ExpertPath

ExpertPath™ 病理辅助诊断平台

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ELSEVIER

特点：内容的高效整合

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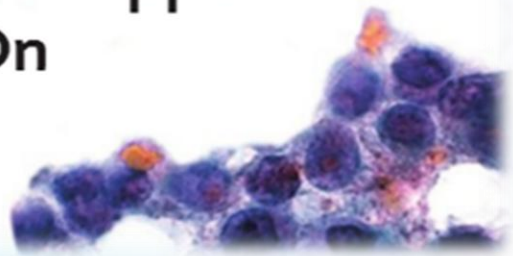
Anatomic and Clinical Pathology
Online Decision Support
You Can Rely On



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全面权威的内容

*ExpertPath*的内容由各专科知名病理学专家撰写，为您提供可以信赖的综合决策支持，包括：

- ✓超过**5,200+**种常见和复杂诊断
- ✓**77,000** 张可搜索的高质量加注释病理图像
- ✓诊断组概述
- ✓器官系统汇总信息表
- ✓正常组织学专题
- ✓样本操作指南及最佳实践

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主要参考书目

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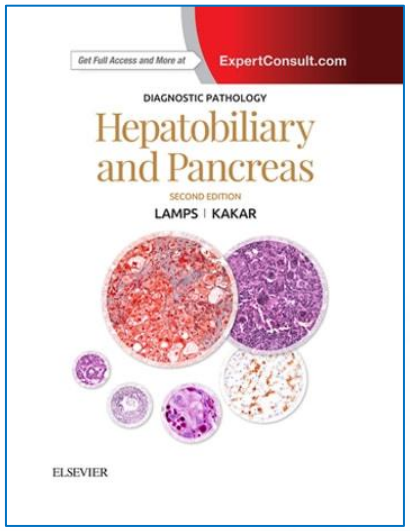

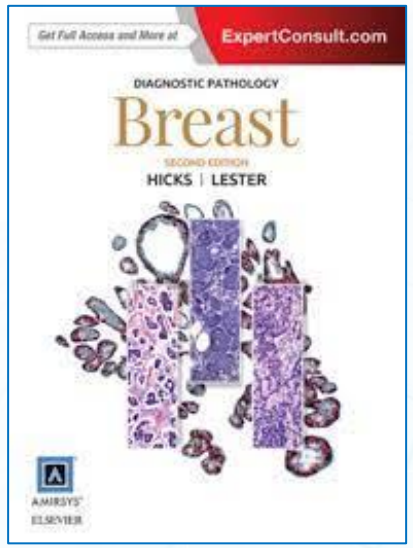

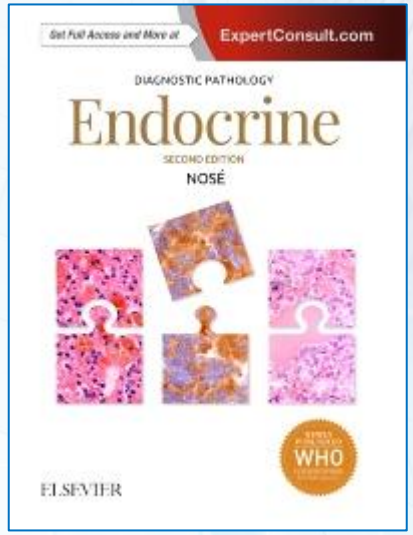

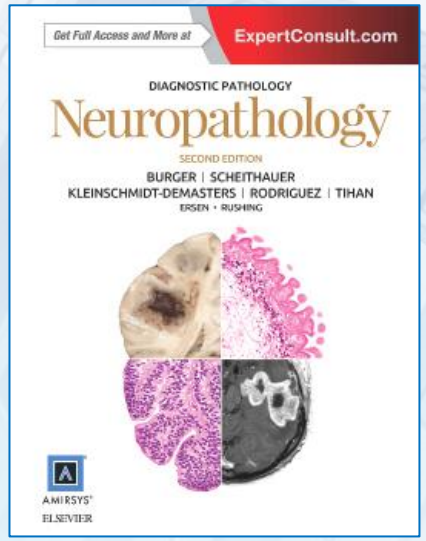

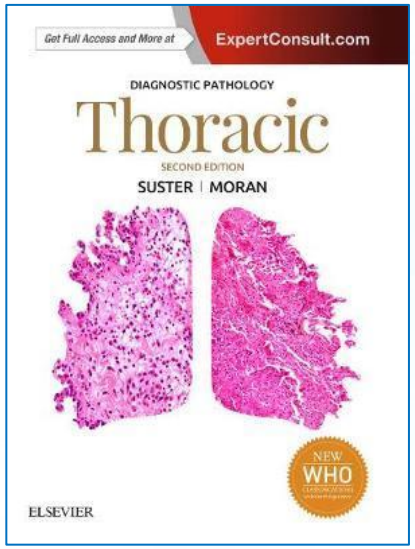

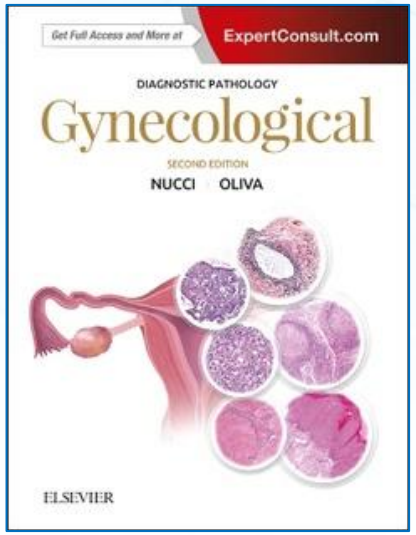

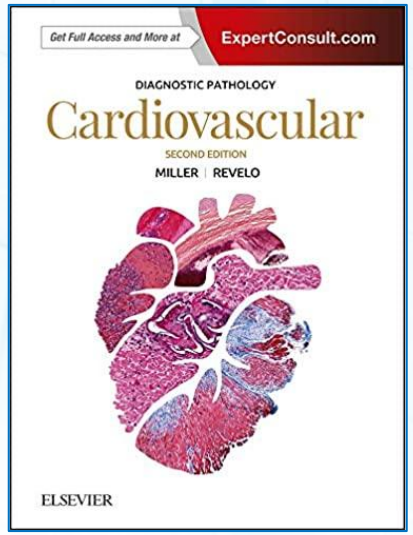

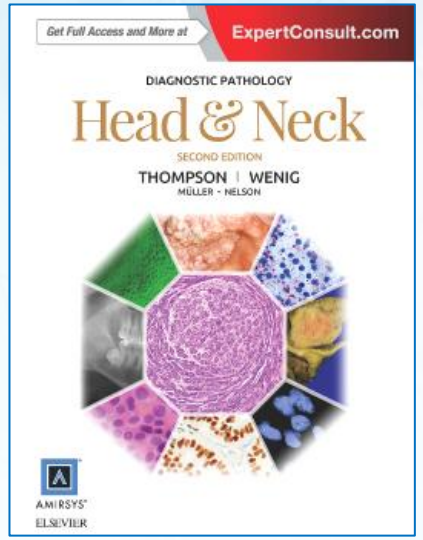

Papilloma, Large Duct and Smal

David G. Hicks, MD; Susan C. Lester, MD, PhD

KEY FACTS

Terminology 定义

- **Large duct papilloma (LDP)**
  - Usually centrally located; often solitar
  - Originates in lactiferous sinus or large
- **Small duct papilloma (SDP)**
  - Usually peripherally located; smaller l lobular units
  - Often multiple (papillomatosis)
  - More likely to be involved by atypical compared with LDP

Clinical Issues 临床问题

- LDP may present with pathologic nipple d
  - Larger lesions may be palpable
- Standard treatment for LDP is complete e
  - Benign lesions on excision need no fu
- Solitary LDPs have increased relative risk (1.5-2.0x)
  - Risk is slightly higher for women with (papillomatosis)

Microscopic 显微镜下表现

- Arborizing fronds of tissue with well-devel
  - Lined by epithelial cells with single my
  - May show usual ductal epithelial hype

ETIOLOGY/PATHOGENESIS 发病机制

Genetics

- Benign papillomas are monoclonal proliferat
- Loss of heterozygosity (LOH)
  - LOH on chromosome 16p13 in *TSC2/PKL* described
    - LOH at locus 16q21.1–16q22.2 detec benign papillary lesions
    - LOH at locus16q23.3–16q24.1 detect papillary lesions
  - *TP53* deletion and possibly LOH at 16q2 with malignant lesions and may play role
- Mutations
  - High frequency of activating point mutat *NRAS* gene families have been reported

IMAGING 影像

Mammographic Findings

- LDP can present as lobulated mass ± calcific
  - Some are not seen by imaging
- SDP can present as lobulated mass or cluste

Ultrasonographic Findings

- LDP: Intraductal, well-defined, hypoechoic m
  - May have both solid and cystic compone
  - Adjacent ducts often dilated
- SDP: Small circumscribed or lobulated masse

Ductography

- LDP associated with nipple discharge may be
  - Involved ductal orifice is often dilated
    - Very difficult to cannulate duct in abs
  - Contrast agent can show 1 or multiple fil contours in duct
    - Papilloma interrupts flow of contrast
- Ductography may help localize lesion for exci

MACROSCOPIC

General Features

- LDP may be visible macroscopically

ANCILLARY TESTS

PREVIOUS | NEXT

Immunohistochemistry 免疫组化

- Myoepithelial markers
  - Benign papillomas usually have prominent myoepithelial cell layer
    - Myoepithelial hyperplasia occasionally present
  - IHC for myoepithelial cells can be helpful to document their presence
    - Papillary carcinomas lack myoepithelial cells
  - p63 is most helpful for evaluation of fibrovascular cores
    - Both myoepithelial cells and endothelial cells are positive for muscle markers
    - Blood vessels can be closely opposed to basal portion of epithelial cells of carcinomas and can be misidentified as myoepithelial cells
  - Smooth muscle myosin heavy chain and calponin may also be useful for highlighting myoepithelial component of lesion
- Cytokeratin 5/6
  - Florid hyperplasia in papillomas can be difficult to distinguish from ADH or DCIS
  - Hyperplasia usually shows patchy positivity for cytokeratin 5/6, whereas ADH and low- to intermediate-grade DCIS are negative

DIFFERENTIAL DIAGNOSIS 鉴别诊断

PREVIOUS | NEXT

Ductal Carcinoma In Situ: Papillary Type

- Epithelial cells are monomorphic in appearance and may be hyperchromatic
  - Scattered globoid cells are often present and have more abundant pale cytoplasm than other tumor cells
  - Can mimic myoepithelial cells
  - Often immunoreactive for GCDFP-15
- Architectural complexity such as solid, cribriform, or micropapillary areas may be present
- Fibrovascular cores are usually thin and delicate
  - Myoepithelial cells are usually absent or rare
- In some cases, DCIS involves preexisting papillomas
  - Residual fibrovascular cores from papillomas have myoepithelial cells
- Myoepithelial cells are present at periphery of involved duct spaces
- May present as nipple discharge
  - DCIS with nipple discharge is usually very extensive in breast

Encapsulated (Intracystic) Carcinoma

- Usually presents as central circumscribed mass but located deeper in breast than LDP
- May be associated with nipple discharge
- Fibrovascular cores are usually thin and delicate
- Epithelial cells are monomorphic in appearance
  - Either lacks apocrine metaplasia or entire lesion appears apocrine

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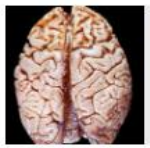
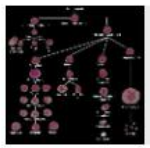
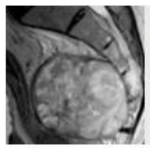


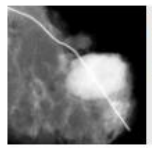
Autopsy and Forensics
159 topics



Blood and Bone Marrow
173 topics

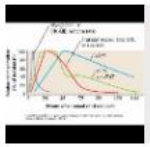


Bone
76 topics

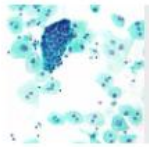


Breast
116 topics

Cardiovascular
110 topics

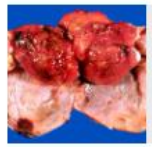


Clinical Chemistry
69 topics



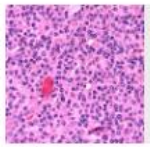
Cytopathology
276 topics

Dermatopathology
512 topics

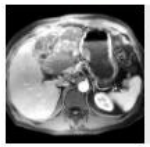


Endocrine
152 topics

Endoscopy
159 topics



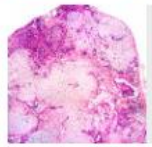
Familial Cancer Syndromes
179 topics



Gastrointestinal
190 topics

Genitourinary
212 topics

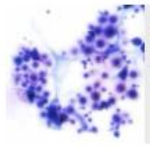
Gynecological
249 topics



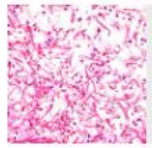
Head and Neck
354 topics

Hematology, Hemostasis, and Thrombosis
129 topics

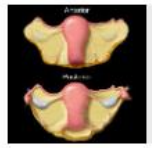
Hepatobiliary and Pancreatic
148 topics



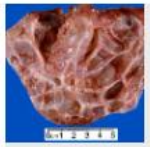
Immunology
49 topics



Infectious Diseases and Medical Microbiology
309 topics

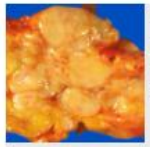


Intraoperative Consultation
75 topics

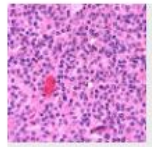


Kidney
304 topics

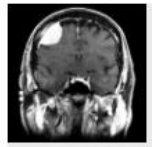
Laboratory Management and Clinical Laboratory Informatics
64 topics



Lymph Nodes and Extranodal Lymphomas
127 topics



Molecular Pathology and Medical Genetics
234 topics



Neuropathology
160 topics

例如：搜索Osteosarcoma

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Topics | Images | Filter by Category | Osteosarcoma

210 results for All: "Osteosarcoma"

Osteosarcoma

Familial Cancer Syndromes
Yin P. (Rex) Hung, MD, PhD; G. Petur Nielsen, MD

Reviewed 4/4/25 Dx

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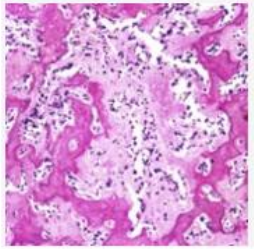
14 images | 20 references



Osteosarcoma

Thoracic
David I. Suster, MD; Saul Suster, MD

Reviewed 12/1/21 Dx

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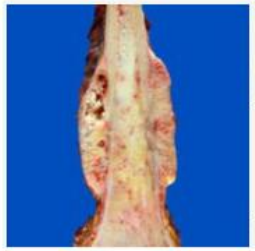

Osteosarcoma

Pediatrics
Angelica R. Putnam, MD

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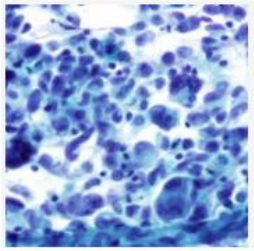

Osteosarcoma

Cytopathology
Savitri Krishnamurthy, MD

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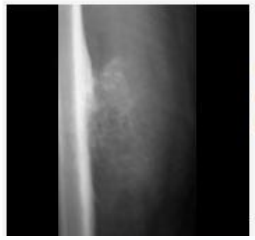

Periosteal Osteosarcoma

Bone
G. Petur Nielsen, MD; Andrew E. Rosenberg, MD

Reviewed 3/1/21 Dx

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Parosteal Osteosarcoma

Bone
G. Petur Nielsen, MD; Andrew E. Rosenberg, MD

Reviewed 3/1/21 Dx

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疾病完整描述

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Familial Cancer Syndromes | Diagnoses Associated With Syndromes by Organ | Bone and Soft Tissue

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Osteosarcoma Dx

Yin P. (Rex) Hung, MD, PhD; G. Petur Nielsen, MD Last updated 04/04/25

Is this what you were looking for? Yes No

提纲

KEY FACTS

Terminology
- Malignant tumor in which neoplastic cells produce bone

Etiology/Pathogenesis
- Primary osteosarcomas arise de novo without known predisposing condition
- Secondary osteosarcomas arise within diseased bone
  - Paget disease of bone
  - Radiation exposure
  - Chemotherapy
  - Trauma
  - Foreign body
- Hereditary syndromes
  - Hereditary retinoblastoma: *RB1* mutation
  - Li-Fraumeni syndrome: *TP53* mutation
  - Rothmund-Thomson syndrome: *RECQL4* mutation
  - Bloom syndrome: *BLM* mutation
  - Werner syndrome: *WRN* mutation

Clinical Issues
- Most patients are young (10-20 years)
- Distal femur > proximal tibia > proximal humerus

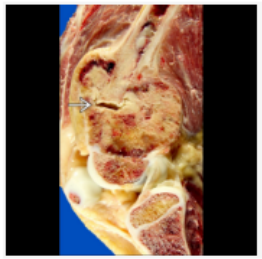
Microscopic
- Admixture of 2 elements in varying proportions
  - High-grade sarcoma with epithelioid, plasmacytoid, fusiform, ovoid, small-round, spindle, or clear cells, sometimes with multinucleated giant cells
  - Bone produced directly by tumor cells
- Conventional osteosarcoma
  - Histologic variants: Osteoblastic, chondroblastic, fibroblastic, telangiectatic, giant cell, small cell,

Thumbnail | Caption

Selected Images

Osteosarcoma in Distal Femur

Radiograph shows a destructive, bone-forming osteosarcoma in the distal femur associated with pathologic fracture. Osteosarcoma commonly arises in the region of the knee.



Osteosarcoma in Distal Femur

Gross photograph of the same tumor shows a tan-yellow, fleshy mass involving the distal femur and adjacent soft tissue. A pathologic fracture is apparent.

Osteosarcoma in Proximal Humerus

Radiograph of the proximal humerus shows ill-defined central

疾病完整描述（中文为网页翻译功能实现）

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比较 登入 帮助

主题 图片 | Filter by Category | Osteosarcoma

家族性癌症综合征 > 按器官划分的综合征相关诊断 > 骨骼和软组织 > 比较 ImmunoQuery 打印

骨肉瘤 诊断

尹培雄（Rex Hung），医学博士，哲学博士；G. Petur Nielsen，医学博士 最后更新日期：2025年4月4日

这是您要找的吗？ 是的 不

描述
- 关键事实
- 术语
- 病因/发病机制
- 临床问题
- 成像
- 宏观
- 显微镜
- 鉴别诊断
- 诊断检查清单

参考文献（20）

关键事实

术语
- 恶性肿瘤，其中肿瘤细胞产生骨

病因/发病机制
- 原发性骨肉瘤是在没有已知诱发因素的情况下从头发生的。
- 继发性骨肉瘤发生于病变骨骼内
  - 佩吉特骨病
  - 辐射暴露
  - 化疗
  - 创伤
  - 异物
- 遗传综合征
  - 遗传性视网膜母细胞瘤：*RB1*突变
  - 李-弗劳梅尼综合征：*TP53*突变
  - 罗特蒙德-汤姆森综合征：*RECQL4*基因突变
  - 布鲁姆综合征：*BLM 基因*突变
  - 沃纳综合征：*WRN*基因突变

临床问题
- 大多数患者年龄较轻（10-20岁）。
- 股骨远端 > 胫骨近端 > 肱骨近端

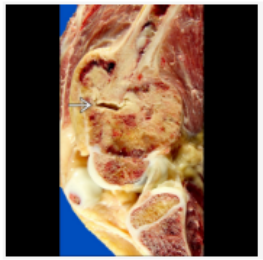
显微镜
- 两种元素按不同比例混合
  - 高级别肉瘤，由上皮样、浆细胞样、梭形、卵圆形、小圆形、梭形或透明细胞组成，有时可见多核巨细胞。
  - 肿瘤细胞直接产生的骨骼
- 传统骨肉瘤
  - 组织学变异型：成骨细胞型、成软骨细胞型、成纤维细胞型、毛细血管扩张型、巨细胞型、小

缩略图 标题

精选图片

股骨远端骨肉瘤

X光片显示股骨远端存在破坏性骨形成性骨肉瘤，并伴有病理性骨折。骨肉瘤常见于膝关节区域。



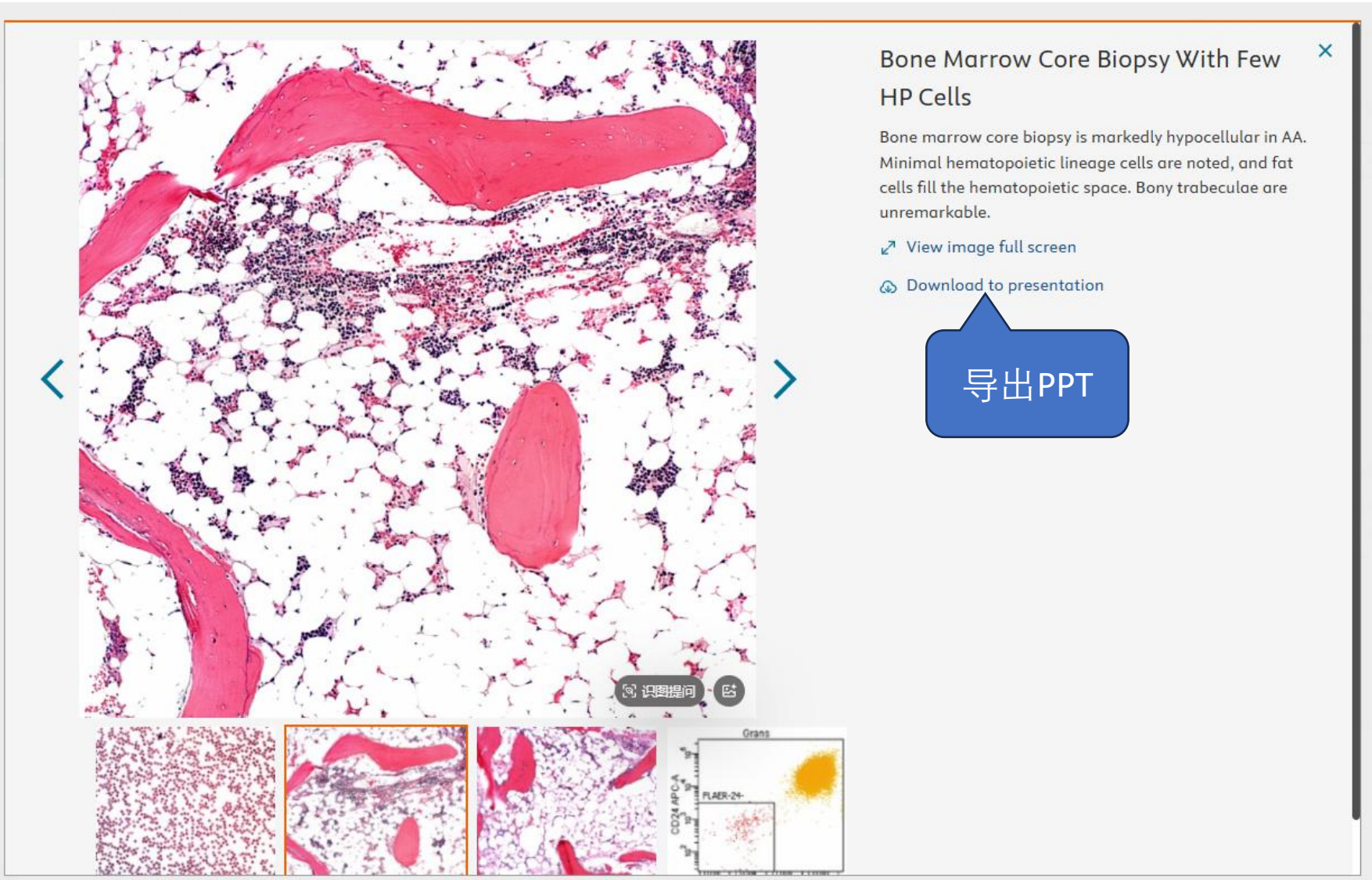
股骨远端骨肉瘤

同一肿瘤的肉眼照片显示，股骨远端及邻近软组织内存在一个黄褐色肉质肿块，并可见病理性骨折。

肱骨近端骨肉瘤

肱骨近端X线片显示边界不清的中心密度影，与该骨肉瘤中的

放大图片，阅读细节，导出PPT



鉴别诊断同框比较

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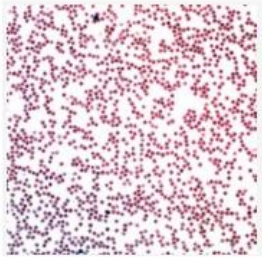
Blood and Bone Marrow > Anemia >

Acquired Anemias



Acquired Aplastic Anemia

Blood and Bone Marrow
Kathryn Foucar, MD; David R. Czuchlewski, MD

Reviewed 08/04/23 Dx

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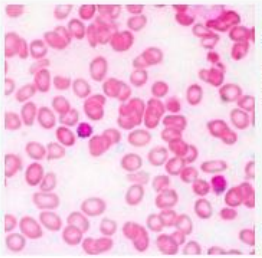
4 images | 42 references



Acquired Nonneoplastic Sideroblastic Anemia

Blood and Bone Marrow
Brittany Coffman, MD; Kaaren K. Reichard, MD

Reviewed 06/22/23 Dx

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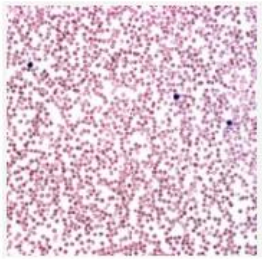
16 images | 11 references



Acquired Red Cell Aplasia

Blood and Bone Marrow
Kristin Hunt Karner, MD

Reviewed 06/18/23 Dx

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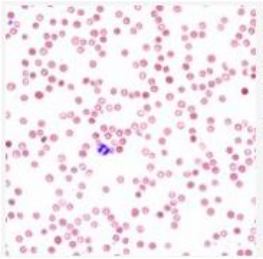
10 images | 14 references



Alcoholism-Associated Anemia

Blood and Bone Marrow
Brittany Coffman, MD; Kathryn Foucar, MD;
Kaaren K. Reichard, MD

Reviewed 08/04/23 Dx

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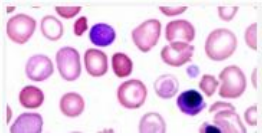
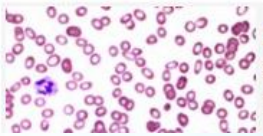
10 images | 10 references



Alloimmune Hemolytic Anemia and Hemolytic Disease of Newborn

Blood and Bone Marrow

Reviewed 06/18/23 Dx



Anemia in Older Adults

Blood and Bone Marrow
Kathryn Foucar, MD

Reviewed 06/18/23 Dx

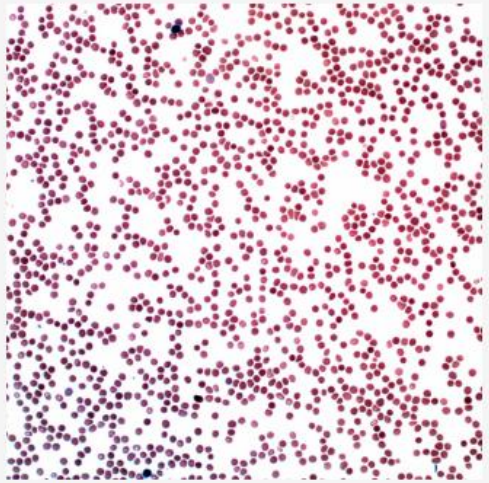
鉴别诊断同框比较（中文为网页翻译）

比较诊断结果（3）

移除所有诊断信息

获得性再生障碍性贫血

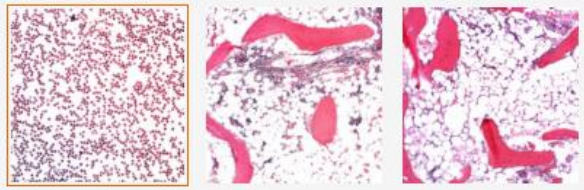
图片　文本



严重全血细胞减少症

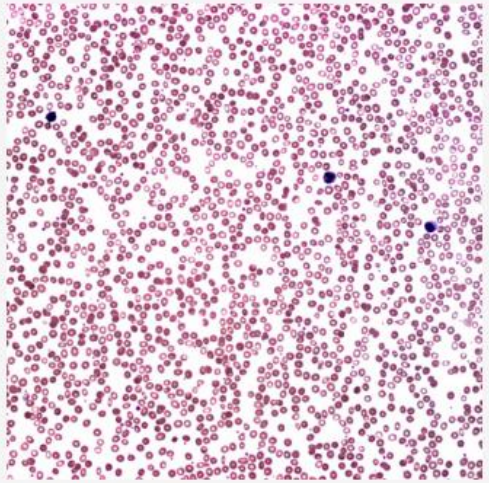
瑞氏染色显示，获得性再生障碍性贫血（AA）患者的外周血涂片出现全血细胞减少，仅有散在的淋巴细胞存在于数量减少的红细胞中。

精选图片



获得性红细胞再生障碍性贫血

图片　文本



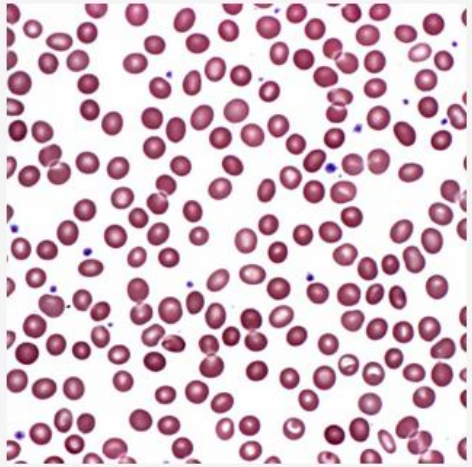
正色素性正细胞性贫血

获得性红细胞再生障碍性贫血患者的外周血涂片显示正色素性正细胞性贫血，多染性轻微。网织红细胞计数也偏低。

精选图片

获得性非肿瘤性铁粒幼细胞性贫血

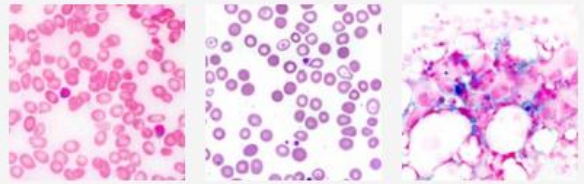
图片　文本



酒精相关性贫血

外周血涂片显示，一名因酒精摄入导致铁粒幼细胞性贫血的成年患者，存在轻度贫血，伴有轻微的红细胞大小不均和形态异常。临床病史明确了该病例贫血的病因。

精选图片



链接到ImmunoQuery – 免疫组化Panel建议

ExpertPath™

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Topics | Images | Filter by Category | Osteosarcoma

Familial Cancer Syndromes > Diagnoses Associated With Syndromes by Organ > Bone and Soft Tissue

Compare | ImmunoQuery | Print

Osteosarcoma Dx

Yin P. (Rex) Hung, MD, PhD; G. Petur Nielsen, MD Last updated 04/04/25

Is this what you were looking for? Yes No

KEY FACTS

Terminology
- Malignant tumor in which neoplastic cells produce bone

Etiology/Pathogenesis
- Primary osteosarcomas arise de novo without known predisposing condition
- Secondary osteosarcomas arise within diseased bone
  - Paget disease of bone
  - Radiation exposure
  - Chemotherapy
  - Trauma
  - Foreign body
- Hereditary syndromes
  - Hereditary retinoblastoma: *RB1* mutation
  - Li-Fraumeni syndrome: *TP53* mutation
  - Rothmund-Thomson syndrome: *RECQL4* mutation
  - Bloom syndrome: *BLM* mutation
  - Werner syndrome: *WRN* mutation

Clinical Issues
- Most patients are young (10-20 years)
- Distal femur > proximal tibia > proximal humerus

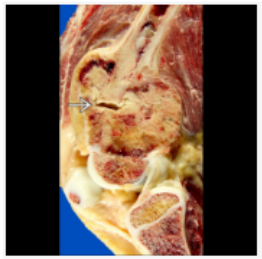
Microscopic
- Admixture of 2 elements in varying proportions
  - High-grade sarcoma with epithelioid, plasmacytoid, fusiform, ovoid, small-round, spindle, or clear cells, sometimes with multinucleated giant cells
  - Bone produced directly by tumor cells
- Conventional osteosarcoma
  - Histologic variants: Osteoblastic, chondroblastic, fibroblastic, telangiectatic, giant cell, small cell,

Thumbnail | Caption

Selected Images

Osteosarcoma in Distal Femur

Radiograph shows a destructive, bone-forming osteosarcoma in the distal femur associated with pathologic fracture. Osteosarcoma commonly arises in the region of the knee.



Osteosarcoma in Distal Femur

Gross photograph of the same tumor shows a tan-yellow, fleshy mass involving the distal femur and adjacent soft tissue. A pathologic fracture is apparent.

Osteosarcoma in Proximal Humerus

Radiograph of the proximal humerus shows ill-defined central

ImmunoQuery®

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Diagnoses | Antibodies

osteosarcoma

Results

+ Bone low grade central **osteosarcoma**
Osteosarcoma, Central, Low Grade; **Osteosarcoma**, low grade central

× Bone **osteosarcoma**, NOS
Osteosarcoma, Metastatic; **Osteosarcoma**, NOS

+ Soft tissue **osteosarcoma**
Osteosarcoma, Extraskeletal; **Osteosarcoma**, Radiation-associated

+ Bone osteoma
Osteoma, NOS

+ Bone osteoid osteoma

Selected

Clear

× Bone osteosarcoma, NOS

Build Panel

Comprehensive Panel

Differentiations: Differentiates | Does not differentiate | Neutral

Antibodies	Bone osteosarcoma, NOS	
	Positive	Cases
CD30 Refs (1) Membrane	100%	3
CK7 Refs (1)	100%	1
FAP-alpha Refs (1) Membrane, Cytoplasm	100%	160
GFAP Refs (1) Cytoplasm	100%	8
HLADR/DP/DQ Refs (1) Nucleus	100%	4
Ki-67 Refs (1) Nucleus	100%	2
MAD2 Refs (1) Nucleus	100%	48
MMP-3 Refs (1) Cytoplasm	100%	15
Vimentin Refs (4)	100%	52
bon-II Refs (1)	100%	9
Thymosin beta-4 Refs (1) Cytoplasm	98%	45
Osteonectin Refs (1)	97%	30

临床病理操作指南

术中会诊 方法

ImmunoQuery 打印

冷冻区 概述

苏珊·C·莱斯特，医学博士，哲学博士 最后更新日期：2022年10月4日

这是您要找的吗？ 是的 不

介绍

目的

- 为了进行显微镜评估，必须对组织进行硬化处理，以便切取厚度小于一个细胞的薄切片。
  - 用于制作永久切片的石蜡包埋过程需要数小时。
- 冷冻组织是一种快速方法，可用于使组织硬化到足以进行薄切片的程度。
  - 可以在短时间内制备出用于病理诊断的切片。
- 快速进行术中会诊的一个限制因素是组织冷冻所需的时间。
  - 应优先对标本进行初步评估，并选择组织进行冷冻保存。
  - 组织冷冻处理开始得越早，就能越快获得用于诊断的切片。
  - 在组织冷冻期间，可以执行一些不太紧急的任务（例如，撰写详细的大体描述或标记切片）。

冰冻切片和细胞学制片

- **比较**
  - 每种方法都有其优点和缺点。
  - 方法提供互补信息
  - 在许多情况下，两种方法结合使用比单独使用任何一种方法都更准确。

方法

组织选择

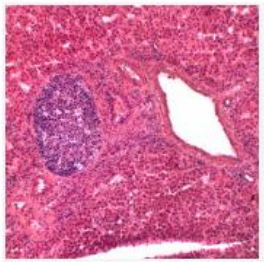
- 良好的肉眼检查对于选择最有可能提供最有帮助诊断结果的组织至关重要。
- 在重要的时候应该保持方向感
  - 皮肤切片应垂直于表皮表面切割。
  - 结肠切片应垂直于黏膜表面
- 组织切片尺寸应≤8 mm x ≤8 mm x 1-2 mm（厚），以便良好冷冻保存。
  - 如果需要冷冻更多组织，则应将切片分成多个块。
- 如果纸巾潮湿，请轻轻吸干。
  - 最大限度减少冻结伪影
  - 但是，请勿使用纱布或将纸巾放在纱布上，因为这可能会在组织上造成人为的孔洞。

缩略图 标题

精选图片

低温恒温器

利用低温恒温器快速冷冻组织是一种使组织硬化的方法，以便切取仅几微米厚的组织切片，用于术中病理诊断。（图片由V. Chan, BS提供。）



冰冻切片

精心挑选、制备、切片和染色的冰冻切片可以非常接近永久切片的质量。然而，其主要局限性在于，在术中会诊的有限时间内，只能冷冻少量组织。

制备包埋介质基底

将包埋剂涂抹在预冷的金属夹具上，然后放入低温恒温器中制

感谢聆听，
欢迎垂询！

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https://eci.elsevier.cn/med/

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