cytokeratines промежуточные филаменты эпителиальных тканей.
- Pan CK AE1//AE3



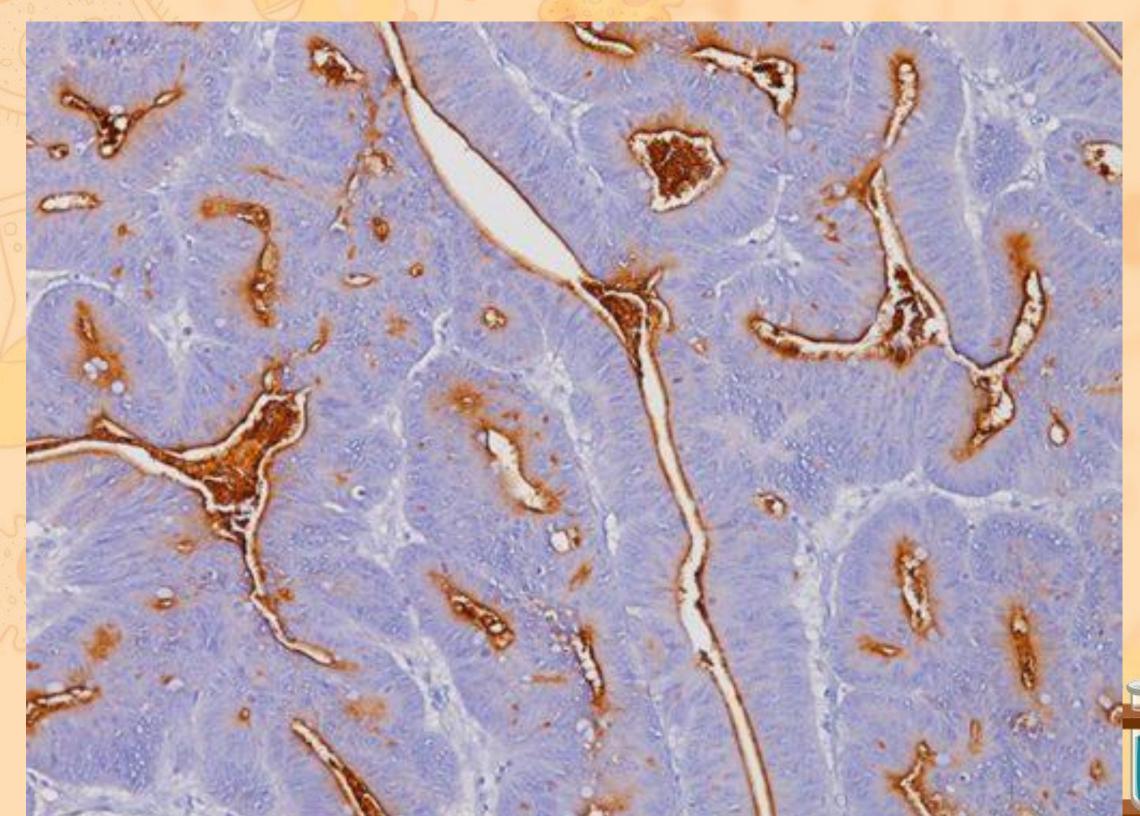
Coordinate Expression of CK7/CK20

Site (tumor)	СК7	CK20
Prostate, hepatocellular carcinoma, renal cell carcinoma, adrenal cortical carcinoma, squamous cell carcinoma, NET, visceral NEC, germ cell tumor (i.e., yolk sac tumor, seminoma)	-	-
Lung, breast, Müllerian, thyroid, bladder, upper GI (UG), pancreatobiliary (PB), mucinous ovarian		-
Bladder, UGI, PB, Mucinous Ovarian, occasional colon (especially rectum), occasional lung (especially mucinous)		+
Colon, Merkel cell, occasional UGI		+



CK7+ in lung adenocarcinoma and normal alveolar cells

CEA Endometrioid carcinoma

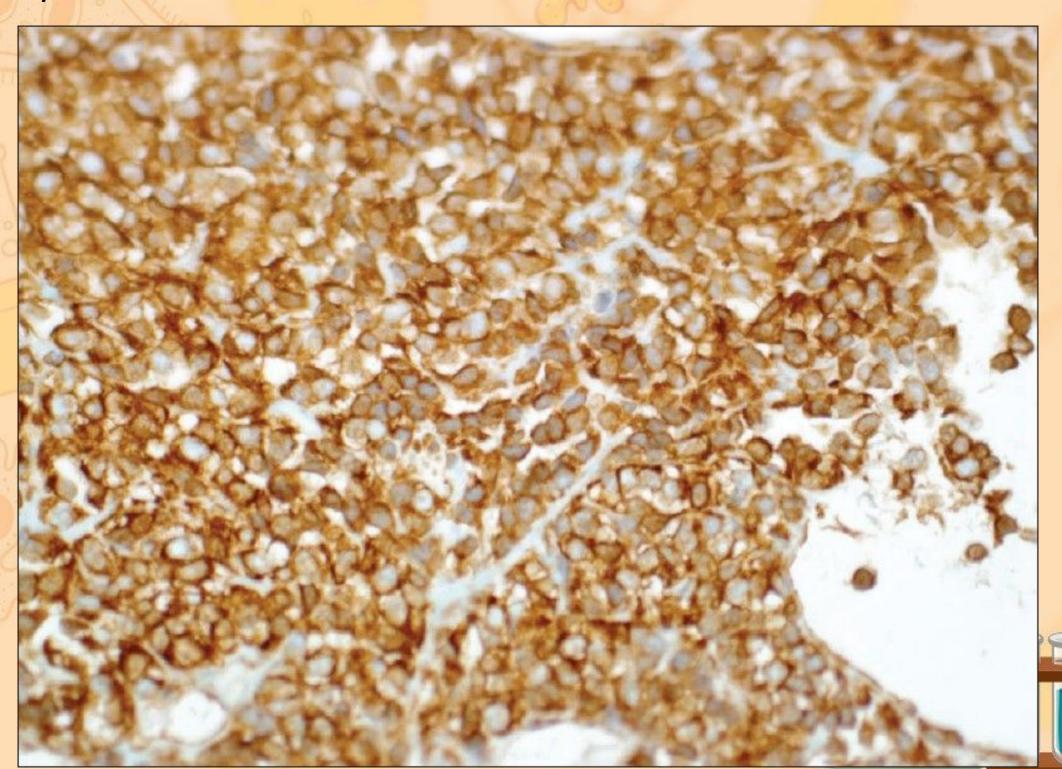


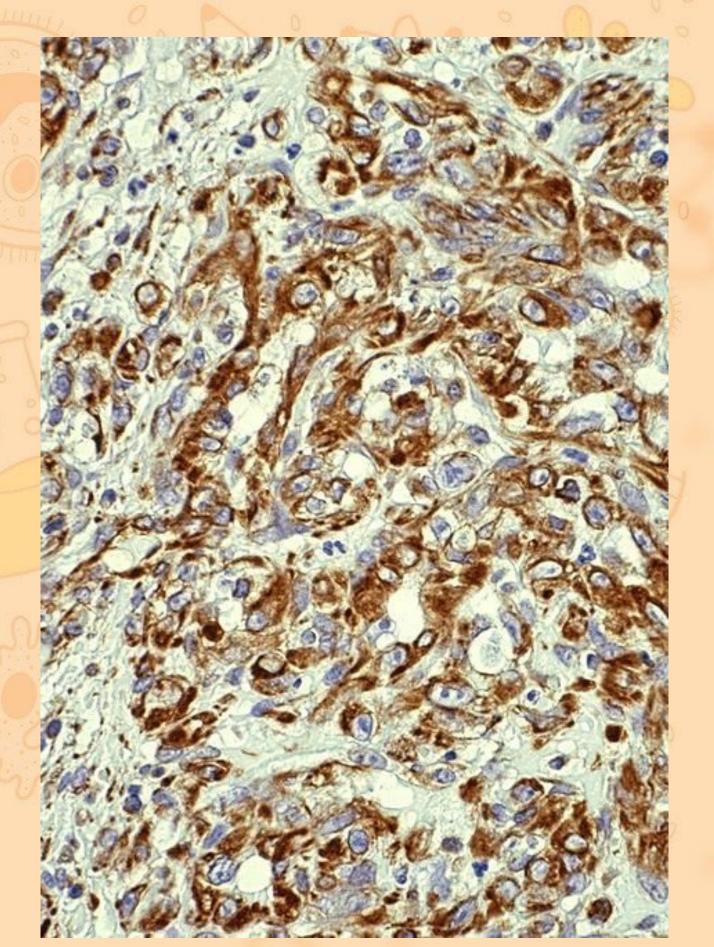
ИГХлогия сраком



Vimentin – промежуточный филамент мезенхимальных тканей

synovial sarcoma





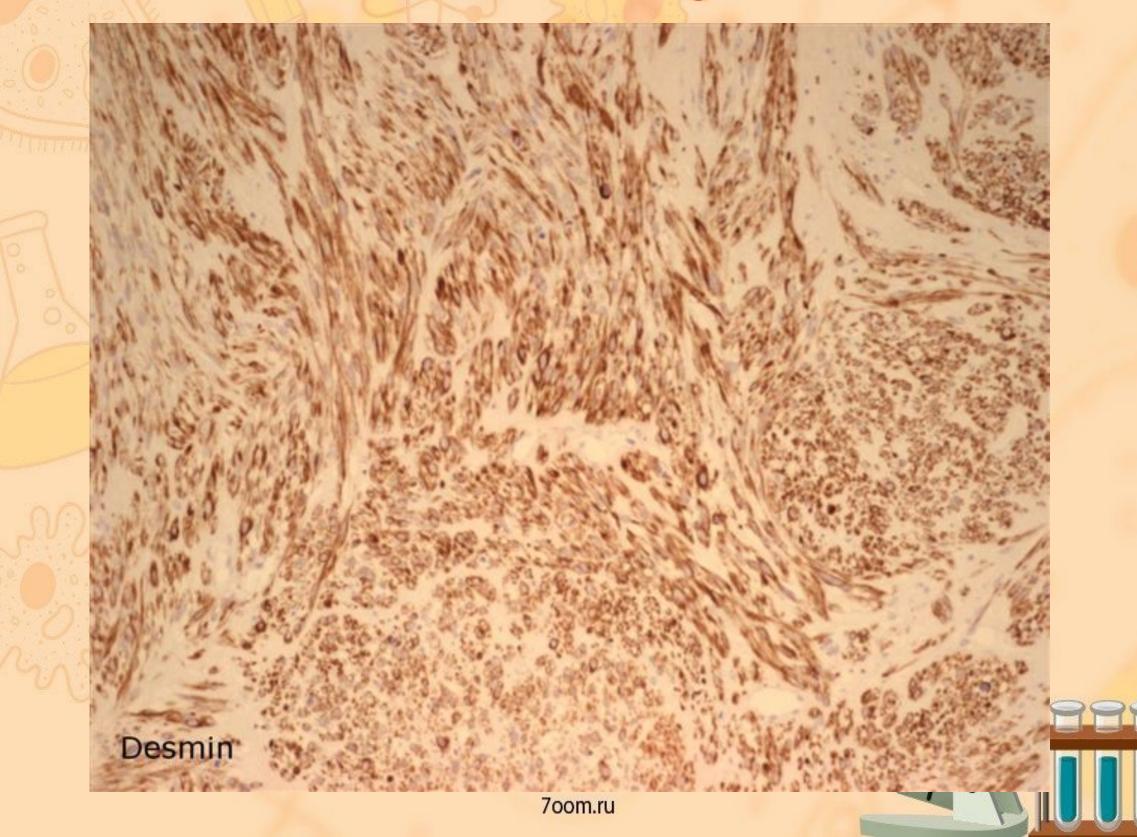
Thyroid gland: angiosarcoma



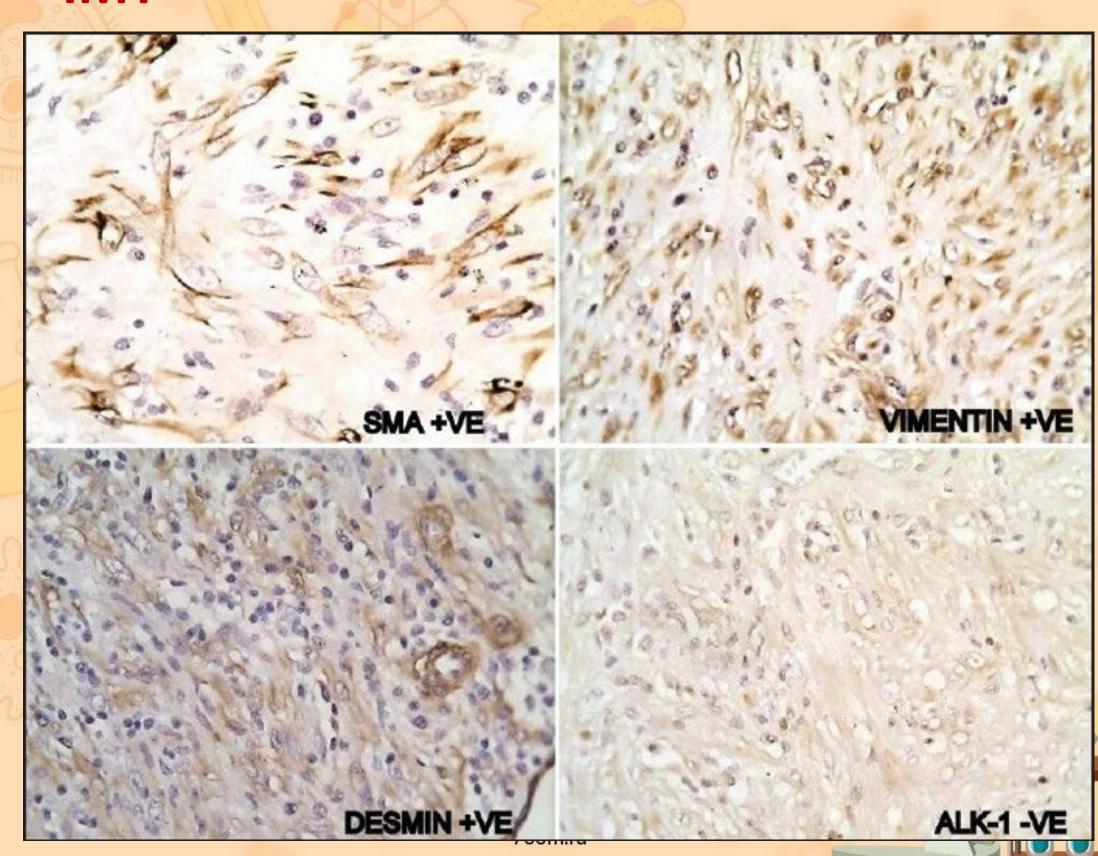
ИГХлогия миогенных опухолей



Миогенные опухоли

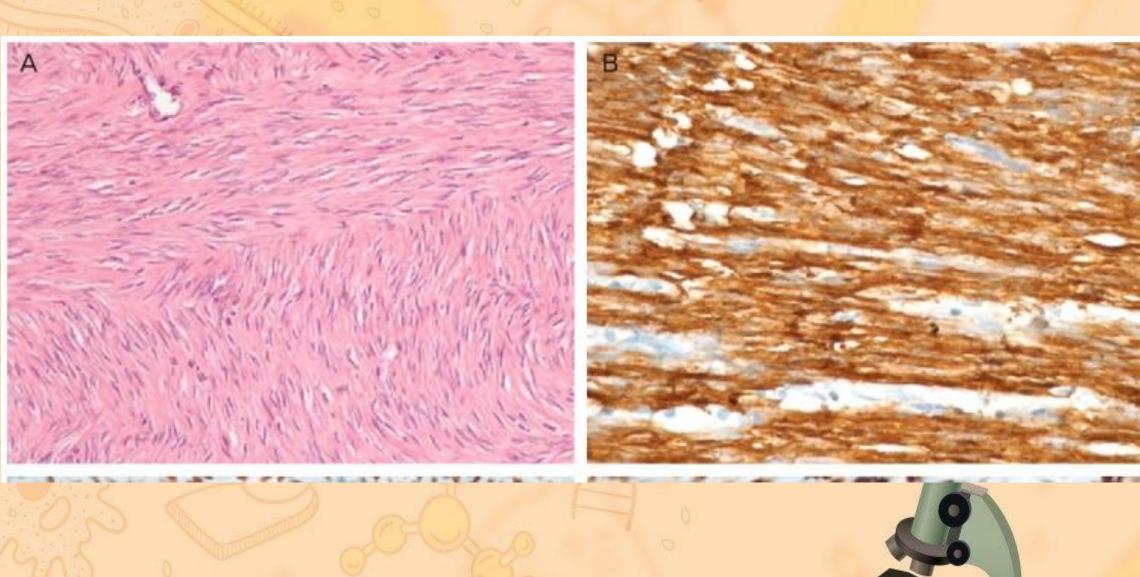


IMT



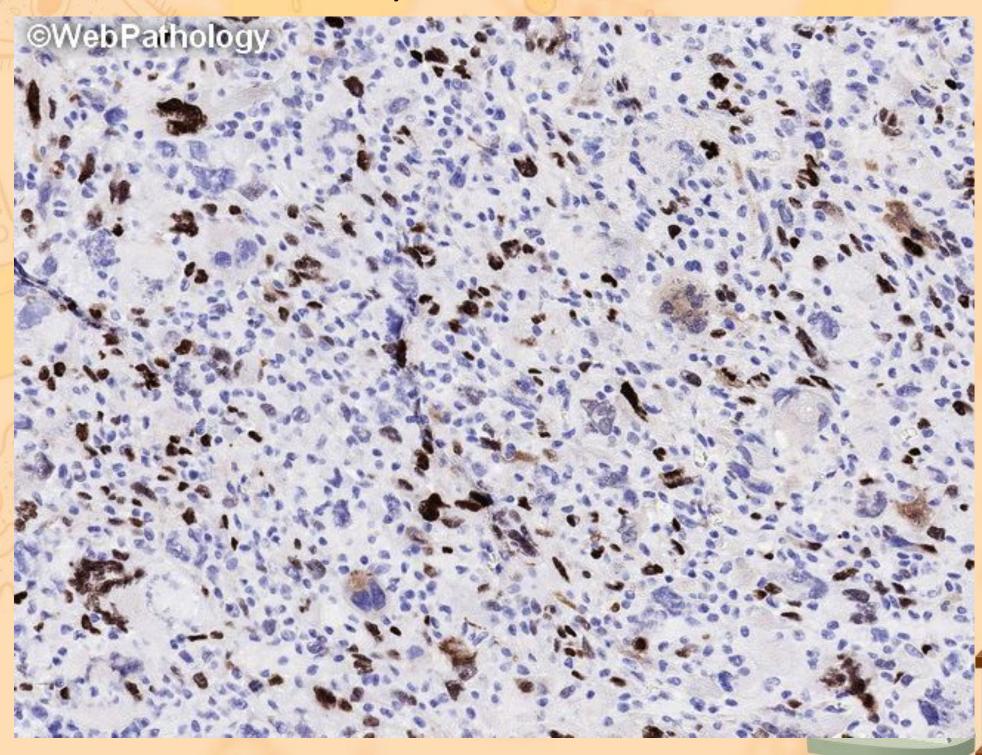
Calponin

Leiomyoma

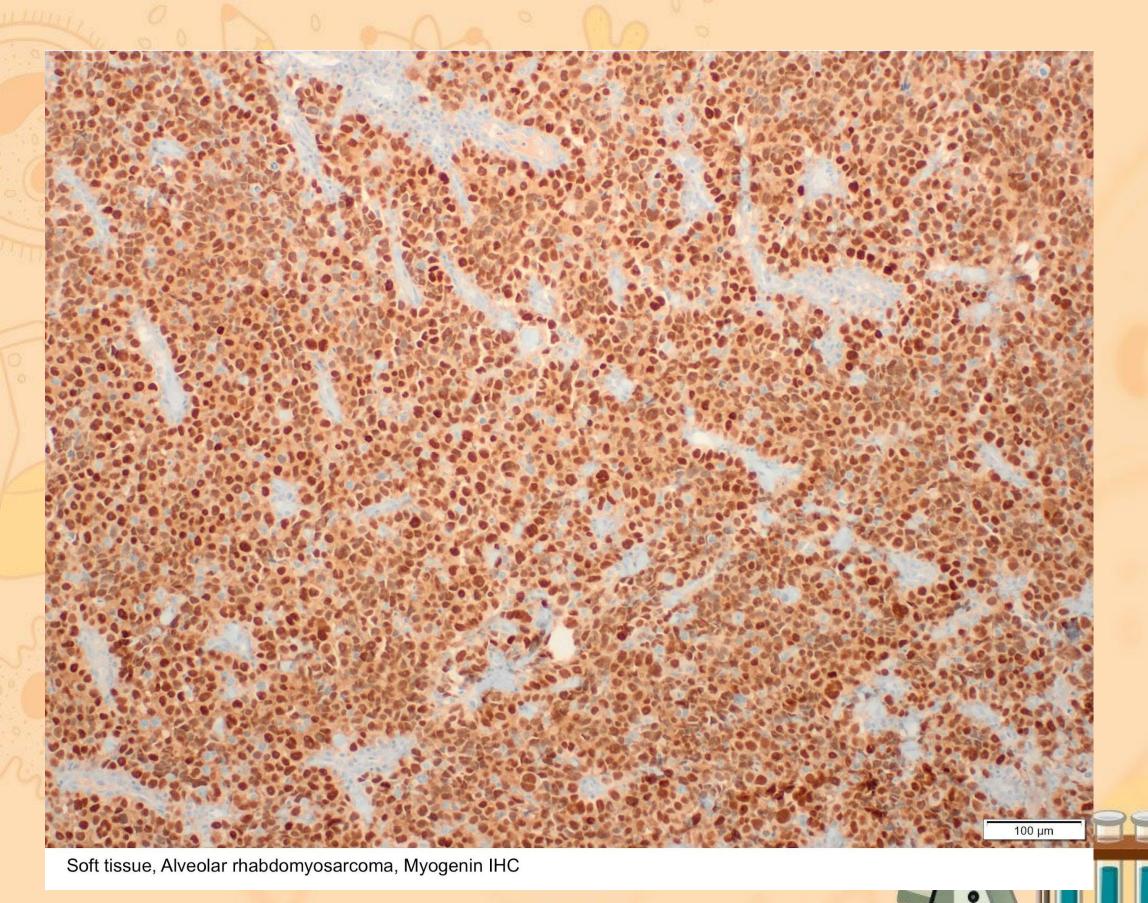


MYOd1

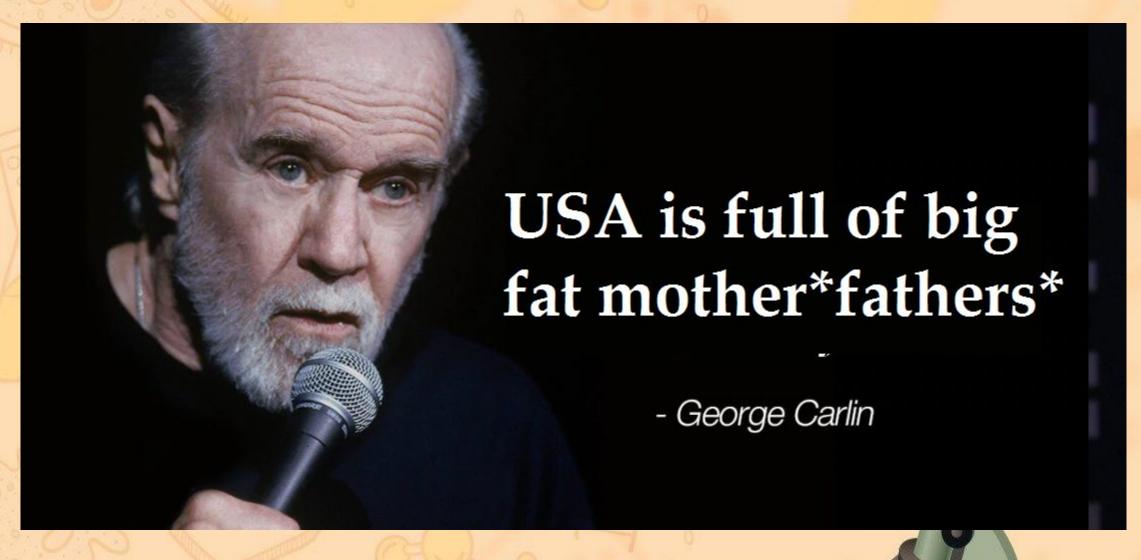
Embrional rhabdomyosarcoma





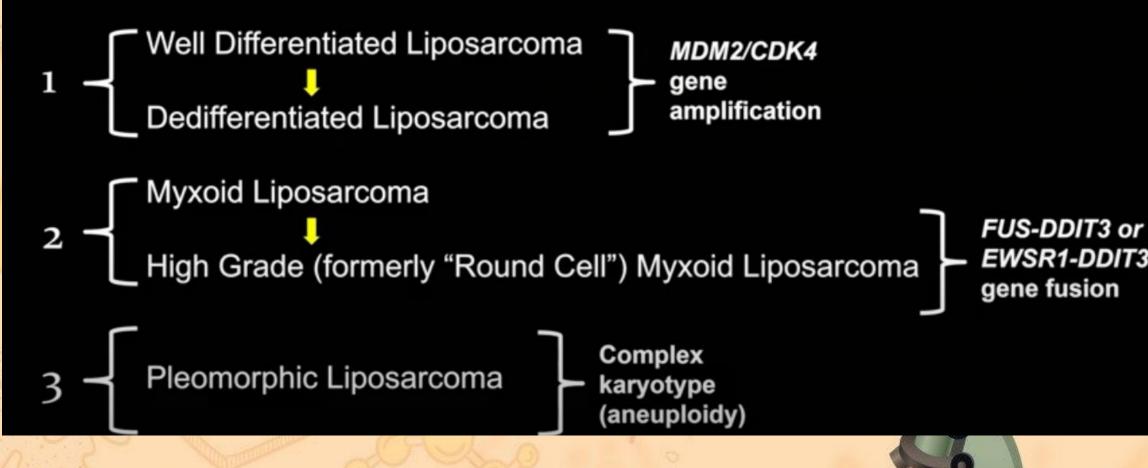


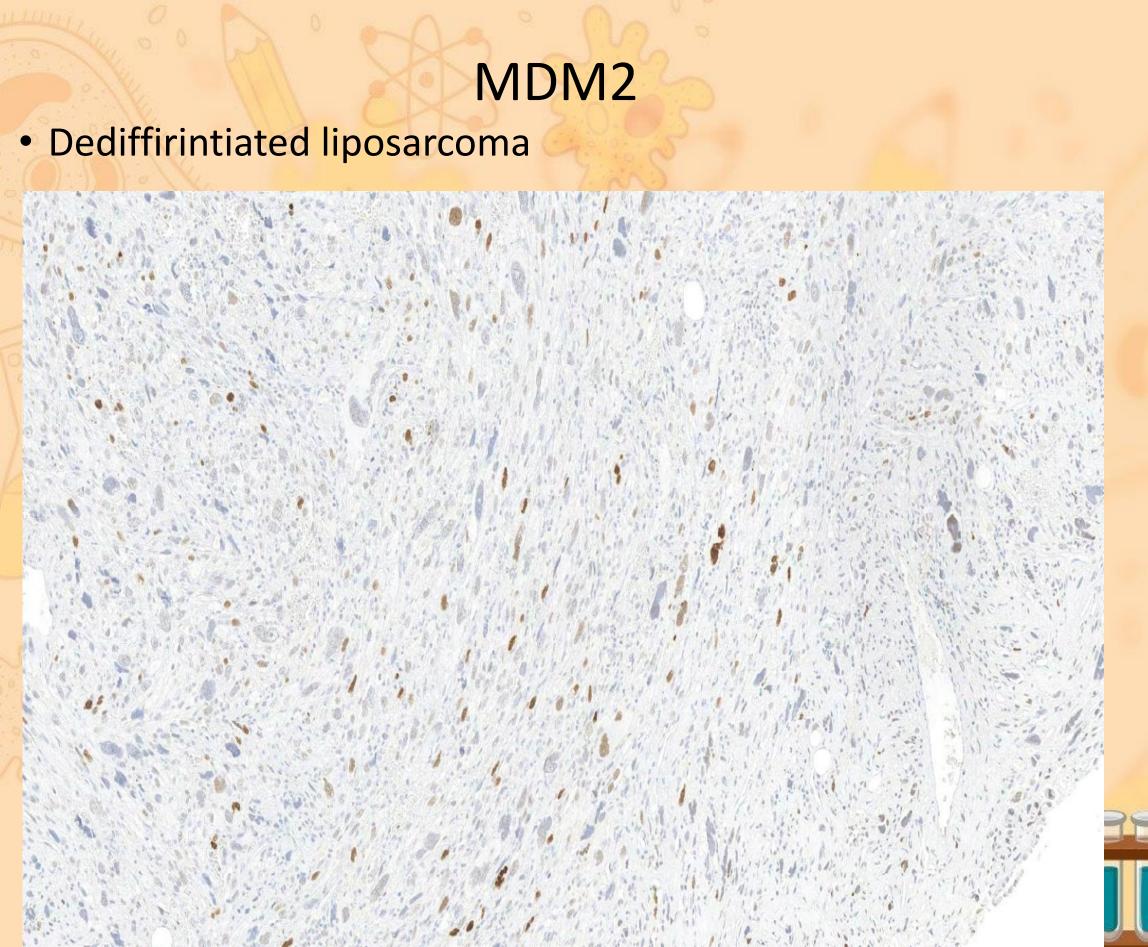
ИГХлогия липогенных опухолей

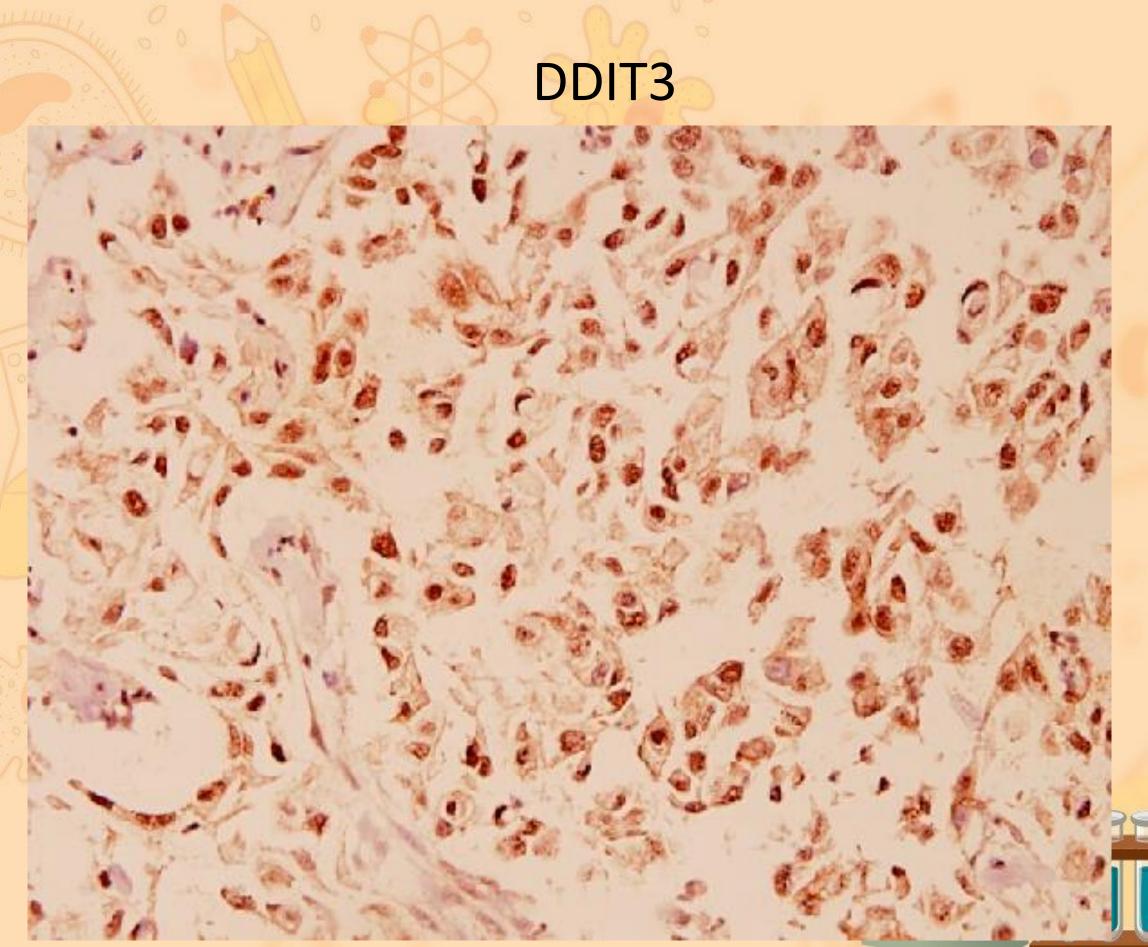




Liposarcoma

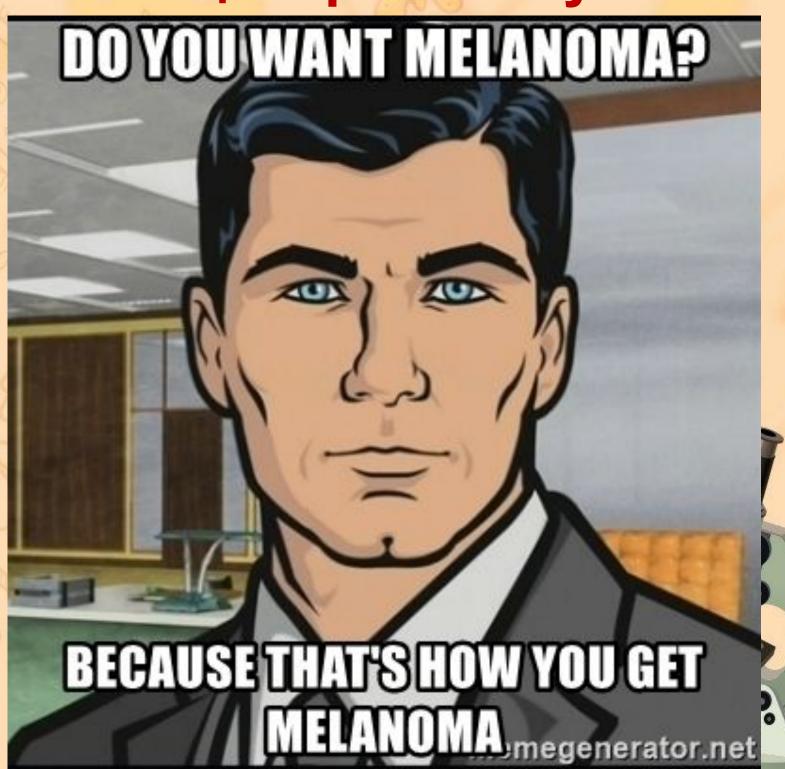




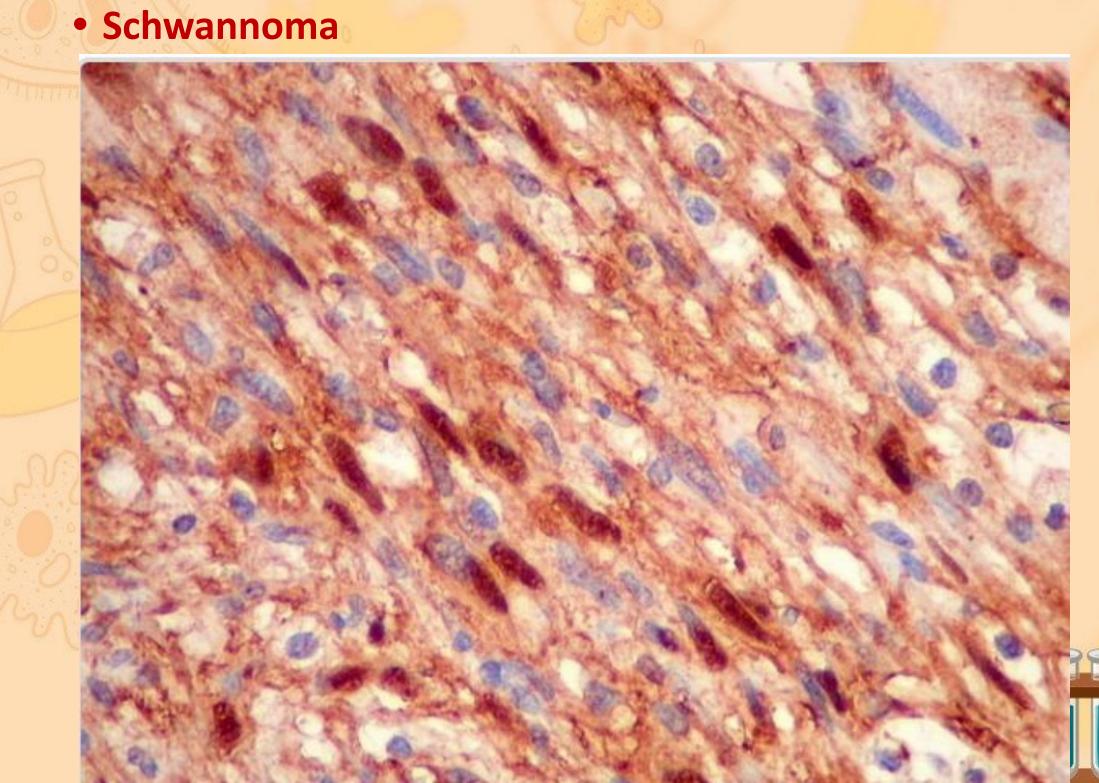




ИГХлогия нейральных и меланоцитарных опухолей

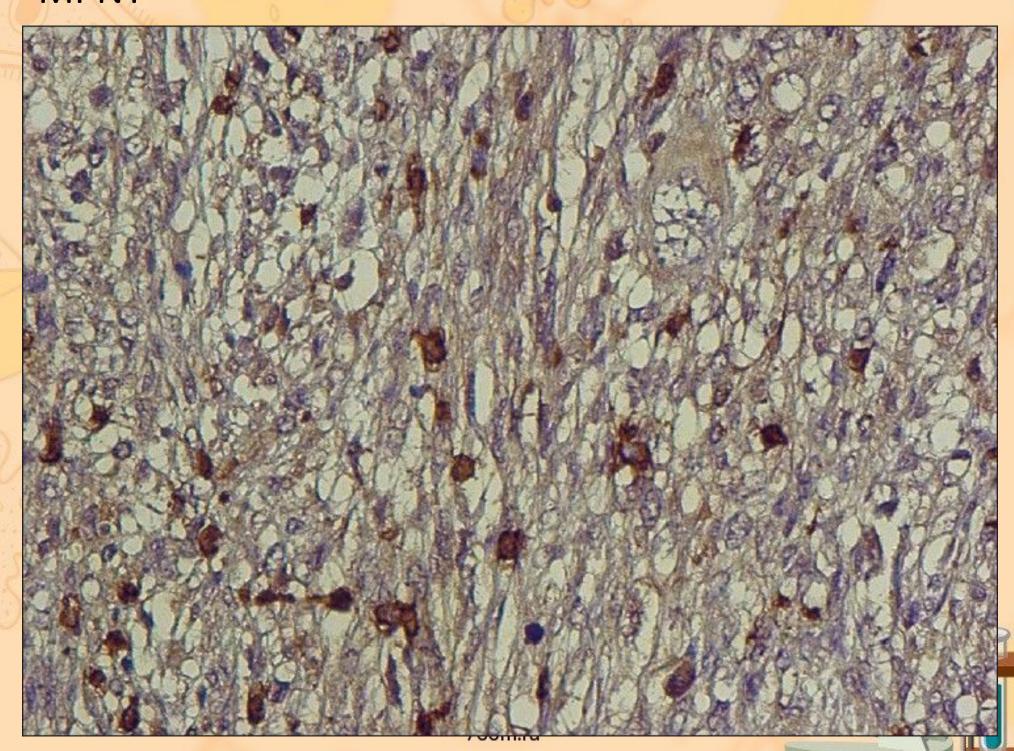


SOX10



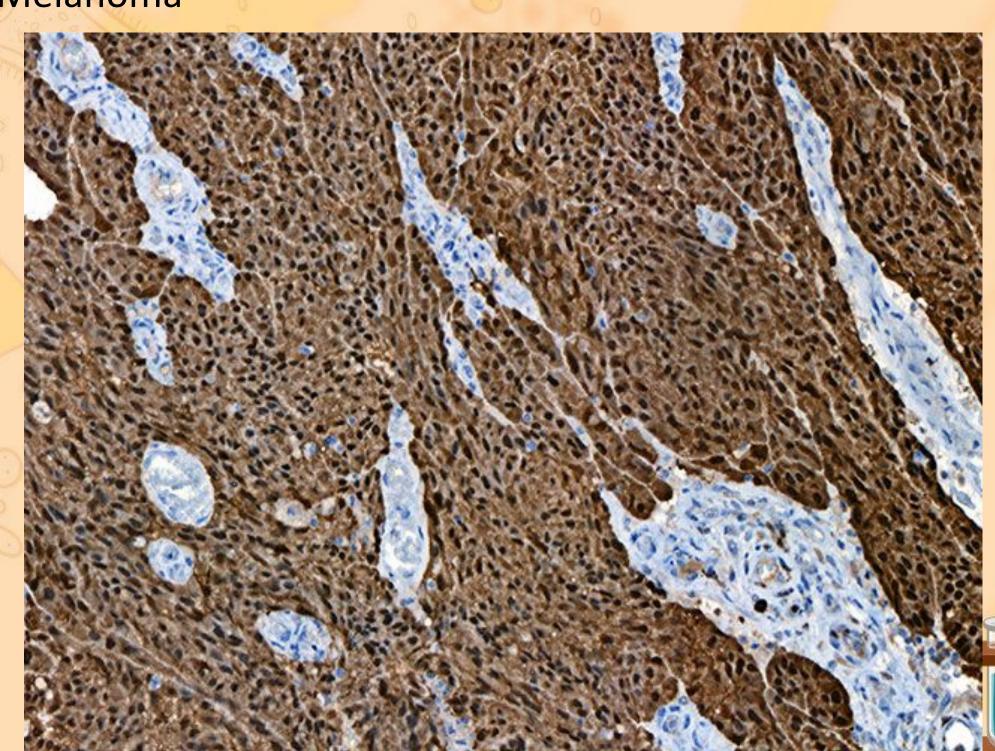
S100

• MPNT

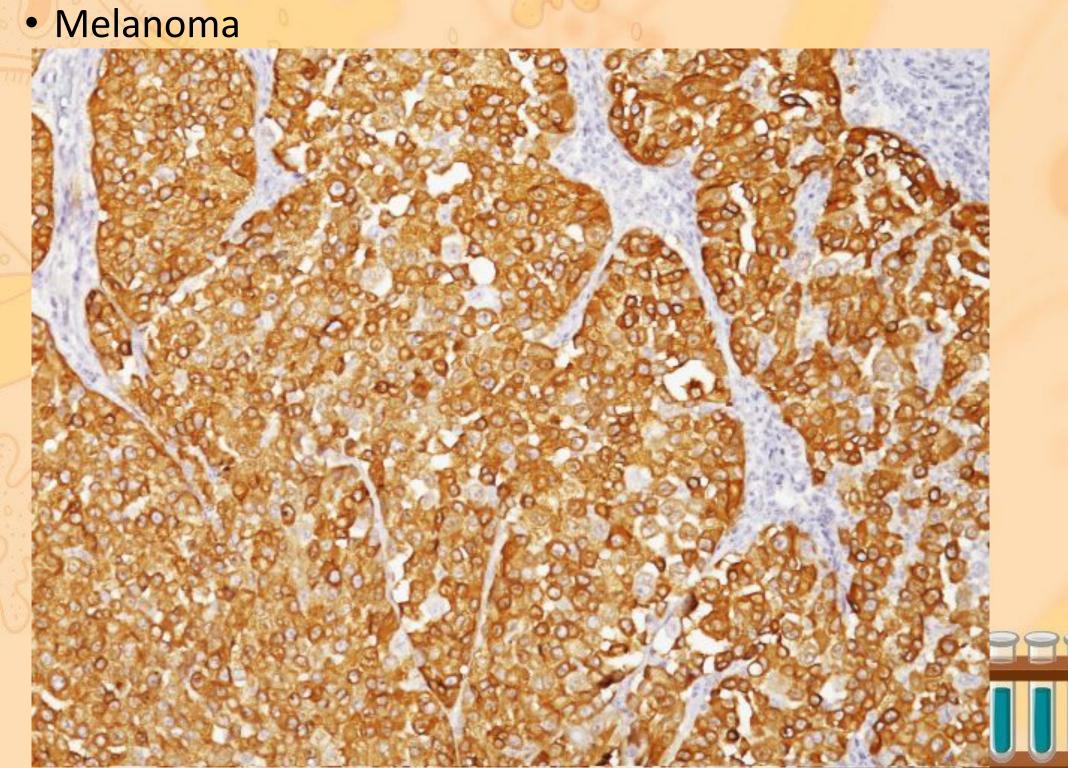


S100

Melanoma



HMB45//MelanA



Blue nevus

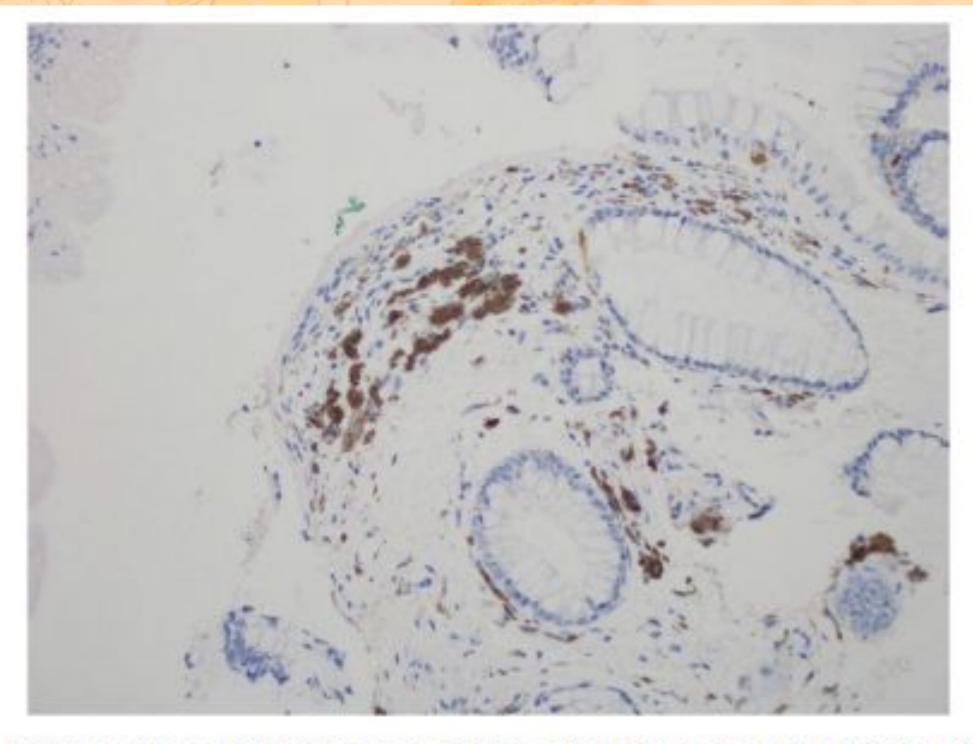


Fig. 4. ×10 magnification: strong staining of spindle melanocytes with S-100

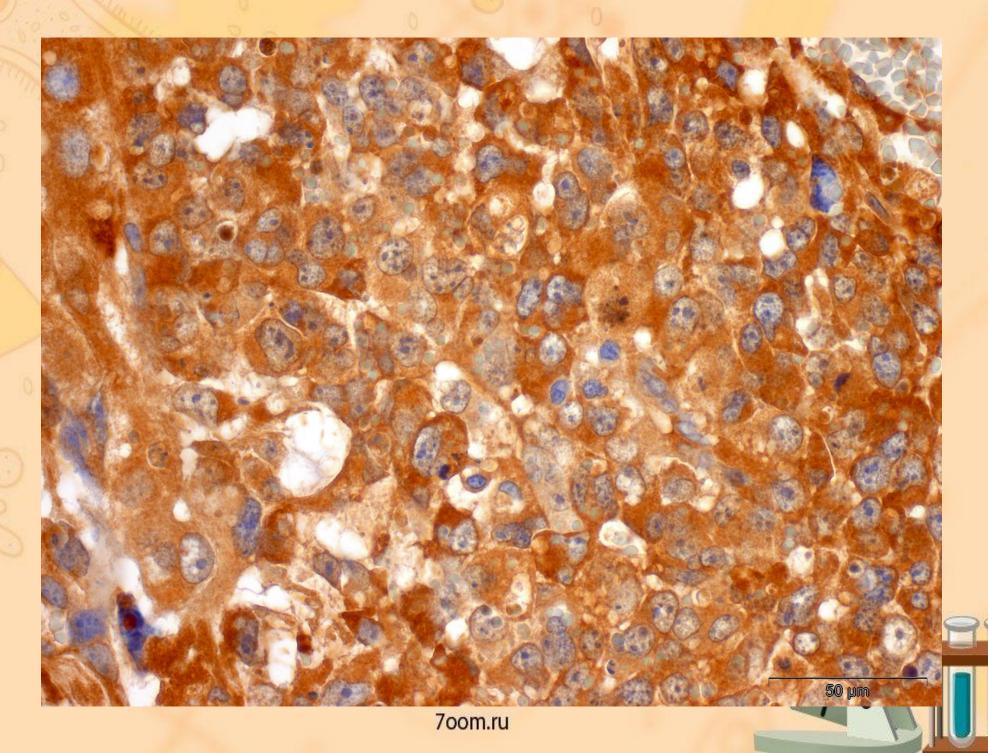
Герминативные маркеры





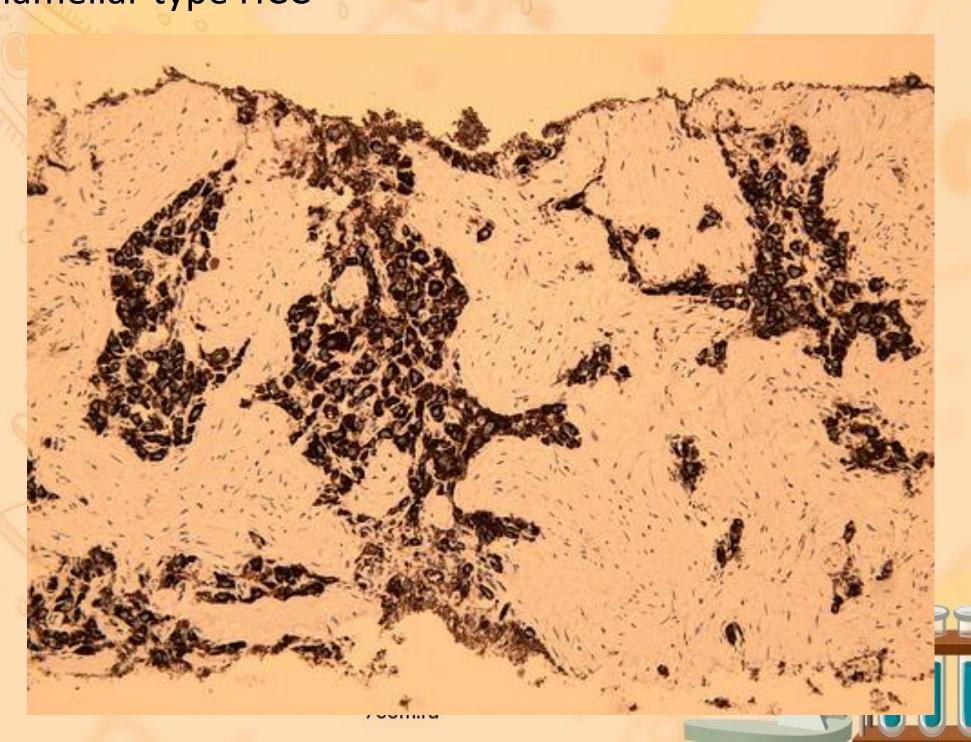
AFP

YST metastatic



HepPar1

Fibrolamellar type HCC



ИГХлогия опухолей крови

О, если б только он знал, сколько боли ждало за углом:

Сынок-то был дуболом, и за намалёванным криво таблом Увы, вот облом,

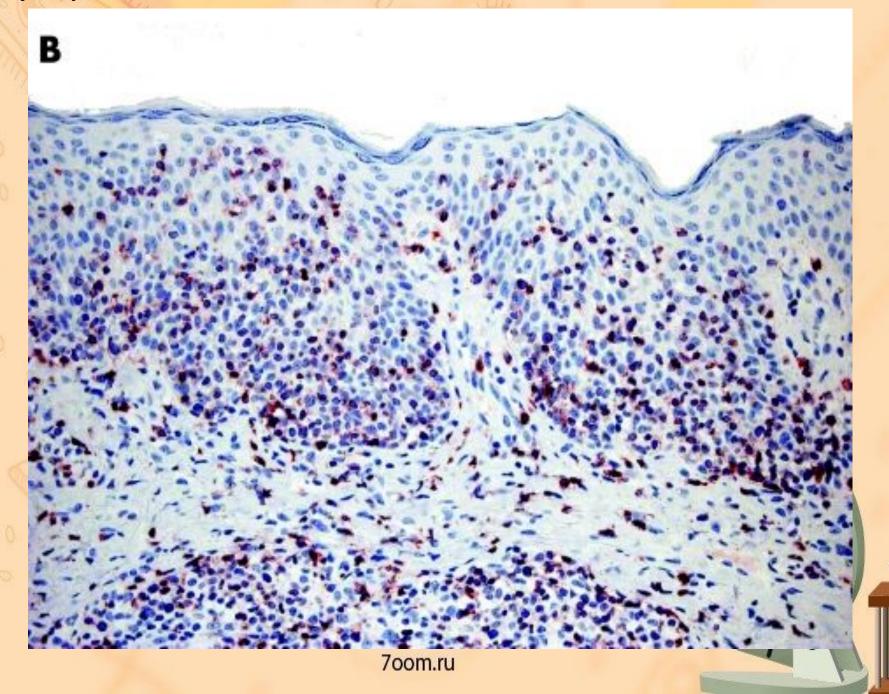
вместо извилин — лишь годовые кольца:

- Тук-тук, есть кто дома, алло? - Сиди, я открою, не беспокойся!



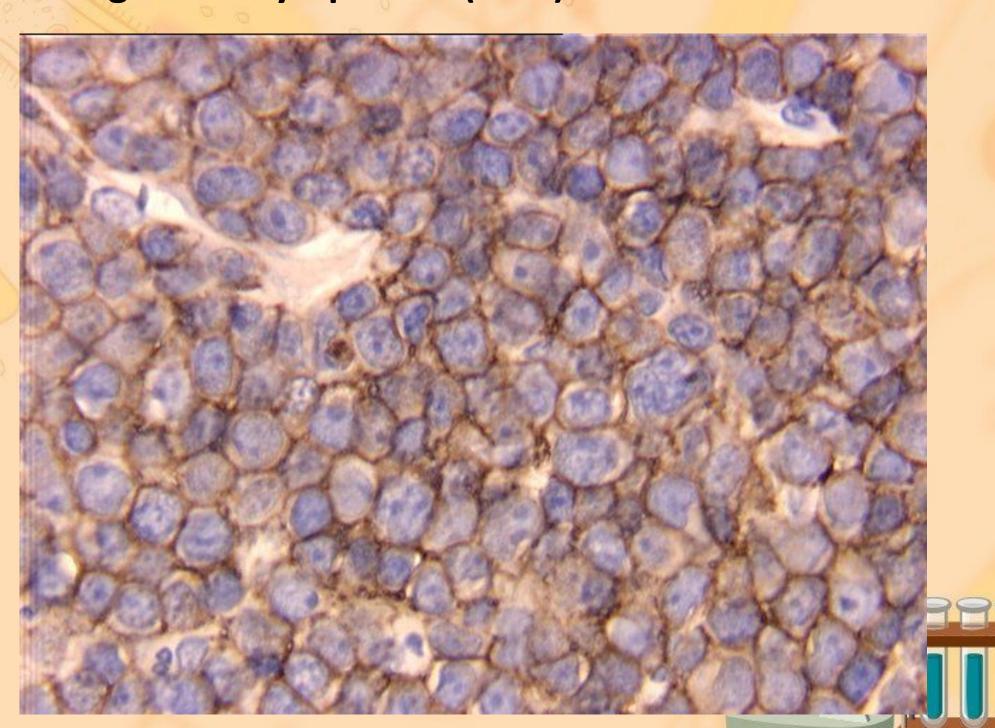
CD8

T cell lymphoma of skin



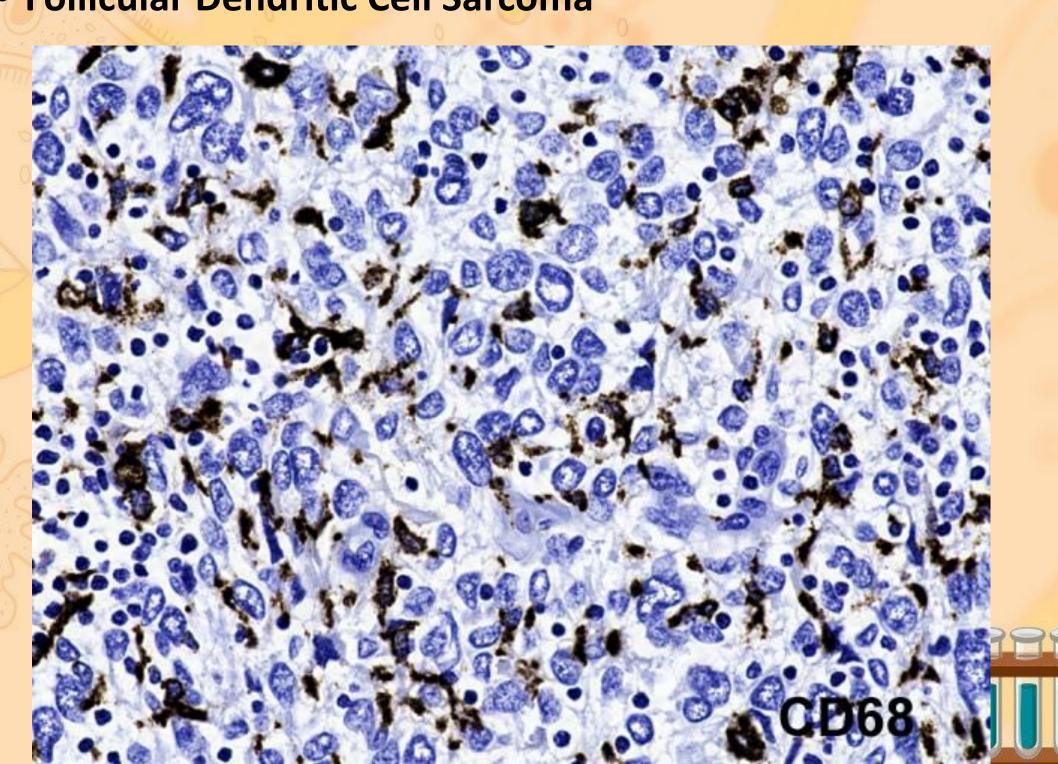
CD45

Diffuse large B cell lymphoma (H&E)



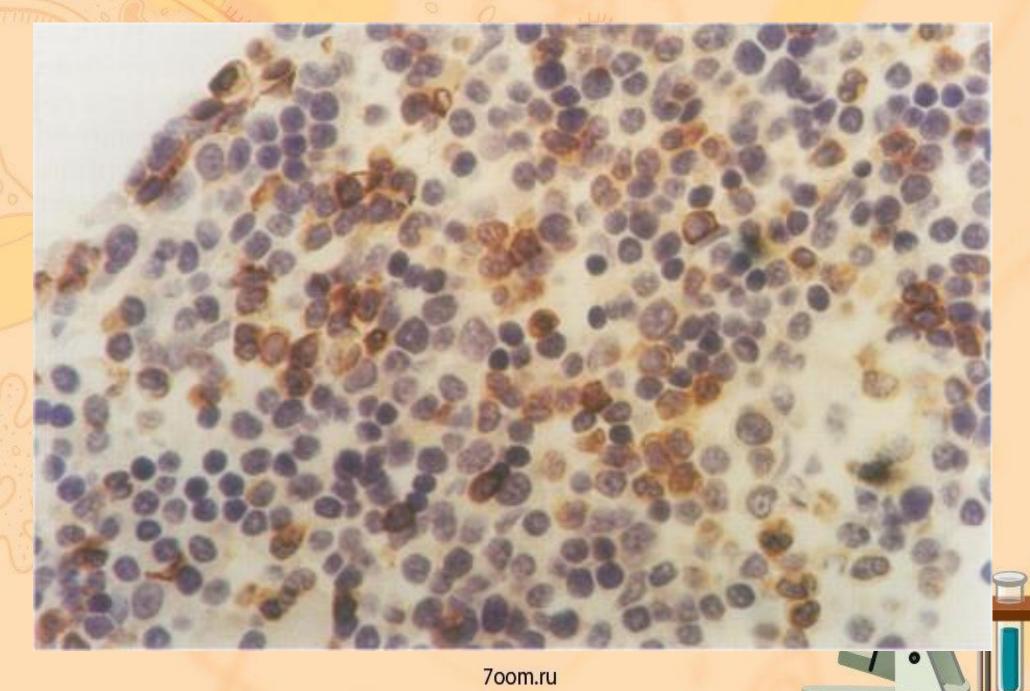
CD68

Follicular Dendritic Cell Sarcoma

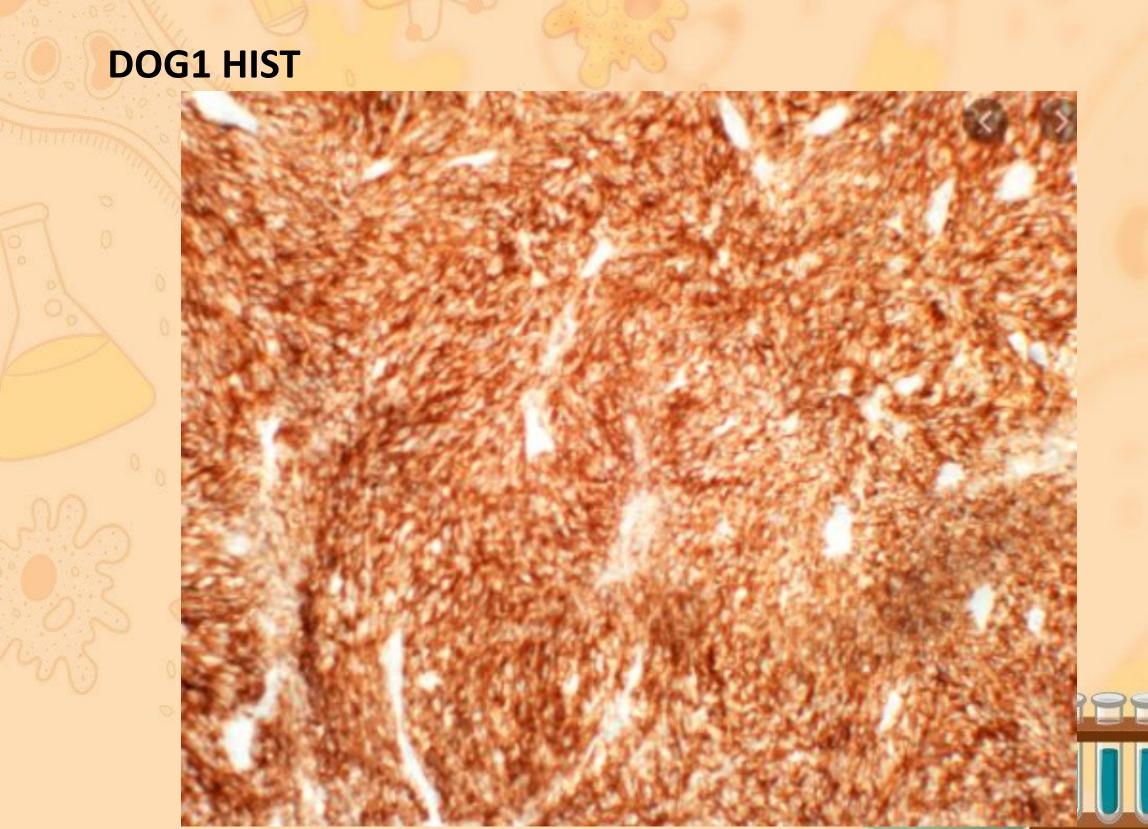


CD45ro

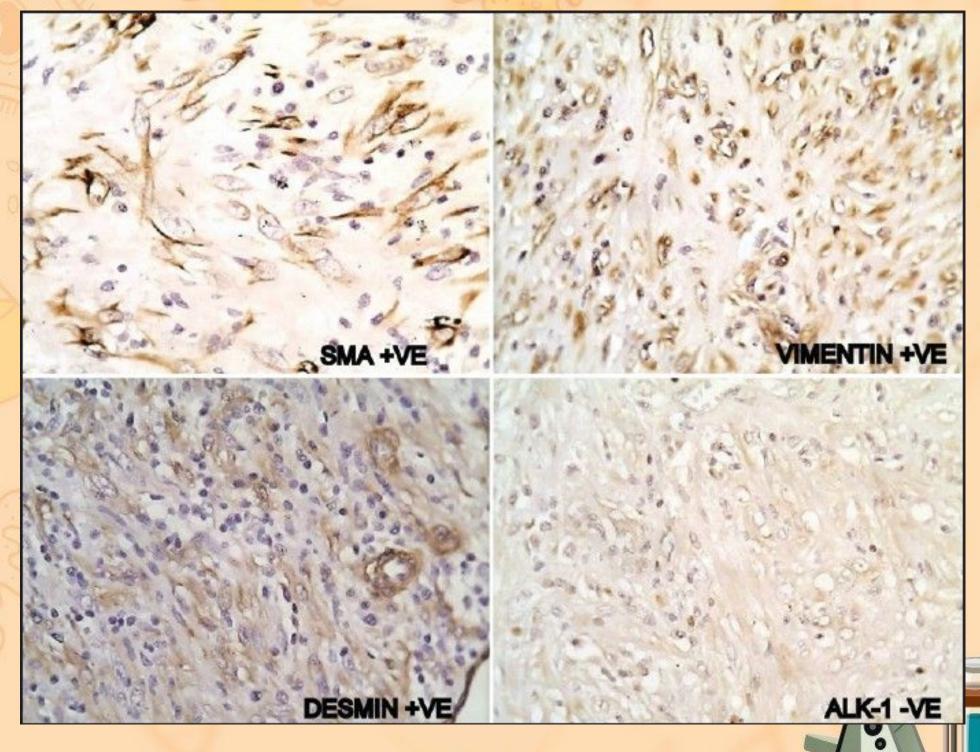
Multiple myeloma-plasma cell staining



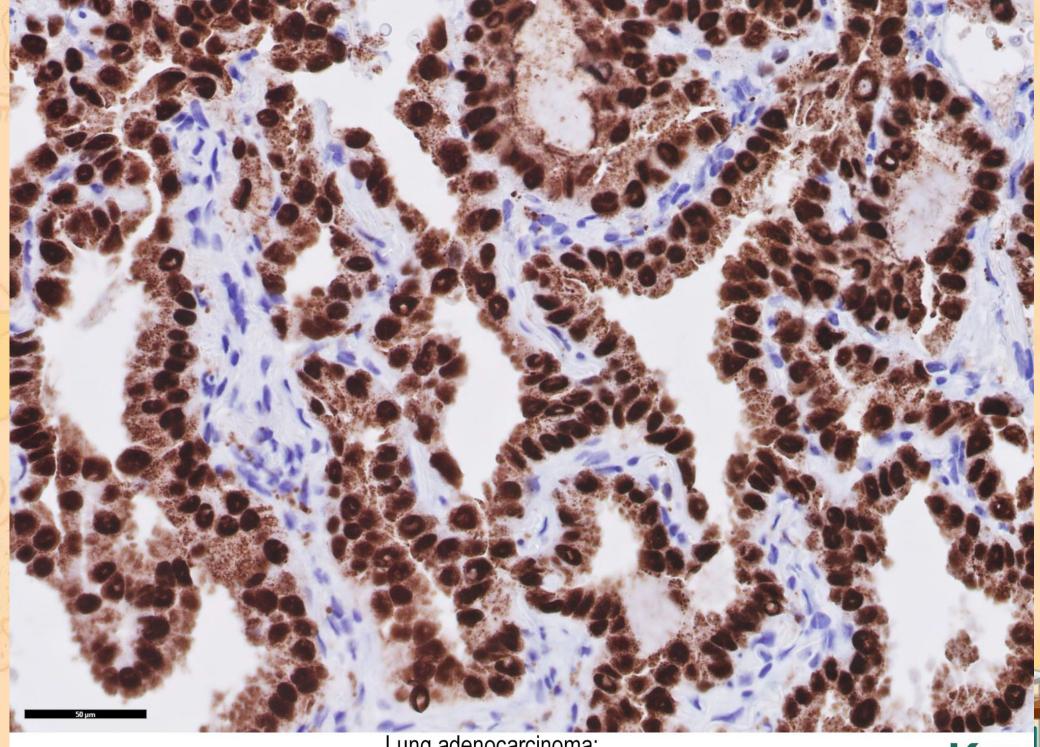
Специальные маркеры



ALK-1



TTF-1



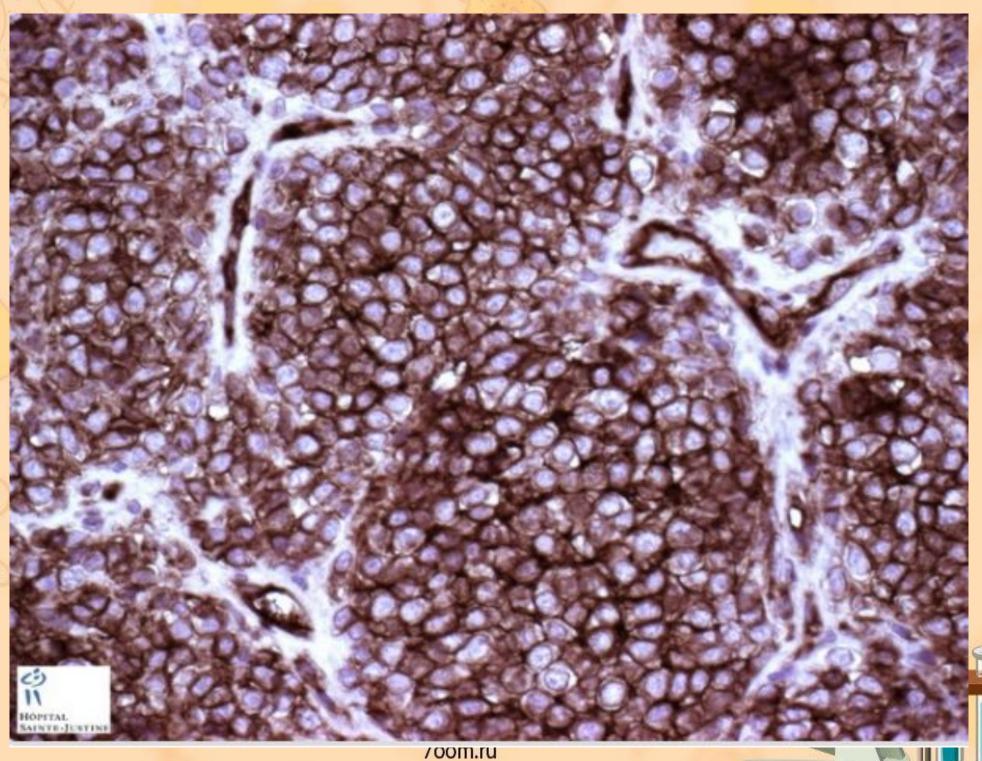
Lung adenocarcinoma:
ADC cocktail, TTF-1 (nuclear) and NapsinA (cytoplasmic), is strongly positive (IHC, ×40)

ИГХ диагностика анапластичных опухолей

- PanCK
- Vimentin
- S100
- MelanA//HMB-45
- Иногда:
- CD8//4//19//etc
- CD99



CD99 PNET



Stains I Hate

Stain I Hate	Undeserved Reputation	What to Use Instead	Comment
Vimentin	Sarcoma	MDM2/CDK4 in undiff. malignant neoplasm; otherwise, morphology- driven	Ubiquitously expressed by melanoma and often expressed by lymphoma and carcinoma; I DO use to support endometrial over endocervical AdCA
p63	Squamous cell CA	p40	Dangerously non-specific
CA125	Pan-Müllerian	PAX8	Broadly expressed by non-GYN CA
CA19-9	Pancreas CA	SMAD4; CDH17 in CK7+ only	Broadly expressed by non- pancreas CA
CK19	CholangioCA	BAP1 (iCC); SMAD4 (i and eCC)	Nearly ubiquitously expressed by non-HCC carcinomas
MOC-31	AdenoCA	There is no pan-AdCA marker	I DO use as a broad-spectrum epithelial marker
RCC	Renal cell CA	PAX8	Supplanted by much better marker
CEA	Colon CA	CDX2 homogeneous; SATB2	Broadly expressed by non-colon CA

