

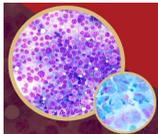
## Interpretação de amostras citológicas

Marta Santos  
Patologia Clínica

U. PORTO

ICBAS | INSTITUTO DE CIÊNCIAS  
BIOMÉDICAS ABEL SALAZAR  
SCHOOL OF MEDICINE AND  
BIOMEDICAL SCIENCES

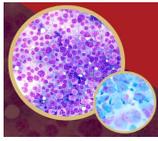
Workshop de Citologia



### Interpretação citológica - premissas

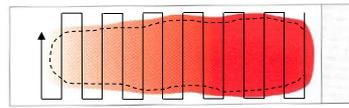


- Microscópio de boa qualidade
- Familiarização com a coloração
- Prática e bibliografia

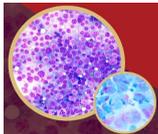


## Observação microscópica a baixa ampliação

→ Baixas ampliações: obj 4x e 10x

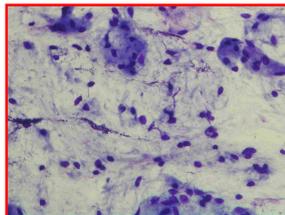
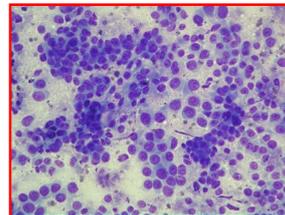
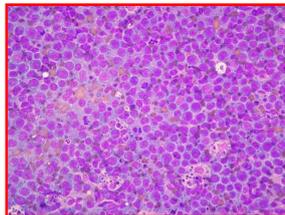


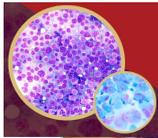
↪ Avaliar a qualidade/representatividade da amostra



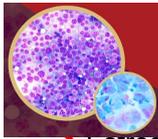
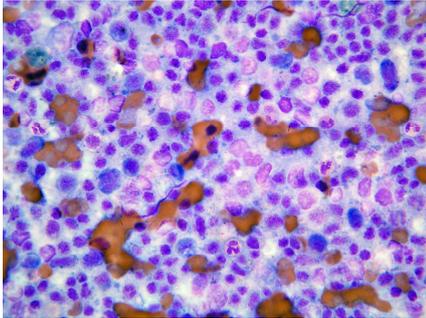
## Celularidade da amostra

→ Acelular, escassamente celular, moderadamente celular, boa celularidade; hemática



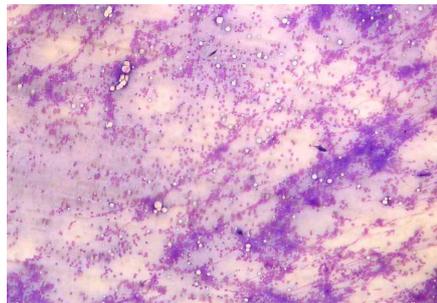


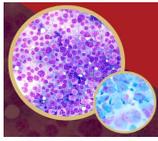
### Distribuição das células – qualidade do esfregaço



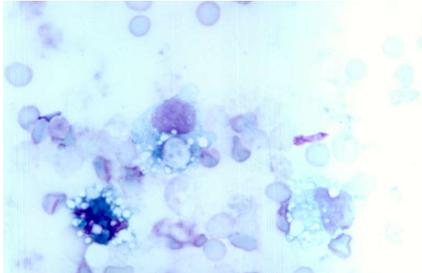
### Preservação das células

→ Esfregaço feito com demasiada força - células fragmentadas

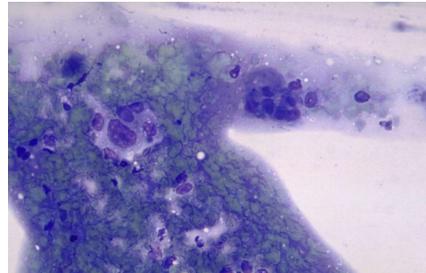




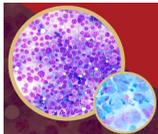
## Qualidade da coloração



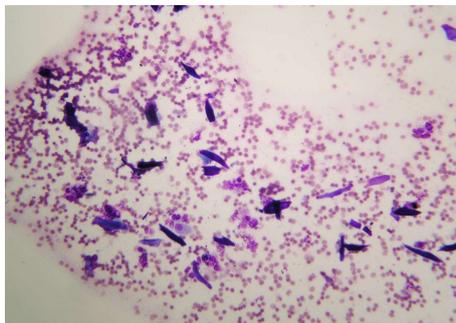
Inadequada: pouco tempo no corante azul; corante azul não foi mudado



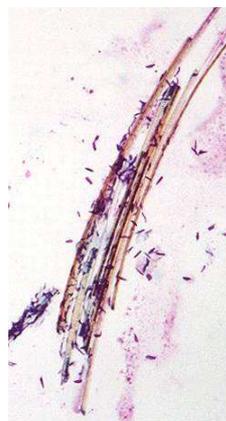
Excesso de azul - eritrócitos verde-escuro



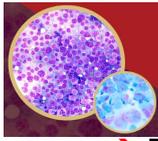
## Contaminantes e artefactos



→ Lâminas sujas; escamas córneas da mão do veterinário!

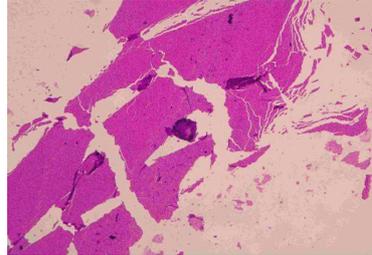
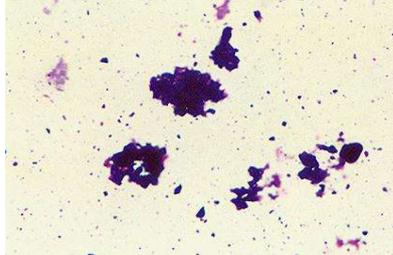


→ Pêlos

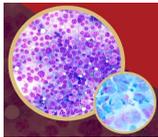
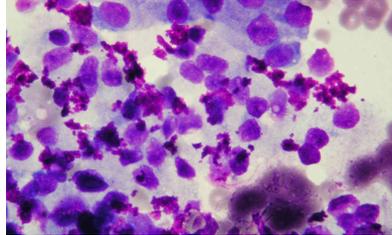


## Contaminantes e artefactos

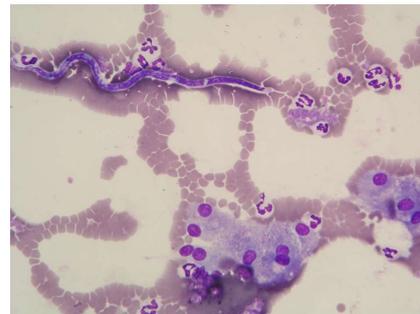
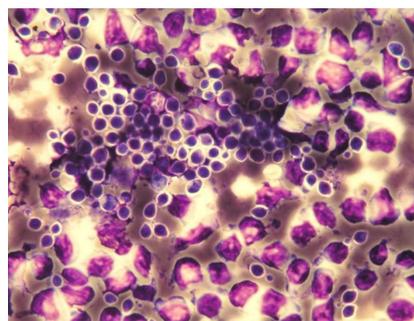
→ Presença de precipitados de corante: lavagem inadequada ou falta de filtração dos corantes



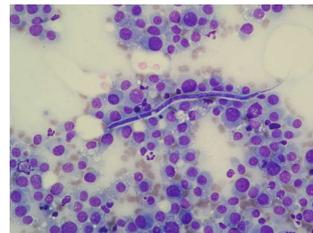
→ Presença de gel de ecografia

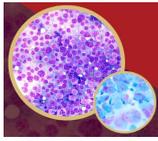


## Contaminantes e artefactos



→ Esporos de fungo num esfregaço de gânglio linfático sem reacção associada





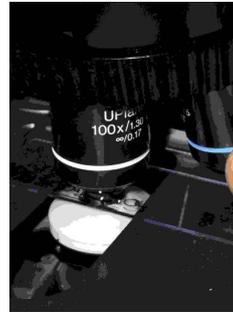
## Observação microscópica

→ Obj 10x, (20x) e 40x



- ↵ Composição celular, percentagens e morfologia
- ↵ População única ou mista

→ Obj de imersão 100x



- ↵ Confirmação dos agentes etiológicos
- ↵ Características dos nucléolos
- ↵ Uso depende da experiência

Estas células são normais nesta sede ?

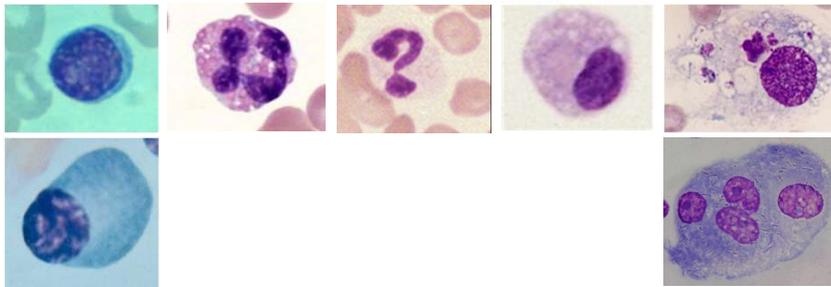


População neoplásica

População não neoplásica

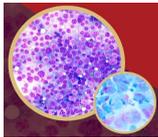
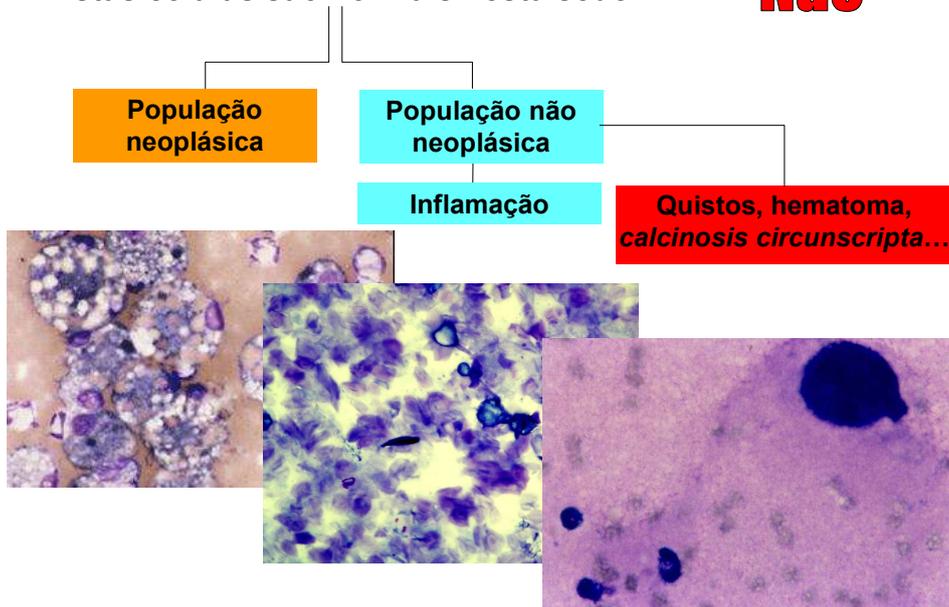
Inflamação ?

Tipo de Inflamação

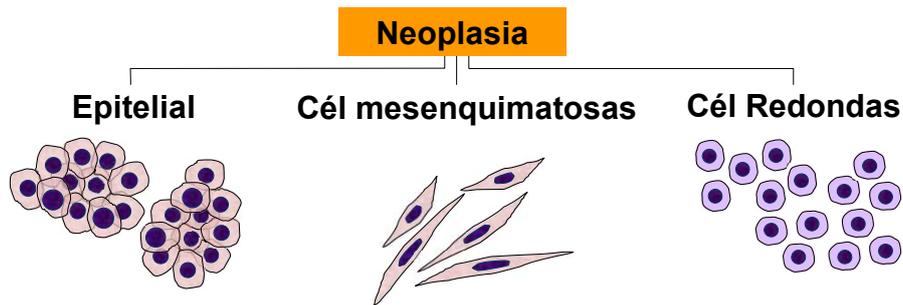


Estas células são normais nesta sede ?

**Não**



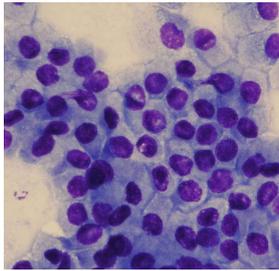
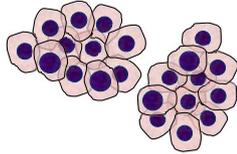
População neoplásica



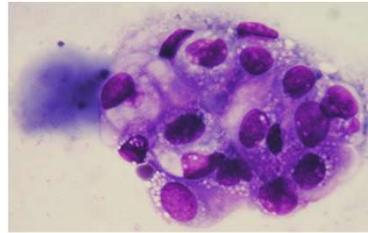
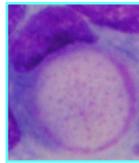
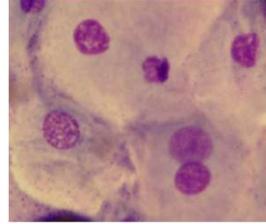
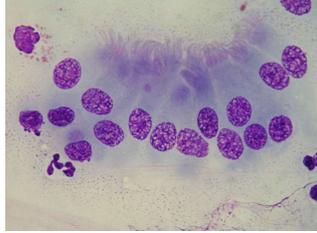
- celularidade
- organização celular (grupos, células isoladas...)
- características citoplasmáticas (limites, cor, grânulos, volume)
- material extracelular (secreção, matriz)

**Neoplasia**

**Epitelial**



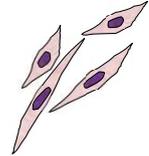
- grupos/clusters
- redondas, cúbicas, colunares, poligonais
- limites +/- visíveis
- vacúolos +/- secreção/cílios



**Neoplasia**

**Células**

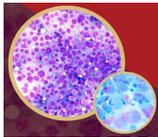
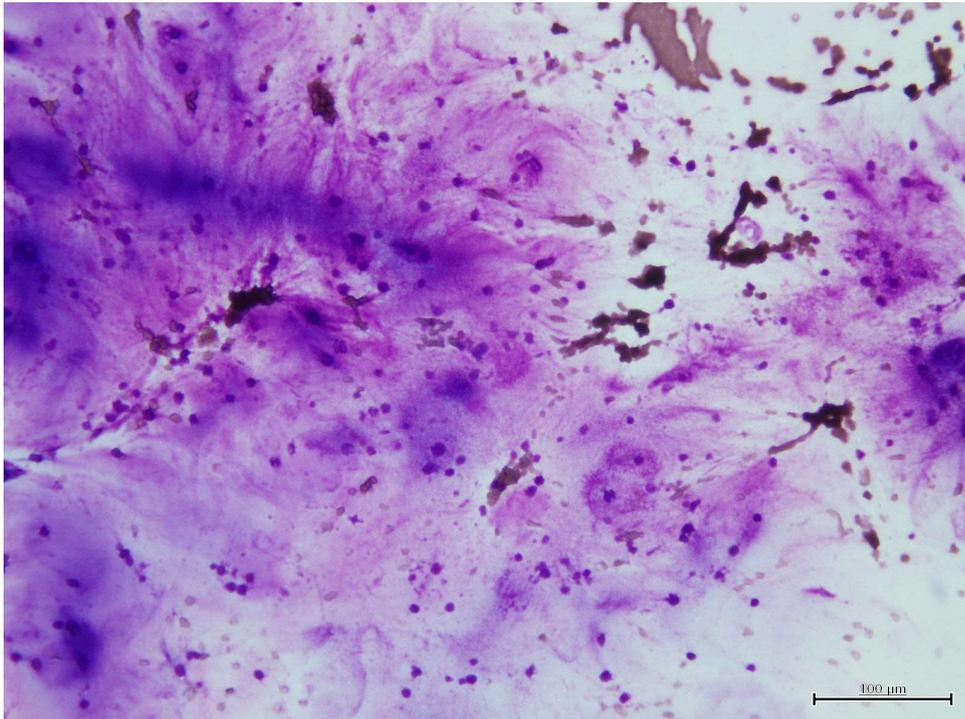
**Mesenquimatosas**



- Fusiformes, estreladas, ovais, com caudas citoplasmáticas
- Limites não definidos
- Matriz extracelular
- Isoladas (em grupos se houver matriz)

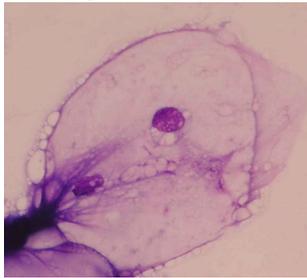


Matriz: material rosa extracelular +/- filamentar

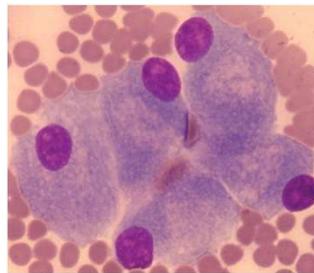


### Células mesenquimatosas não fusiformes

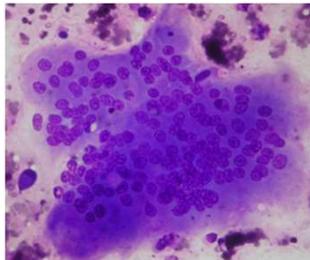
→ Adipócitos



→ Osteoblastos



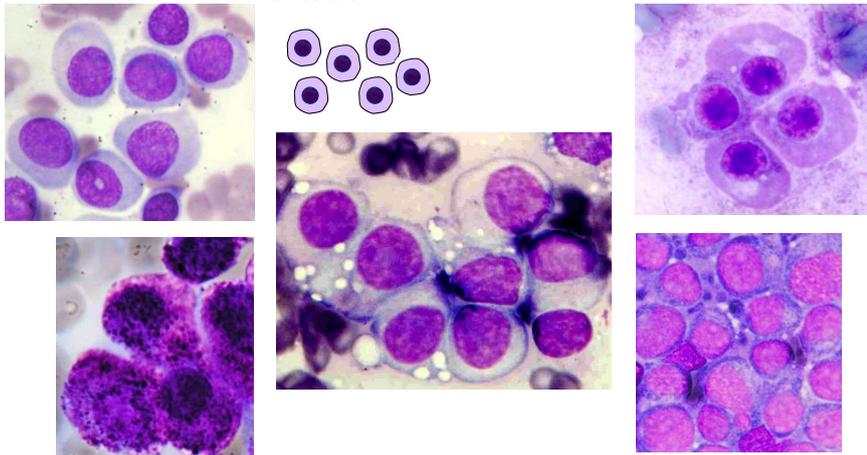
→ Células gigantes de sarcoma



**Neoplasia**

- Isoladas (*discrete cells*) – em monoestrato
- Limites definidos
- Grânulos/vacúolos

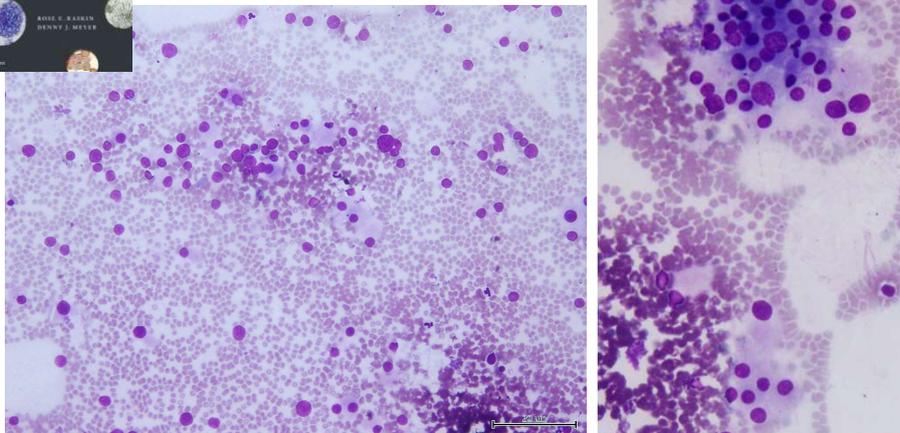
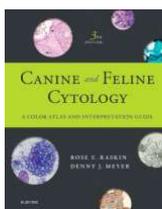
**Células redondas**

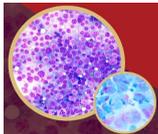
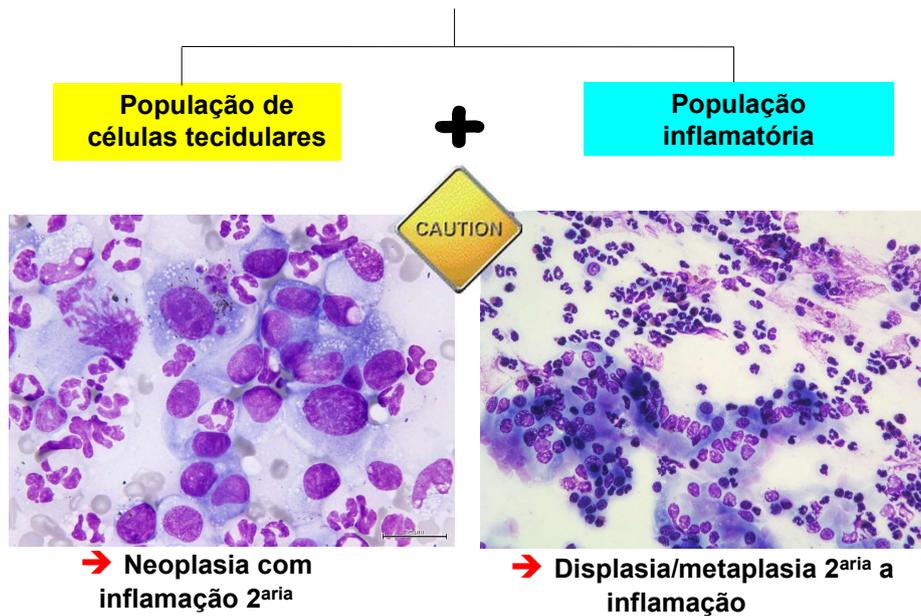


**Neoplasia**

- Neoplasias endócrinas e neuroendócrinas
- Epiteliais – sacos anais

**“Naked nuclei”**

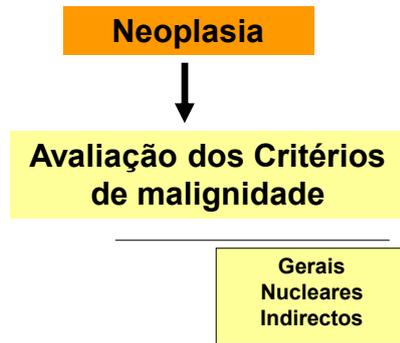




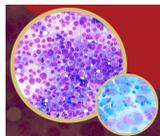
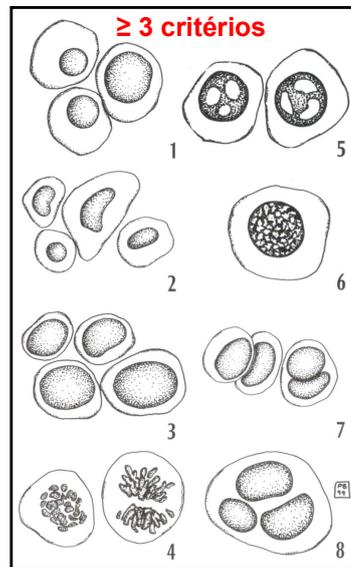
**População mista – o que fazer?**

**EVITAR FALSOS POSITIVOS**

1. PEDIR AJUDA
2. EXPERIÊNCIA / TIPO DE LESÃO : CCE + neutrófilos, Mastocitoma + eosinófilos
3. MUDAR A TÉCNICA DE COLHEITA - fazer aspiração com agulha fina se possível
4. AVALIAR A RESPOSTA AO TRATAMENTO MÉDICO (anti-inflamatórios, antibiótico...) e 2<sup>a</sup> AMOSTRA CITOLÓGICA
5. BIOPSIA HISTOPATOLÓGICA: arquitetura, invasão local, actividade mitótica, técnicas especiais (imunohistoquímica)...

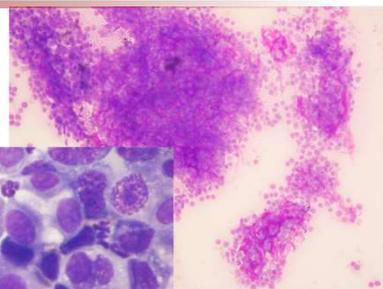


- comportamento biológico de neoplasia
- + aplicáveis às neoplasias epiteliais e mesenquimatosas; neoplasia de células redondas: população uniforme
- não há critérios patognomónicos

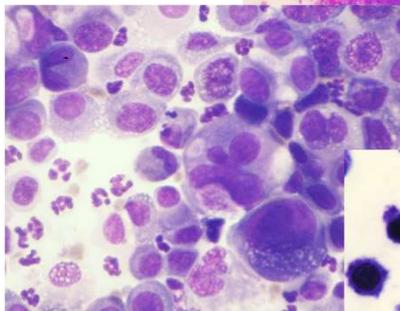


**Critérios de malignidade gerais**

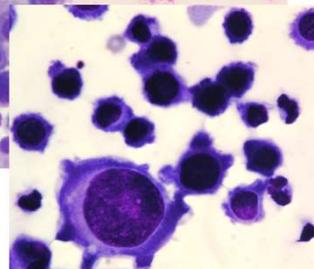
**Celularidade**

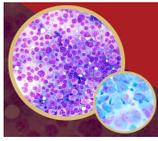


**Pleomorfismo**



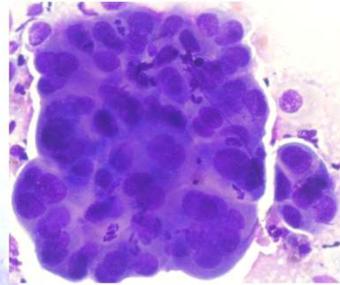
**Anisocitose**



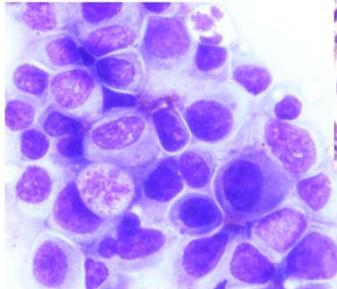


## Critérios de malignidade citoplasmáticos

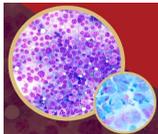
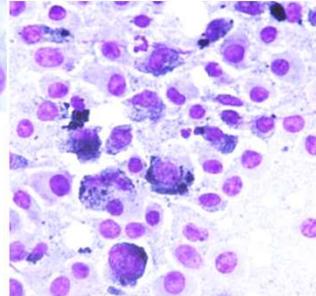
Hiperbasofilia



Vacúolos

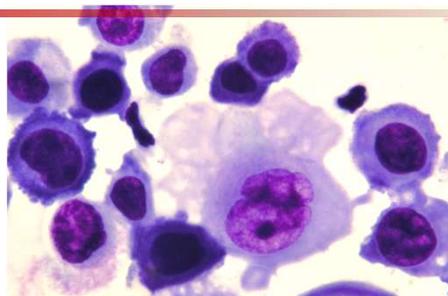


Grânulos

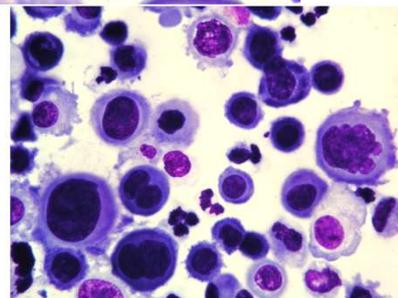


## Critérios de malignidade nucleares

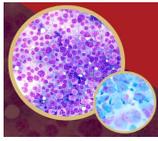
Anisocariose



Relação N:C

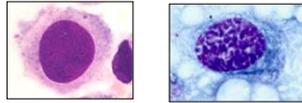


Multinucleação

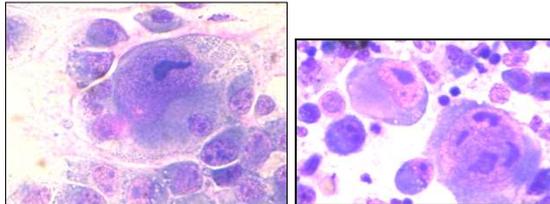


## Critérios de malignidade nucleares

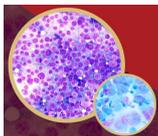
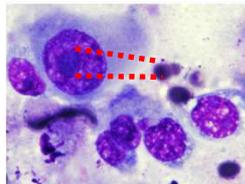
Padrão de cromatina



Nucléolos atípicos

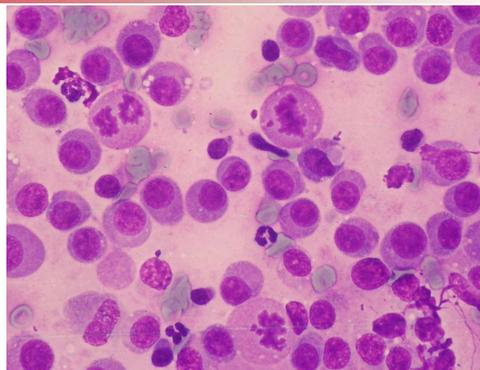


Macronucléolos

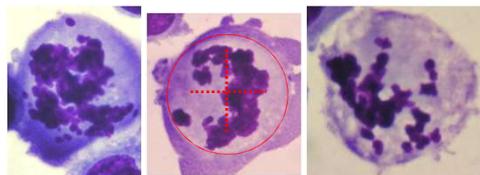


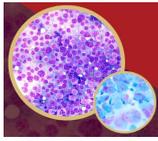
## Critérios de malignidade nucleares

Figuras de mitose



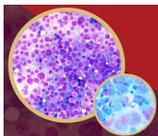
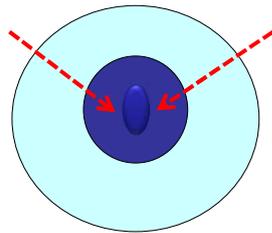
Mitoses atípicas





## Relatório de citologia – regras

IDENTIFICAÇÃO  
 MATERIAL ENVIADO  
 DESCRIÇÃO MICROSCÓPICA  
 INTERPRETAÇÃO/DIAGNÓSTICO  
 COMENTÁRIOS



## Utilidade clínica da citologia

The perceived and actual diagnostic utility of veterinary cytological samples

N. SKELDON AND E. DEWHURST

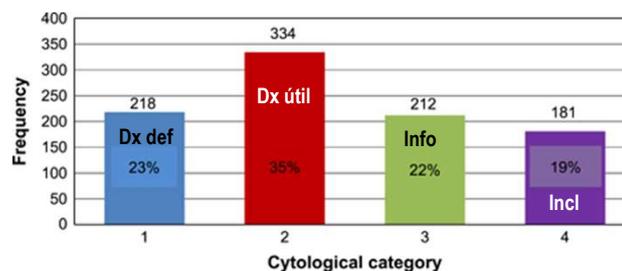
*Journal of Small Animal Practice* (2009)  
 50, 180–185

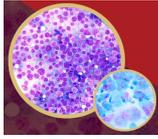
✓ média de amostras/semana: 3,9

✓ “obtenção de Dx”; “excluir/incluir Dxs”; “direccionar tratamento e testes Dx adicionais”; “teste de screening”; “detecção metástases”

→ 1206 amostras (700 C, 140G, 6 cavalos, 6 exóticos); 1 de 4 citologistas

→ 74 questionários a Vets/ Reino Unido



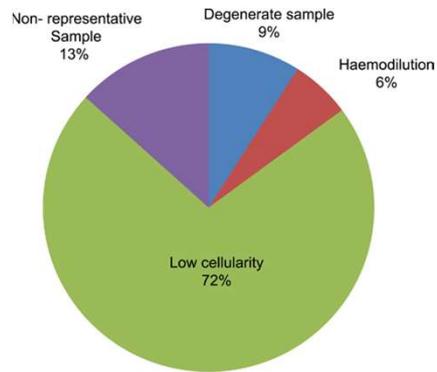


## Utilidade clínica da citologia

→ Razões para o exame ser inconclusivo

N. SKELDON AND E. DEWHURST

*Journal of Small Animal Practice* (2009)  
50, 180-185



- ✓ + em amostras de GL
- ✓ Amostra c/ ARTEFACTOS: ruptura celular em GI
- ✓ Amostra N/ REPRESENTATIVA: gordura periganglionar, glândula salivar

# euvg

## Obrigada

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BIOMEDICAL SCIENCES