St Vincent's Hospital

Chronic Rhinosinusitis Histopathology report

Tissue			
	Tissue present	☐Respiratory mucosa ☐mucoserous glands ☐bone	
	Overall degree of inflammation	☐ Absent ☐ Mild	☐ Moderate ☐ Severe
	Eosinophil Count	☐ <10 per HPF ☐ 10-100 per HPF ☐ >100 per HPF	
	Neutrophil Infiltrate	☐ Absent ☐ Focal ☐ <20 per HPF ☐ >=20 per HPF	
	Inflammatory predominance	☐ Lymphocytic ☐ Lymphoplasmocytic ☐ Eosinophilic	☐ lymphohistiocytic ☐ Neutrophilic ☐Other_____
	Basement Membrane thickening	☐ <7.5µm (normal) ☐ 7.5 - 15µm ☐ >15 µm	
	Sub-epithelial oedema	☐ Absent ☐ Mild (focal or perivascular only) ☐ Moderate (distortion of mucosal structure) ☐ Severe (diffuse/polypoid change)	
	Hyperplastic/papillary change	☐ Absent ☐ Present	
	Mucosal ulceration	☐ Absent ☐ Present (with reactive changes)	
	Squamous metaplasia	☐ Absent ☐ Present	
	Fibrosis	☐ Absent ☐ Partial ☐ Extensive	
Mucin			
	Fungal elements	☐ Not assessable ☐ Absent ☐ Present	
	Charcot-Leyden Crystals	☐ Not assessable ☐ Absent ☐ Present	
	Eosinophil aggregates	☐ Not assessable ☐ Absent ☐ Present	

Notes on CRS structured histopathological reporting

At its inception, the reporting system was intended to be user friendly for the reporting pathologists and that the study results could be considered to reflect those that would be expected if this reporting system were adopted in a general community based practice.

We chose to avoid time consuming cell counts and specific measurements. It was a particular imperative that these reports could be completed by the reporting pathologists in a time comparable to the pre-existing unstructured formats. We also insisted that reporting was performed by a range of anatomical pathologists both in community practice and in tertiary referral institutions, rather than limiting reporting to 1 or 2 pathologists with ENT expertise.

In practise, we have fulfilled these aims, in particular compliance of pathologists (across several disparate laboratories) is excellent (> 95%).

All pathologists received a rudimentary history stating only the clinical diagnosis of either CRS with or without polyps.

Mucin is noted as "**Not assessable**" if no significant surface mucin available for grading.

If Left and Right samples are taken, then the more severe side is reported.

Please do not hesitate to contact our group if you have any queries:
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Category	Guide	Notes on grading			
Overall degree of inflammation		**Absent:** virtually no inflammatory cells in subepithelial stroma	**Mild:** single and "small" groups of inflammatory cells identified focally, typically in locations such as perivascular, amongst mucoserous glandular tissue or in the superficial subepithelial stroma. The inflammatory infiltrate does not distort mucosal structures.	**Moderate:** Inflammatory cells form larger, more confluent aggregates, yet the distribution is still patchy. There may be some distortion of mucosal structures, such as separation of mucoserous glandular acini. There may be stromal oedema of any degree from	**Severe:** Confluent, often dense aggregates and sheets of inflammatory cells which distort, expand or obscure normal mucosal structures. Oedema is usually mild to severe. Some areas of relatively absent inflammation may still be observed, and are not incompatible with a designation of severe.

				absent to severe with polypoid change.	
Eosinophil count	The original intention was to make counts at three random areas of the mucosa. In practice due to the often patchy nature of the infiltrates, which may also be separated by severe stromal oedema, we have chosen the approximately 3 most dense collections of eosinophils in the stroma.	**<10 per HPF:** may have 1 field only >10	**10-100 per HPF:** 10-100 eosinophils per HPF, in 2 or more areas	**>100 per HPF:** >100 eosinophils per HPF, in 2 or more areas	
Neutrophil infiltrate	Include both stromal and intra-epithelial cells	**Absent**	**Focal:** focal neutrophils seen in epithelium or stroma, including adjacent to areas of ulceration	**<20/HPF** confluent areas of neutrophil infiltration	**>=20/HPF** confluent areas of neutrophil infiltration
Inflammatory predominance	This is the dominant inflammatory cell type pattern. Note ECRS with 10-100 eosinphils per HPF will frequently have a lymphoplasmacytic predominance.				
Basement membrane thickening	The red cell, at approximately 7.5 microns is used as the yardstick. In practice <7.5 microns is considered normal. Basement membrane thickening is often variable within a specimen. The greatest degree of thickening is that which is recorded.	**<7.5µm (normal)**	**7.5 - 15µm**	**>15 µm**	
Sub-epithelial oedema	self explanatory	**Absent**	**Mild** (focal or perivascular only)	**Moderate** (distortion of mucosal structure)	**Severe** (diffuse/polypoid change)
Hyperplastic/papillary change	These are hyperplastic changes of the respiratory epithelium which may include cellular crowding, heaping up and papilliform projections, but also	**Absent**	**Present**		

	includes areas of respiratory epithelium with dense confluent areas of goblet cells.				
Mucosal ulceration	Absence or presence is noted. The presence of a stromal reaction distinguishes true ulceration from intraoperative denudation.	**Absent**	**Present**		
Squamous metaplasia	Absence or presence is noted.	**Absent**	**Present**		
Fibrosis	May occur in polyps, and in mucosa without polyp formation. The presence and extent of fibrosis is most easily confirmed using polarised light to identify areas of excess collagen deposition.	**Absent**	**Partial**	**Extensive**	
Mucin					
Fungal elements	Fungal stains, both diastase/PAS and Methenamine Silver should be used routinely when there is more than a trace of mucin present. We do not use these stains in the absence of mucin. When present, mucin is generally located on the mucosal surface, but may be seen in distended ducts of subepithelial mucoserous glands.	**Not assessable**	**Absent**	**Present** Fungal stains, both diastase/PAS and Methenamine Silver positive	
Charcot-Leyden Crystals		**Not assessable**	**Absent**	**Present**	
Eosinophil aggregates	Note that lamination of these aggregates is typical and readily observed whilst scanning mucin at low magnification	**Not assessable**	**Absent**	**Present** Minimum criteria would be 2 aggregates of 10 to 20 cells each.	