Table 1. *Granulomatous Lymphadenitis classification, causes, histological findings and lymph nodes most commonly affected.*

Types of Granuloma		Histological characteristics	Lymph nodes affected
NON-INFECTIOUS		Rarely have abscesses and necrosis in the center	
A. Sarcoidosis		**Non-caseous** epithelioid granulomas with characteristic sharp demarcation, lack of central **necrosis** and special staining, such as acid-fast and silver impregnation staining	Pulmonary hilar lymph nodes (93.5%), cervical (12.2%), axillary (5.2%) and inguinal (3.3%) lymph nodes
B. Sarcoid Like Lymphadenitis			Regional lymph nodes
	I. Malignancies	**Non caseating** epithelioid cell granulomas contain B cell lymphocytes and sinus histocytes that are not typically observed in sarcoid granulomas	Regional and distal lymph nodes
	Lymphoma Hodgkin and non-Hodgkin)		
	Sarcoidosis-like reaction of malignancy		
	II. Crohn's disease	Not well-formed, non-caseous	Intestinal lymph nodes (draining)
	III. Vasculitis		
	GPA	Loosely formed granulomas with multinucleate giant cells, necrotic debris, and abundant PMN	
	EGPA	Loosely formed granulomas with necrotic debris and eosinophils	
	IV. Occupational-environmental exposure		
	Silicosis	Granulomatous inflammation with focal necrosis	Subcarinal, mediastinal and hilar
	Berylliosis	Non-necrotizing granulomas (identical to sarcoidosis)	Hilar and mediastinal lymph nodes.
	V. Drug Induced Sarcoidosis like reactions (DISRs)	Granulomas completely resemble sarcoid granulomas with presence of non-caseating giant-cell epithelioid granulomas surrounded by lymphocytes, with occasional presence of birefringent foreign bodies, asteroid bodies and Schaumann	Hilar
	VI. Other diseases		
	Primary Biliary Cirrhosis (PBC)	Epithelioid non suppurative granulomas	Any
	Adult onset Stills Disease (AOSD)	Suppurative necrotizing granulomatous lymphadenitis	Mesenteric lymph nodes
INFECTIOUS			
A. Suppurative		Follicular hyperplasia and sinus histiocytosis (early phase) - Almost all Gram-negative bacteria induced granulomas have central abscesses and necrosis	
	I. Tularemia Lymphadenitis	Monocytoid B lymphocytes (MBLs) with T cells and macrophages Three phases: • Abscess phase: lymph follicles and histiocytic cells in subcapsular sinus. • Abscess with central necrosis and mononuclear cells • Abscess-granulomatous form: small granulomas with central necrosis at the cortex and the paracortex that fuse and form irregular large lesions • Granulomatous form: Necrosis is homogenized-caseous necrosis	Axillary and cervical
	II. Cat scratch Lymphadenitis	Monocytoid B lymphocytes (MBLs) with T cells and macrophages. Three phases: • Early phase (of non-specific reactivity): Reactive follicular hyperplasia, histiocytic proliferation and expansion of lymphoid follicles • Intermediate phase (micro-abscess formulation): Micro-abscesses with centric necrosis, clustered neutrophils, lack of epithelioid granuloma within the sub-capsular sinus. Centric fibrinoid necrosis is comprised of neutrophilic aggregates and progressive suppuration • Final phase: Epithelioid cell granulomas configured by Enveloping macrophages within frequent multinucleated or Langhans giant cells (stellate micro-abscess). Integration of the stellate micro-abscesses of varying magnitude produces an irregular, giant abscess (geographic abscess)	Axillary, inguinal and cervical
	III. Yersinia Lymphadenitis	NO MBLs in the epithelioid cell granulomas • Yersinia enterocolitica lymphadenitis: Non-suppurative epithelioid cell granulomas in the germinal centres but suppuration of the centric epithelioid cell granulomas may ensue (central micro-abscesses) and expand to spheroid micro-abscesses. Composed of epithelioid histiocytes along with dispersed, miniature lymphocytes and plasmacytoidmonocytes • Yersinia pseudotuberculosis: Intense neutrophilic infiltrate and miniature granulomas with subsequent, disseminated micro-abscesses, centric suppuration and an envelope of histiocytes (Suppurative granulomas)	Mesenteric (lymph nodes of the ileum and cecum)
	IV. Lymphogranulomavenerum	Miniature necrotic locus with neutrophilic infiltration →expansive, necrotic foci →stellate micro-abscesses	Inguinal
	V. Fungal infection	Suppurative or non-suppurative granulomas. The fungal organism may be demonstrated by the Grocott's Methenamine Silver (GMS) and Periodic acid Schiff (PAS) Gridley stains	Any
A. Non Suppurative			
	I. Tuberculous Lymphadenitis	From multiple, miniature epithelioid cell granulomas resembling sarcoid granulomas, to massive caseous necrotic aggregates enveloped by Langhans giant cells, epithelioid cells and mature lymphocytes	Cervical and mediastinal (90%)- Ghon's complex
	II. Atypical Mycobacterial infections-Non Tuberculous Mycobacteria (NTM)	Well-formed granulomas with or without caseous necrosis / Typically necrotizing granulomas	
	III. BCG- Lymphadenitis.	Follicular hyperplasia and sinus histiocytes in the early phase / later: micronodules of epithelioid granulomas without necrosis and epithelioid cell granuloma with central coagulation necrosis / Langhans giant cells rarely appear	Axillary and cervical
	IV. Toxoplasma Lymphadenitis (Piringer-Kuchinka lymphadenopathy)	Three characteristic features: florid follicular hyperplasia, small epithelioid granulomas (mainly at the follicular periphery) and dilated marginal and cortical sinuses with monocytoid B cells (MBLs). Necrosis and Langhans giants cells are rare	Immunologically competent: A limited, firm, moderate posterior cervical lymphadenopathy.
	V. Leprosy	Typically, not suppurative	Any
	VI. Syphilis	Typically, non-caseating	Any (typically in tertiary syphilis)
	VII. Fungal infection	Suppurative or non-suppurative granulomas. The fungal organism may be demonstrated by the Grocott's Methenamine Silver (GMS) and Periodic acid Schiff (PAS) Gridley stains	Any
	VIII. Brucellosis	Nonspecific follicular hyperplasia and aggregates of epithelioid cells to massive non-caseating granulomas	Any-Even isolated abdominal lymphadenopathy