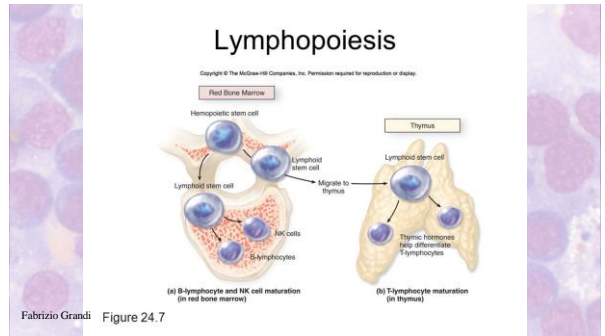


HISTOLOGIA E CORRELAÇÃO CITO-HISTOLÓGICA NOS LINFONODOS E BAÇO NORMAIS

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LINFONODOS

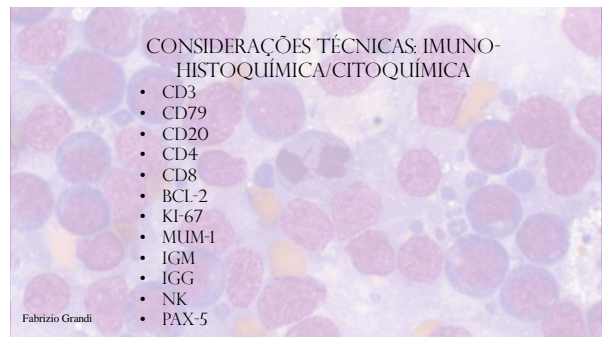
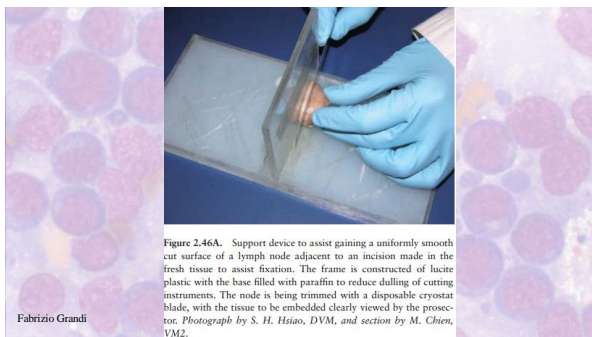
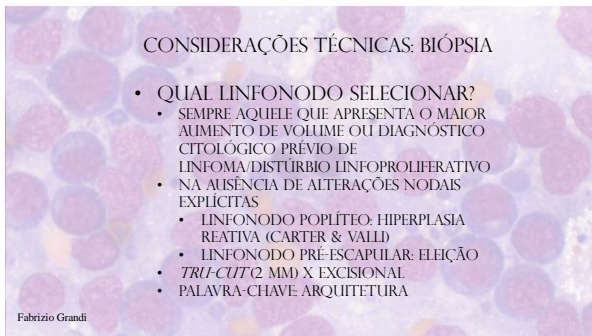
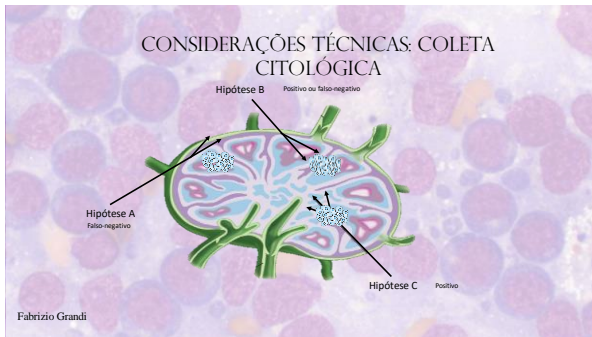
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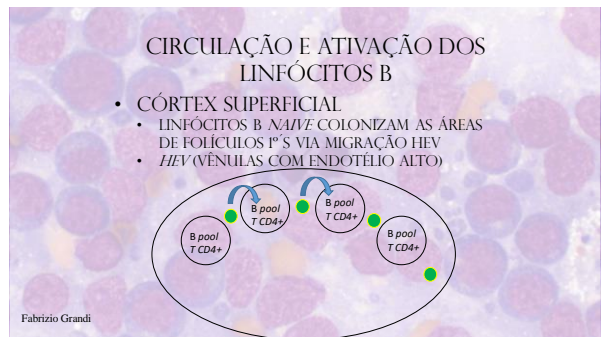
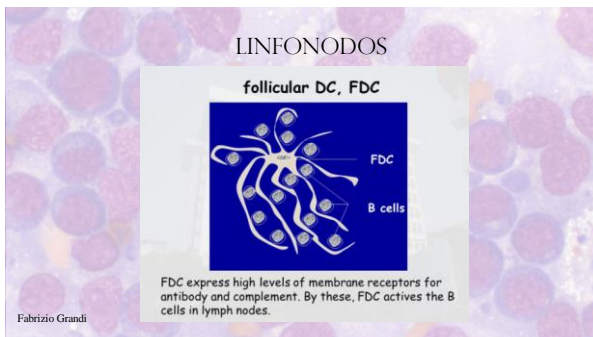
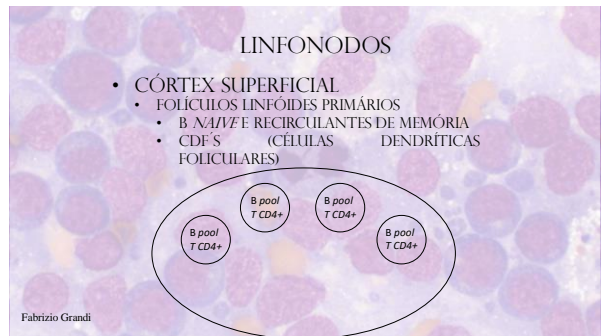
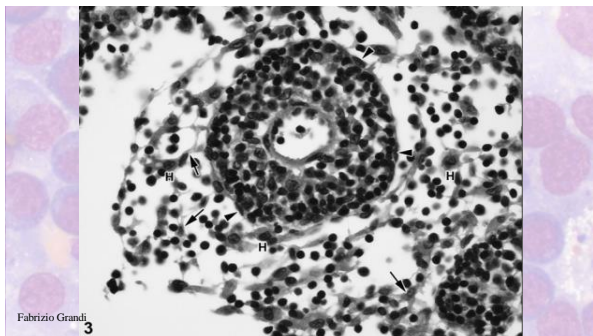
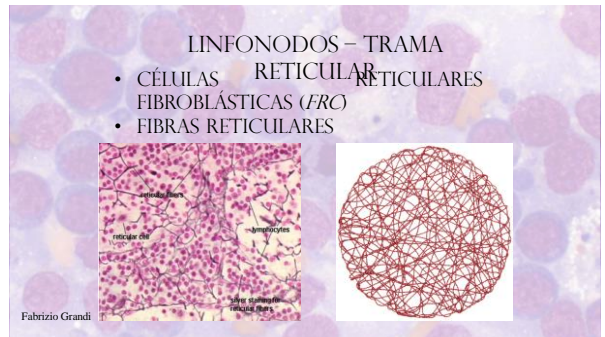
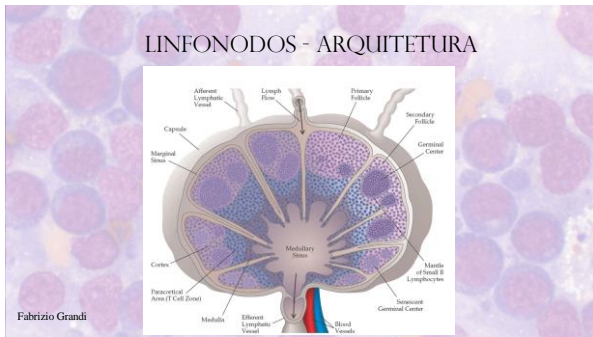
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INDICAÇÕES E LIMITAÇÕES DA CAF NODAL

- LINFADENOMAGELIA X TAMANHO NORMAL
- GLÂNDULA SALIVAR E TECIDO ADIPOSITO PERINODAL
- METÁSTASES
- MATERIAL PARA ANÁLISE DE CLONALIDADE, CF E ICQ

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CIRCULAÇÃO E ATIVAÇÃO DOS LINFÓCITOS B

- CÓRTEX
 - INTERAÇÃO B NAIVE E FDC > EXPANSÃO CLONAL B




follicular DC, FDC

FDC express high levels of membrane receptors for antibody and complement. By these, FDC activate the B cells in lymph nodes.

Figure 2.4. Dog: lymph node: Paracortex with high endothelial venules with several lymphocytes in transendothelial cell through the vessel wall.

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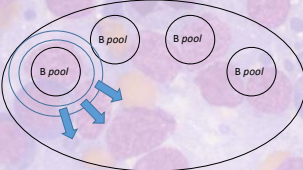
CIRCULAÇÃO E ATIVAÇÃO DOS LINFÓCITOS B

- DESTINOS DOS LINFÓCITOS B PÓS-INTERAÇÃO COM AS CDF'S
 - 1) FENÔMENO DE EXCLUSÃO FOLICULAR APOPTÓTICA
 - 2) POOL DE RECIRCULAÇÃO
 - 3) ATIVAÇÃO E EXPANSÃO CLONAL (FOLÍCULOS SECUNDÁRIOS)
 - 4) DIFERENCIAÇÃO EM PLASMÓCITO (B DE MEMÓRIA)

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CIRCULAÇÃO E ATIVAÇÃO DOS LINFÓCITOS B

- CÓRTEX
 - FOLÍCULO SECUNDÁRIO (CÓRTEX OUTER, PARACÓRTEX E INNER)



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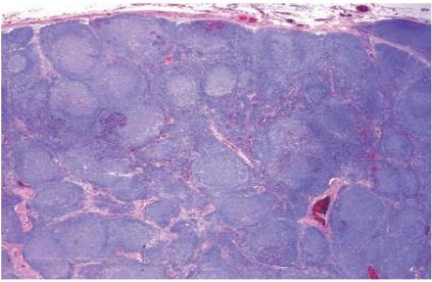



Figure 2.15. Dog: lymph node, follicular hyperplasia. Marked and chronic, with compression of medullary structures.

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CIRCULAÇÃO E ATIVAÇÃO DOS LINFÓCITOS B

- CÓRTEX
 - FOLÍCULOS LINFÓIDES SECUNDÁRIOS



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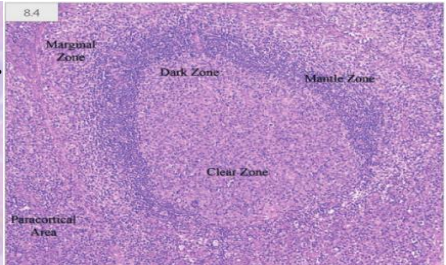
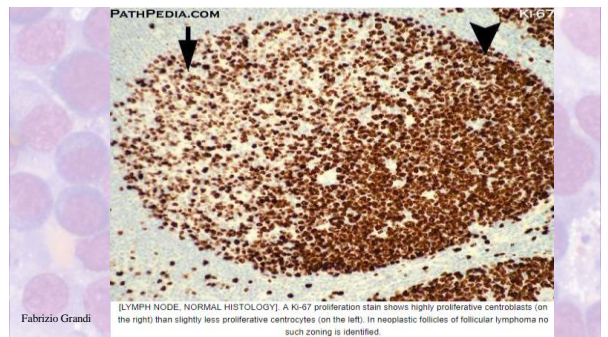
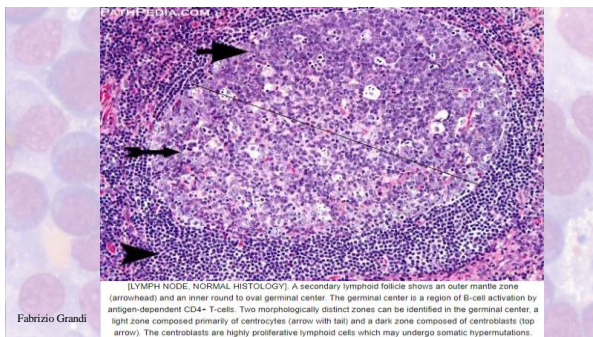
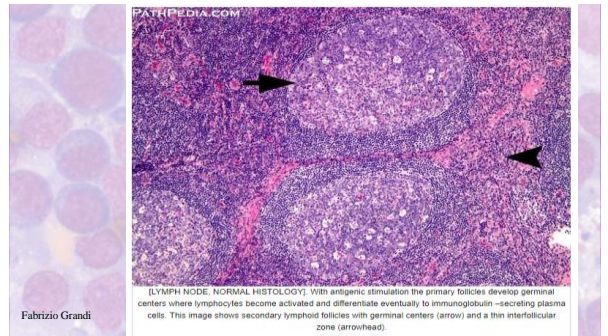
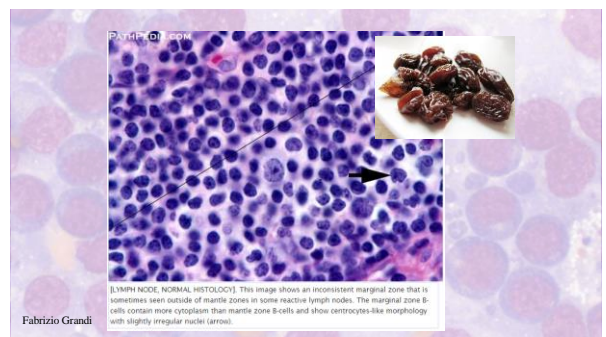
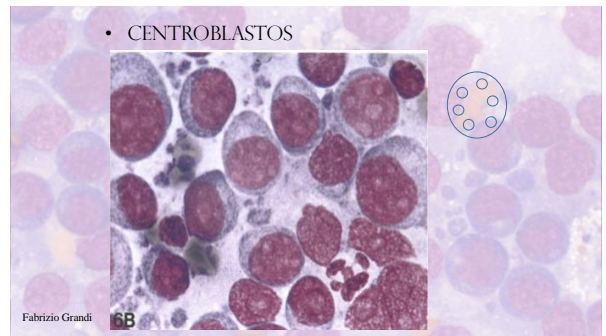
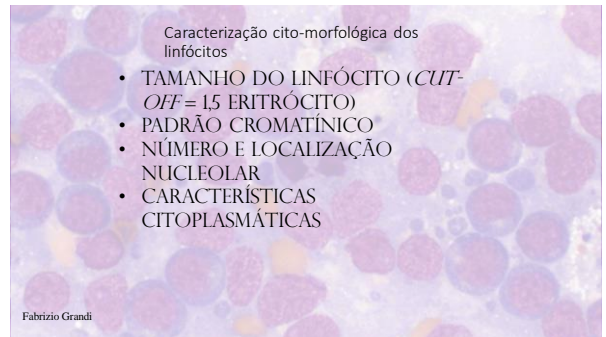
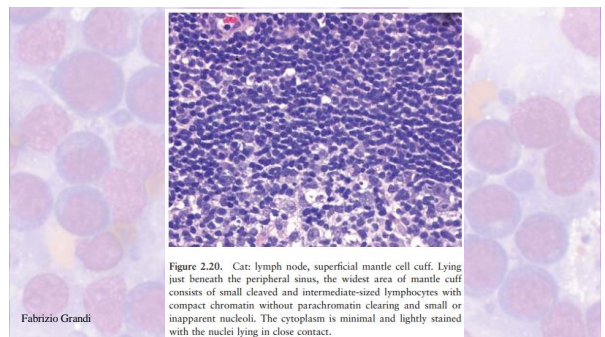
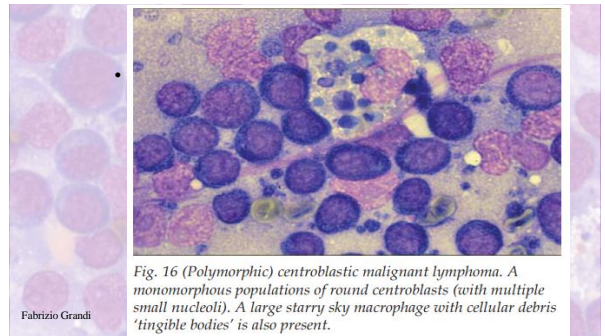
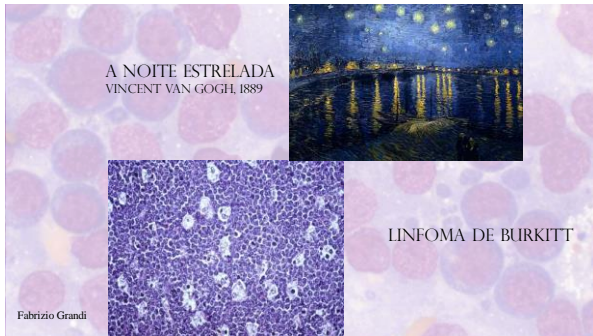
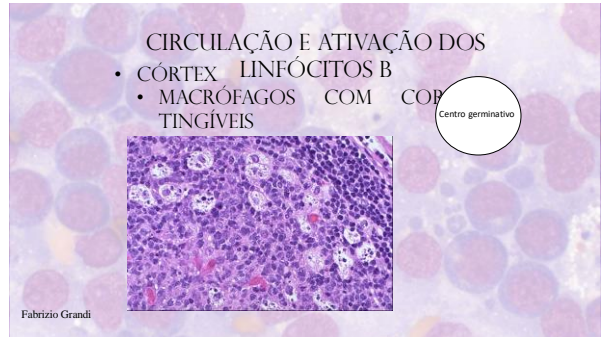
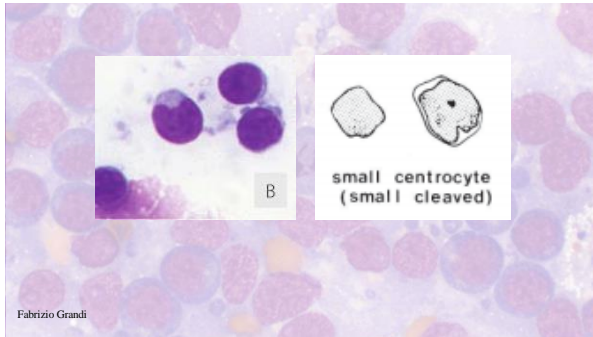


Figure 8.4. Dog, peripheral lymph node, histology: A secondary follicle with central germinal center (clear and dark zone) surrounded by an inner rim of mantle cells and an outer rim called the marginal zone. (H&E, 100x magnification) (Courtesy L. Aresu)

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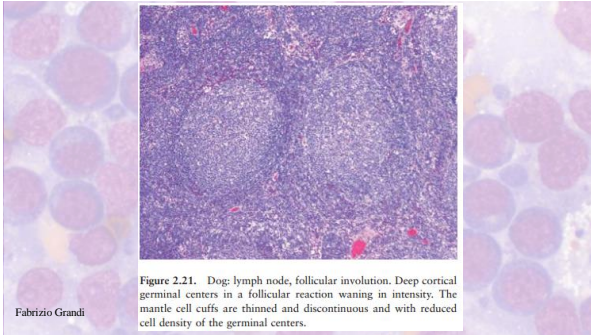


Figure 2.21. Dog: lymph node, follicular involution. Deep cortical germinal centers in a follicular reaction waning in intensity. The mantle cell cuffs are thinned and discontinuous and with reduced cell density of the germinal centers.

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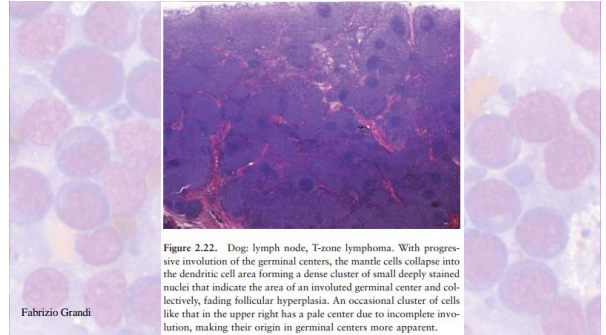


Figure 2.22. Dog: lymph node, T-zone lymphoma. With progressive involution of the germinal centers, the mantle cells collapse into the dendritic cell area forming a dense cluster of small deeply stained nuclei that indicate the area of an involuted germinal center and collectively, fading follicular hyperplasia. An occasional cluster of cells like that in the upper right has a pale center due to incomplete involution, making their origin in germinal centers more apparent.

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CIRCULAÇÃO E ATIVAÇÃO DOS LINFÓCITOS B

- CÓRTEX
 - ZONA MARGINAL
 - ZONA MAIS EXTERNA DO FOLÍCULO
 - LINFÓCITOS INTERMEDIÁRIOS (15 ERITRÓCITOS) PÓS-GERMINATIVOS
 - LINFÓCITOS MACRONUCLEOLADOS MÉDIOS
 - LINFÓCITOS B PÓS-GERMINATIVOS



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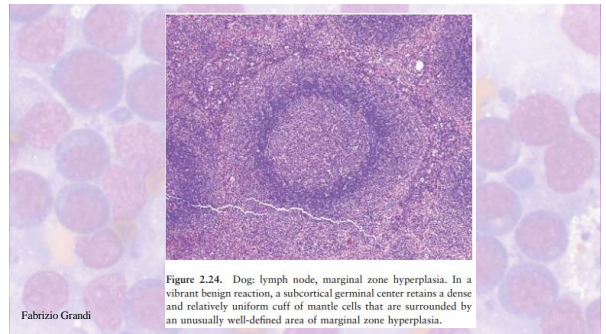


Figure 2.24. Dog: lymph node, marginal zone hyperplasia. In a vibrant benign reaction, a subcortical germinal center retains a dense and relatively uniform cuff of mantle cells that are surrounded by an unusually well-defined area of marginal zone hyperplasia.

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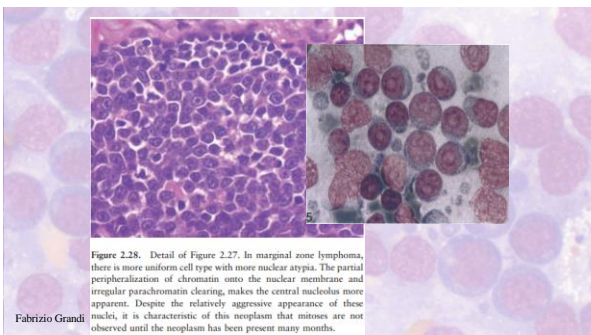


Figure 2.28. Detail of Figure 2.27. In marginal zone lymphoma, there is more uniform cell type with more nuclear atypia. The partial peripheralization of chromatin onto the nuclear membrane and irregular parachromatin clearing, makes the central nucleolus more apparent. Despite the relatively aggressive appearance of these nuclei, it is characteristic of this neoplasm that mitoses are not observed until the neoplasm has been present many months.

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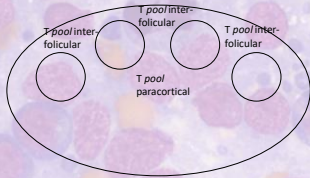
CIRCULAÇÃO E ATIVAÇÃO DOS LINFÓCITOS T

- PARACÓRTEX

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CIRCULAÇÃO E ATIVAÇÃO DOS LINFÓCITOS T

- PARACÓRTEX PROFUNDO (CÓRTEX



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CIRCULAÇÃO E ATIVAÇÃO DOS LINFÓCITOS T

- PARACÓRTEX E ZONA INTERFOLICULAR
 - RICA EM LINFÓCITOS T
 - CÉLULAS DENDRÍTICAS INTERDIGITANTES (APC'S)
 - MIGRAÇÃO VIA VEA E *HOMING*
 - MACRÓFAGOS COM CORPOS TINGÍVEIS

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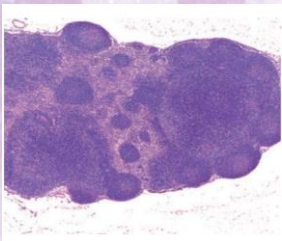
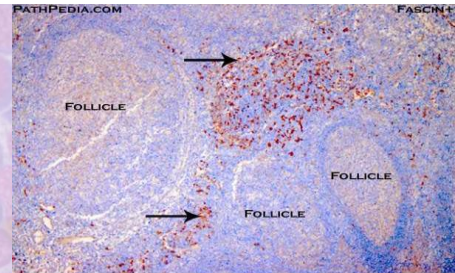


Figure 2.13. Mature Sprague-Dawley rat: mesenteric lymph node, focal paracortical nodular hyperplasia. Typical appearance with deep cortical units appearing as well-defined areas of the paracortex that have a mottled appearance due to the variation in cell types present. The deep cortical units are each related to and dependent upon the antigenic drainage from specific afferent lymphatics.

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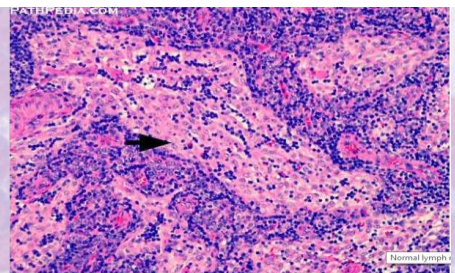
[LYMPH NODE, NORMAL HISTOLOGY] Interdigitating dendritic cells (IDC) are non-lymphoid, non-phagocytic, antigen-presenting cells situated in the paracortex among follicles. These cells are similar to follicular dendritic cells (FDC) except that they present antigens to T-cells rather than B-cells and thereby help in T-cell activation. The antigens are derived from lymph fluid percolating through the paracortex.

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MEDULA

- CORDÕES E SEIOS MEDULARES
 - PROPORÇÕES IGUAIS, POREM COM ENORME PLASTICIDADE
 - CÉLULAS ENDOTELIAIS (SEIOS)
 - CORDÕES LINFÓCITOS B PÓS-GERMINATIVOS, PLASMÓCITOS E LINFÓCITOS B DE MEMÓRIA (PROGÊNIE)
 - SEIOS MEDULARES: HISTIÓCITOS

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[LYMPH NODE, NORMAL HISTOLOGY] The medullary sinuses drain lymph fluid containing T-cells, few B-cells, and numerous macrophages. These cells travel through complex network of lymphatic channels and finally end up either at other lymphoid organs or through blood at sites of inflammation. Unlike in reactive lymph nodes the sinuses in nodes involved by most lymphomas are obliterated.

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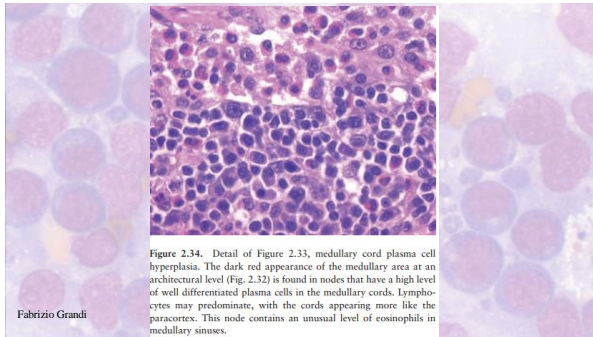


Figure 2.34. Detail of Figure 2.33, medullary cord plasma cell hyperplasia. The dark red appearance of the medullary area at an architectural level (Fig. 2.32) is found in nodes that have a high level of well differentiated plasma cells in the medullary cords. Lymphocytes may predominate, with the cords appearing more like the paracortex. This node contains an unusual level of eosinophils in medullary sinuses.

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CITOMORFOLOGIA LINFONODO NORMAL

- LINFÓCITOS PEQUENOS T E B (>80%)
- CENTROCITOS (5-10%)
- CENTROBLASTOS (1-5%)
- IMUNOBLASTOS (1-5%)
- MMC (<1% EM CÃES, AUSENTE EM GATOS)
- PLASMOCITOS (<2%)
- FLAME CHLS (<1%)
- MOTT CHLS (<1%)
- CÉLULAS DENDRÍTICAS (<1%)
- MACRÓFAGOS (<2%)
- NEÚTRÓFILOS, EOSINÓFILOS E MASTÓCITOS (<3% CADA)
- CORPÚSCULOS LINFOGLANDULARES

Fonte: Barger A. Small Animal Cytological Diagnosis

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FONTE: BARGER A. SMALL ANIMAL CYTOLOGICAL DIAGNOSIS

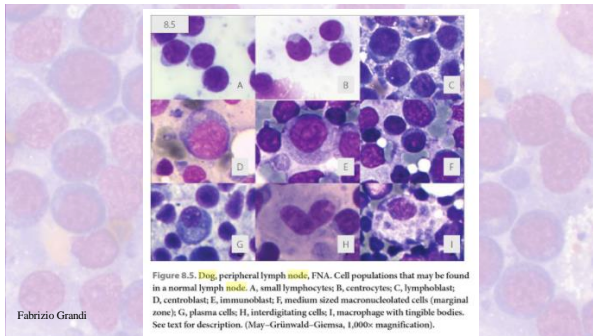
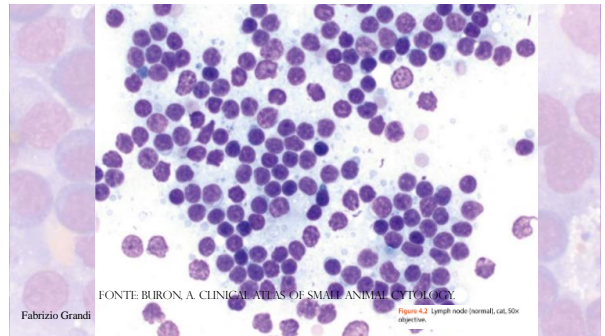


Figure 8.5. Dog, peripheral lymph node, FNA. Cell populations that may be found in a normal lymph node. A, small lymphocytes; B, centrocytes; C, lymphoblast; D, centroblast; E, immunoblast; F, medium sized macrophagocytosed cells (marginal zone); G, plasma cells; H, interdigitating cells; I, macrophage with tingible bodies. See text for description. (May-Grünwald-Giemsa, 1,000x magnification).

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FONTE: BURON A. CLINICAL ATLAS OF SMALL ANIMAL CYTOLOGY

Figure 4.2 Lymph node (normal, cat, 50x objective)

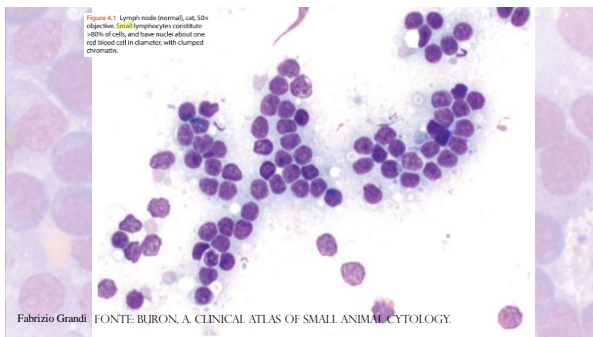
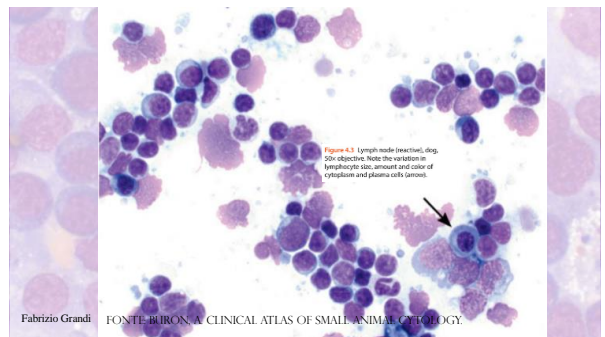


Figure 4.1 Lymph node (normal, cat, 50x objective). Small lymphocytes constitute 20% of cells, and have nuclei about one red blood cell in diameter, with clumped chromatin.

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FONTE: BURON A. CLINICAL ATLAS OF SMALL ANIMAL CYTOLOGY



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FONTE: BURON A. CLINICAL ATLAS OF SMALL ANIMAL CYTOLOGY

Figure 4.3 Lymph node (inactive), dog, 50x objective. Note the reduction in lymphocyte size, amount and color of cytoplasm and plasma cells (arrow).

