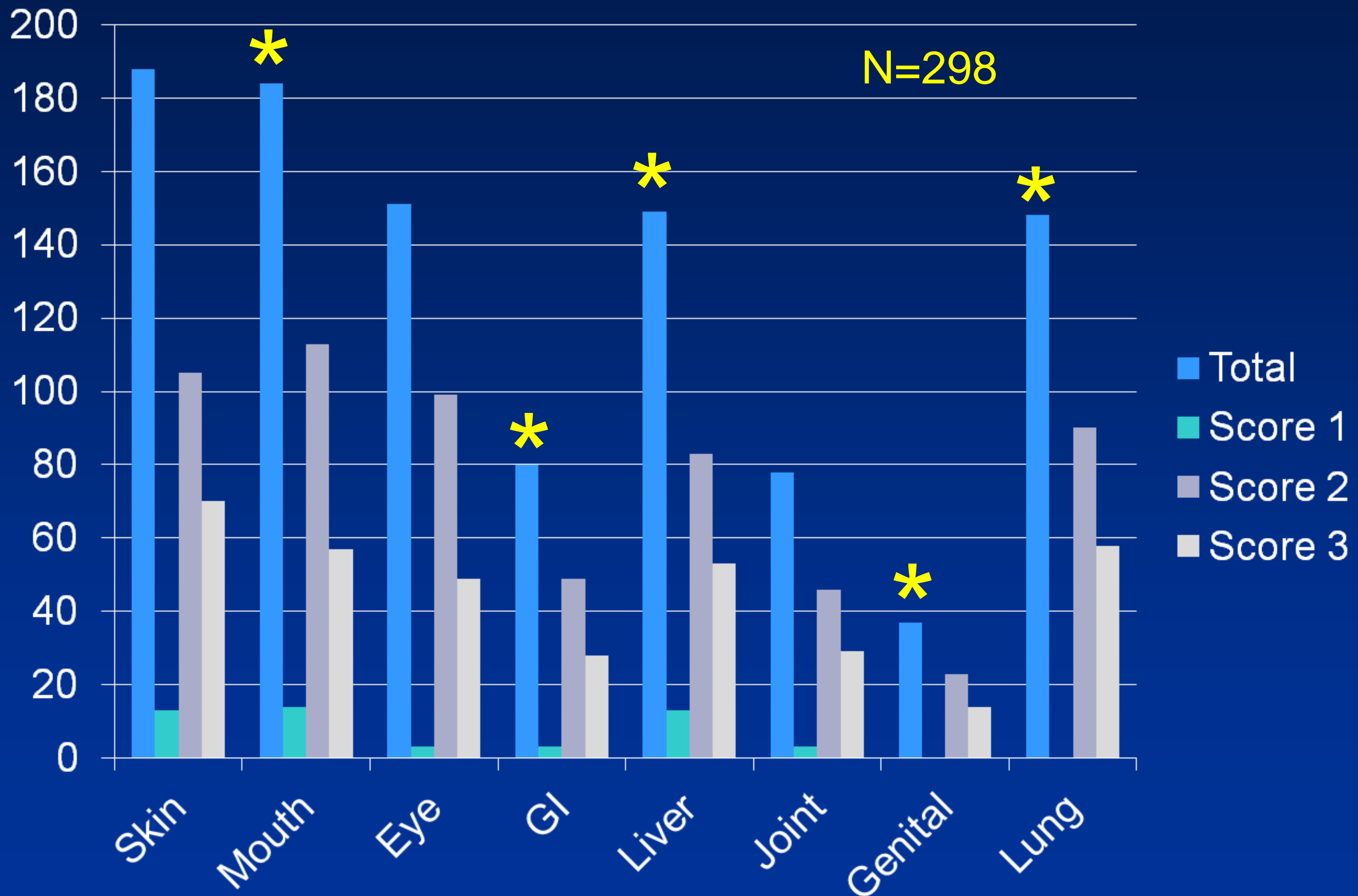
Assessment of chronic GVHD according to NIH criteria: Easily done in daily practice Oral and other extra cutaneous manifestations

Steven Pavletic, MD
National Cancer Institute, NIH, Bethesda, Maryland

GVHD Subcommittee of the Complications and QOL WP, EBMT, London, April 9, 2013

Chronic GVHD NIH organ scores



Arai et al, Blood. 2011;118:4242

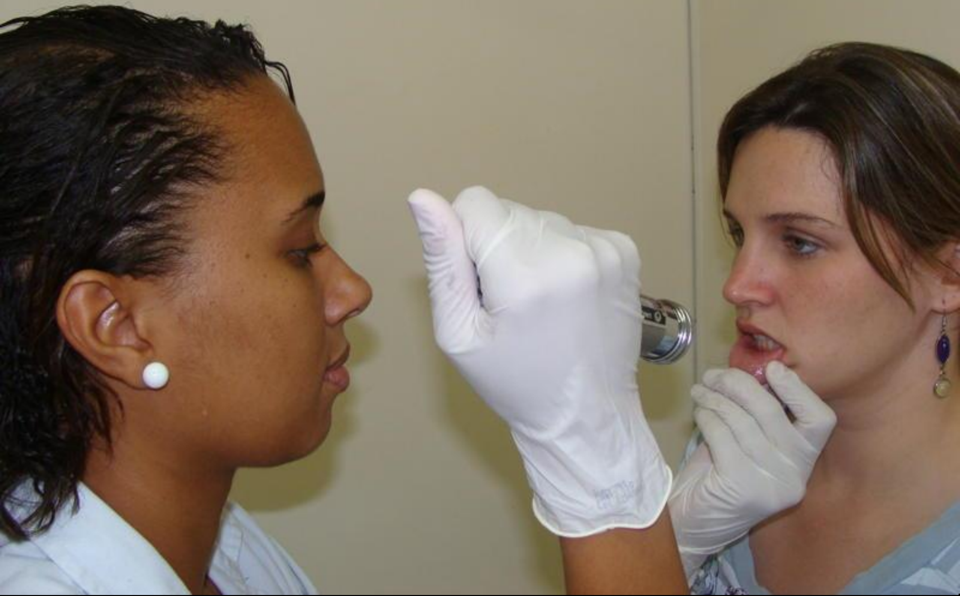
Assessment of chronic GVHD: Easily done in daily practice

Establish diagnosis	1. Not acute GVHD 2. Diagnostic or distinctive 3. Rule out other disease
Organ score	"As is" Based on symptoms, signs, function, therapy May not score if other cause obvious
Global score	Prognosis Therapeutic decision Quality of life and function

Diagnosis of Oral cGVHD

Diagnostic	Distinctive*	Other	Common
Lichen-type features	Xerostomia		Gingivits
Hyperkeratotic plaques	Mucocele		Mucositis
Restriction of mouth opening from sclerosis	Mucosal atrophy		Erythema
	Pseudomembranes		Pain
	Ulcers		

Role of biopsy: diagnostic or non-specific for cGVHD
mostly done for differential diagnosis

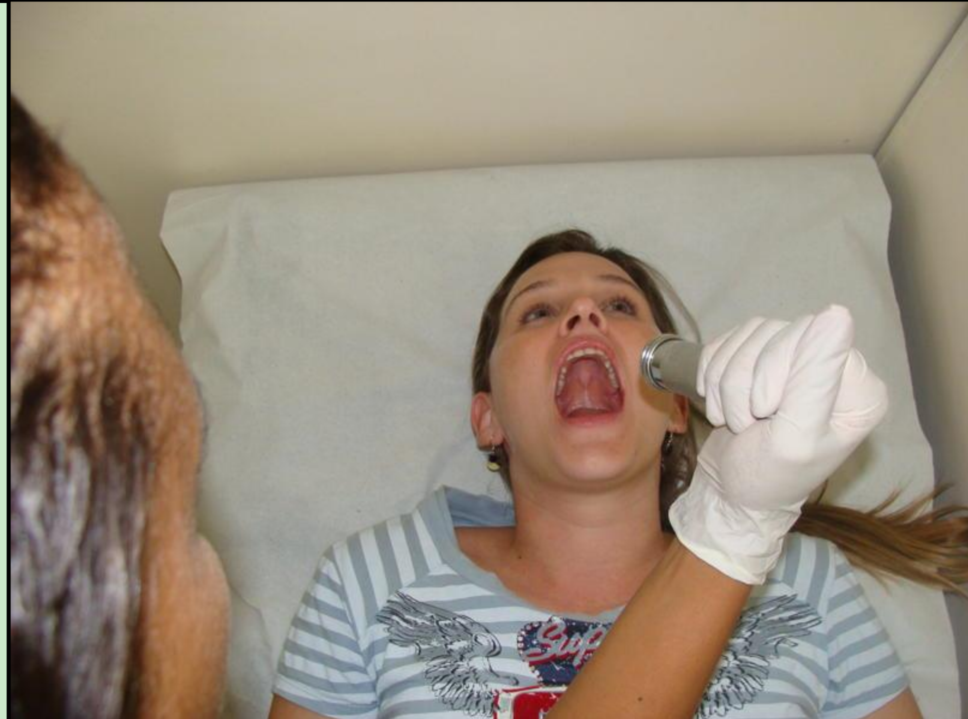


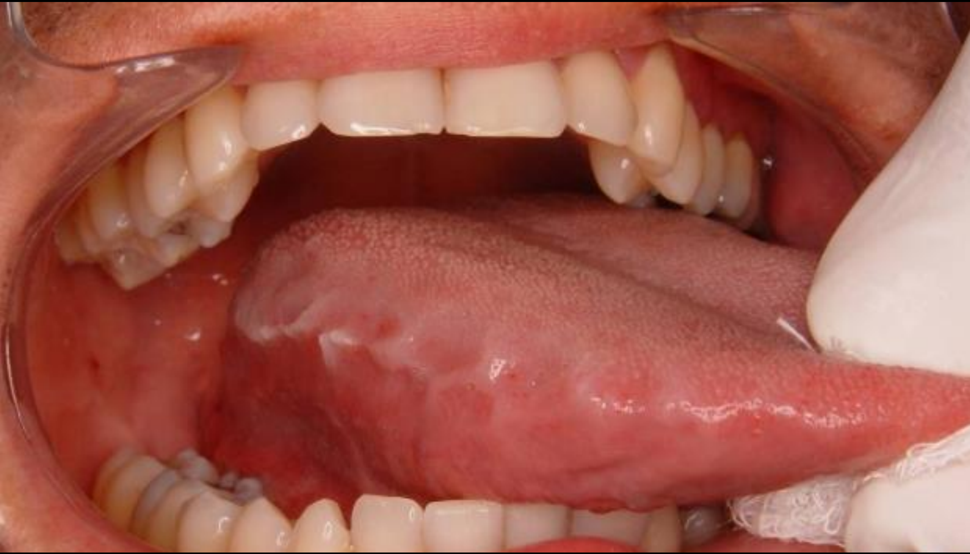
Patient Positioning

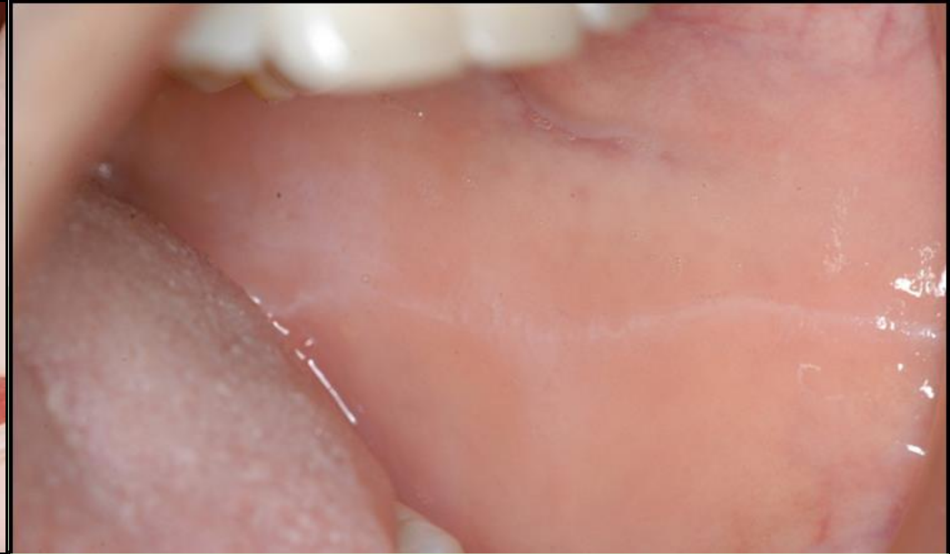
- Sitting up or supine
- Comfortable for patient and examiner
- Direct visualization of all surfaces
- Move head to assure direct vision

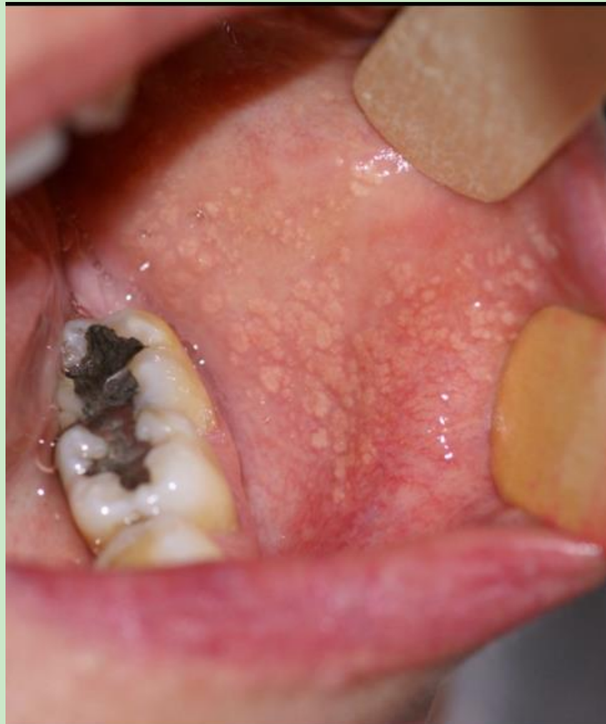
Halogen Light Source

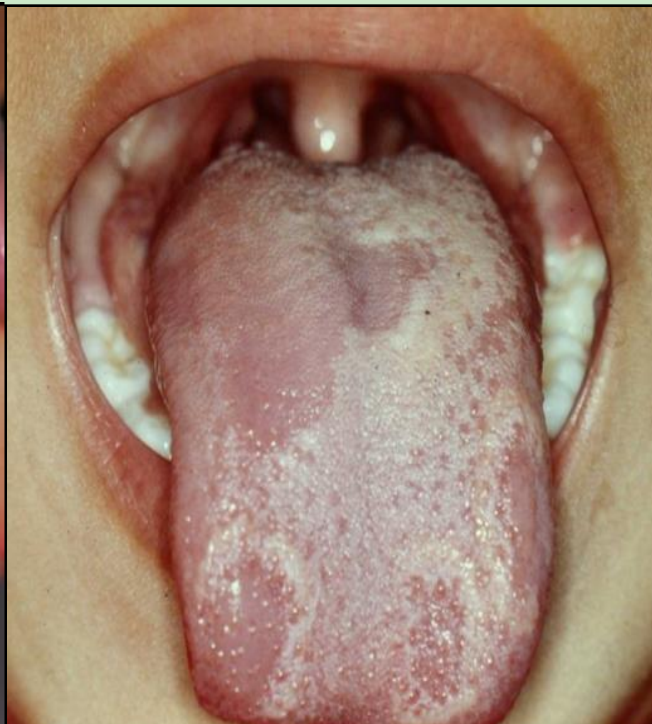
- Otoscope
- Ophthalmoscope
- Halogen flash light

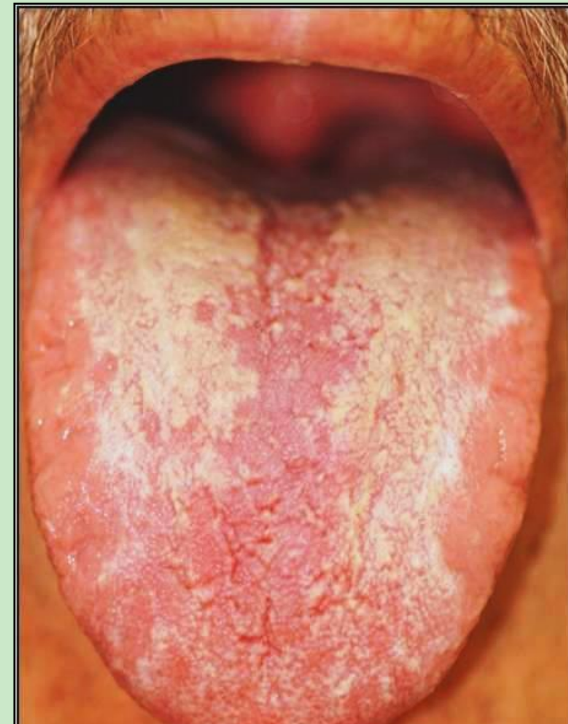



Crenated tongue

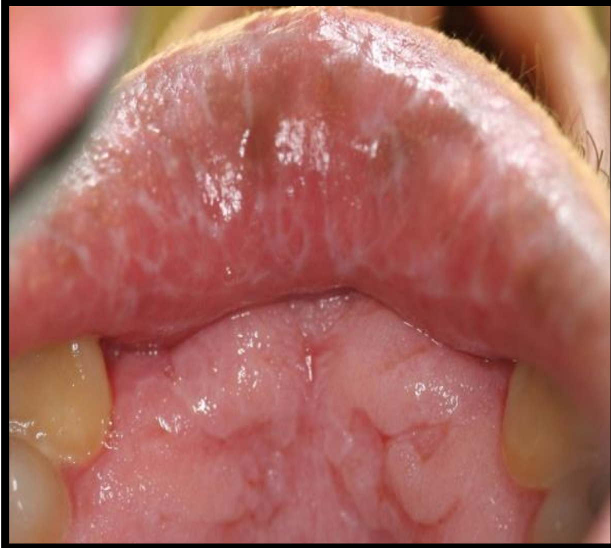

Linea Alba


Fordyce Granules

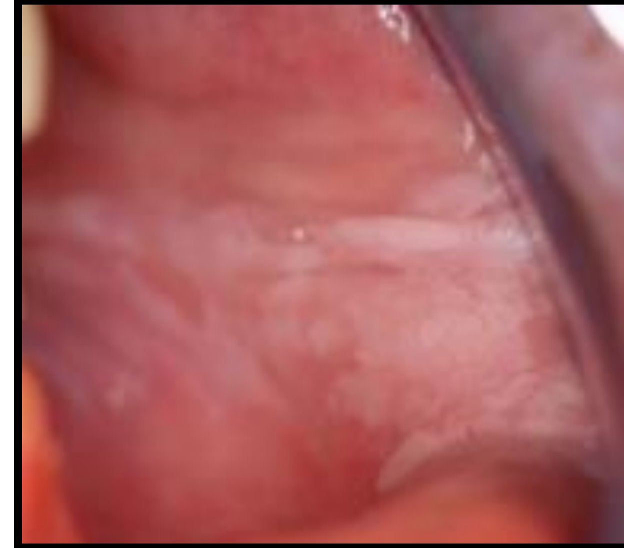

Geographic tongue

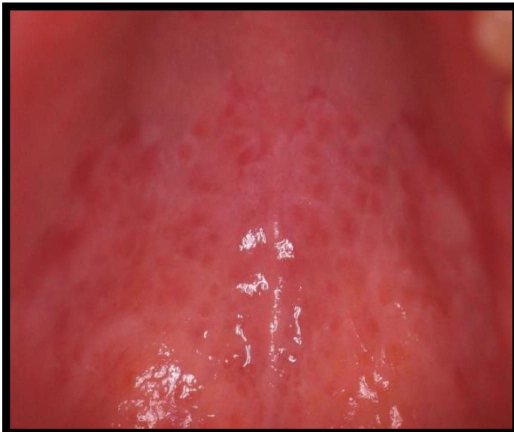

Hairy tongue

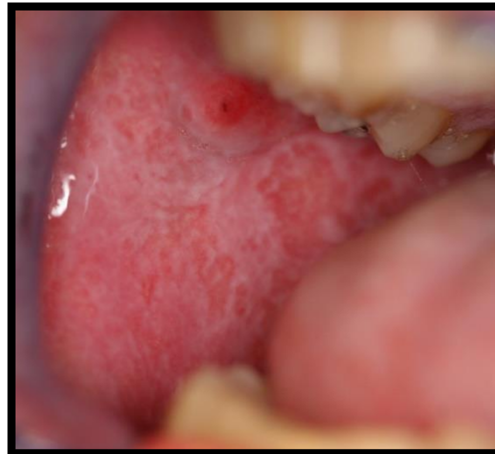
Diagnostic: Lichen-type features



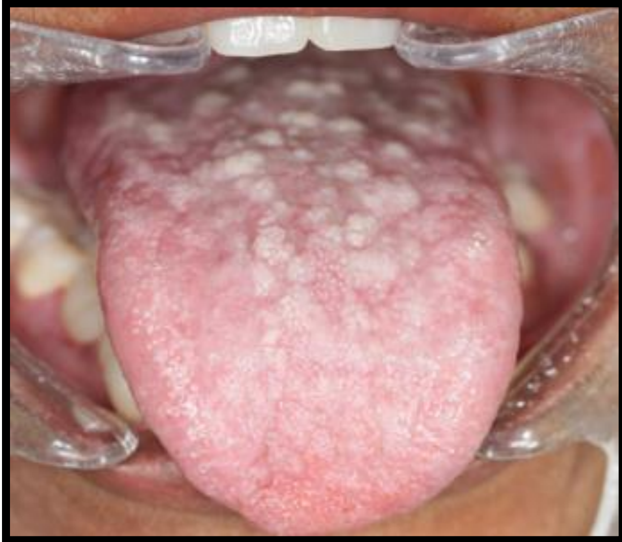
Erosive Lichenoid Lesion

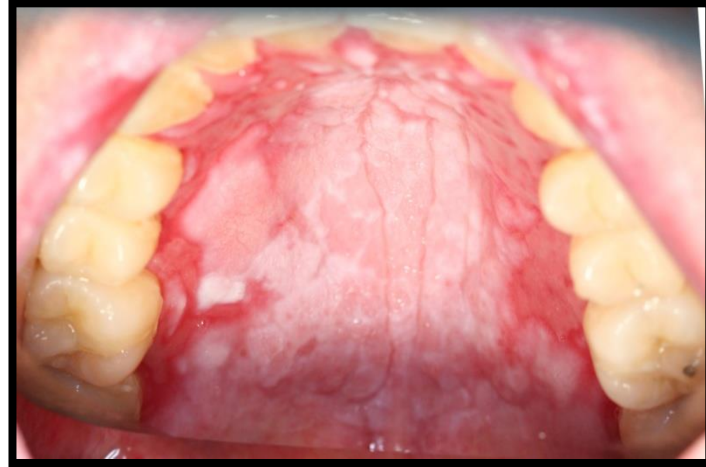


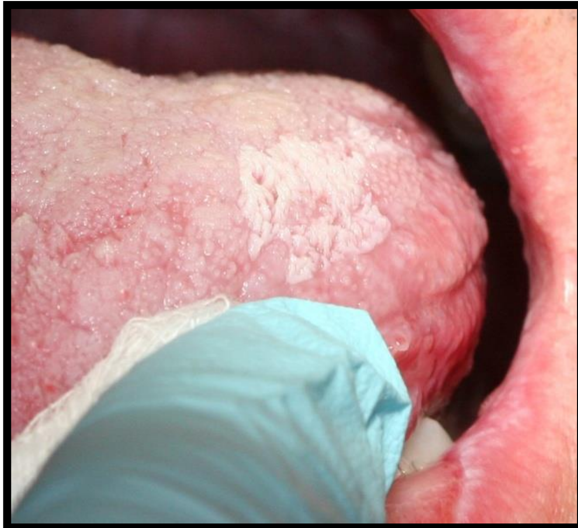


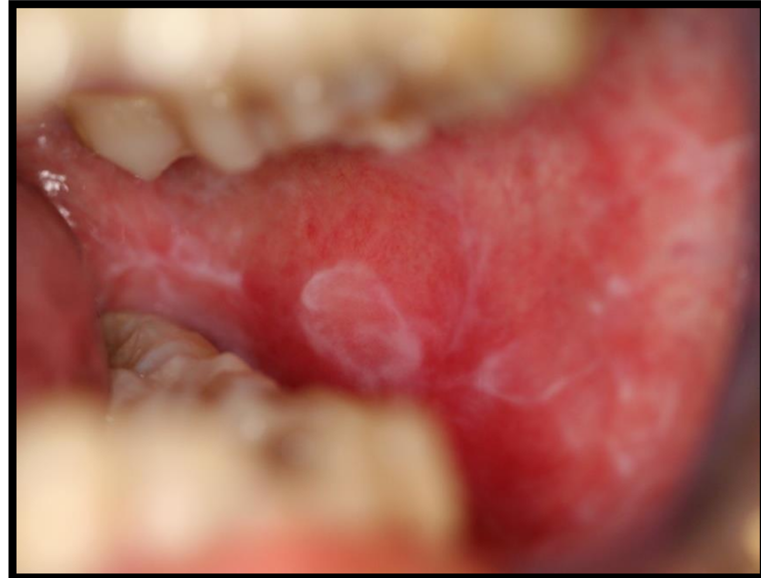


Diagnostic: Hyperkeratotic plaques

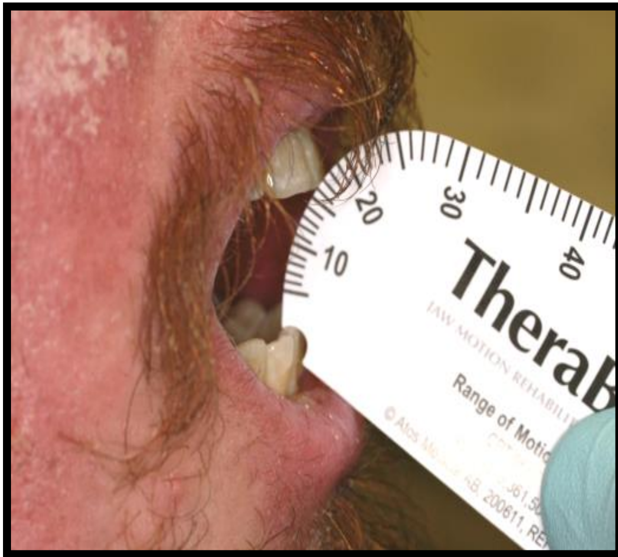


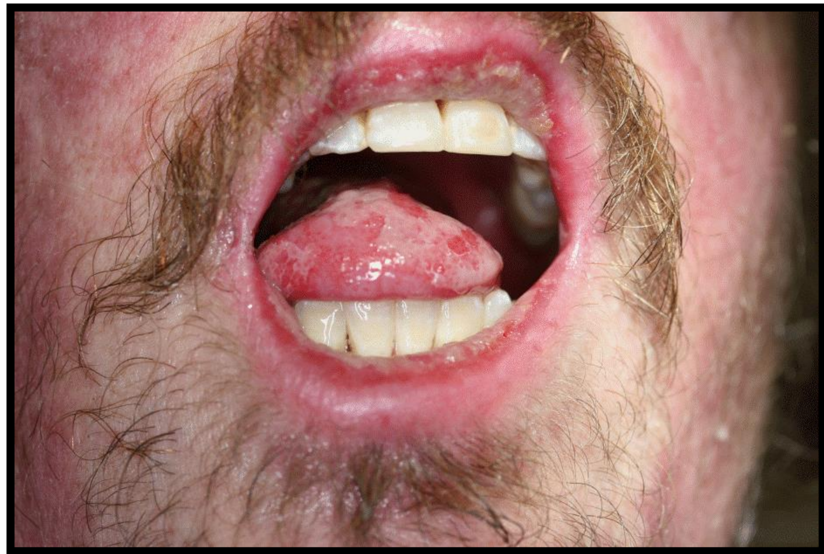






Diagnostic: Restriction of mouth opening from sclerosis





Organ scoring of oral chronic GVHD

0	1	2	3
❑ **No symptoms**	❑ Mild symptoms **with** disease signs but not limiting oral intake significantly	❑ Moderate symptoms **with** signs with partial limitation of oral intake	❑ Severe symptoms **with** disease signs on examination with major limitation of oral intake

Symptoms:
Oral pain or sensitivity
Mouth Dryness
Uncomfortable to eat
Change of taste

Limited oral intake:
Need to avoid certain foods
Difficulty swallowing
Need to interrupt meals
Limited calories

Differential diagnosis: Cancer or precancerous lesion, infection, drug reaction, therapy-related mucositis

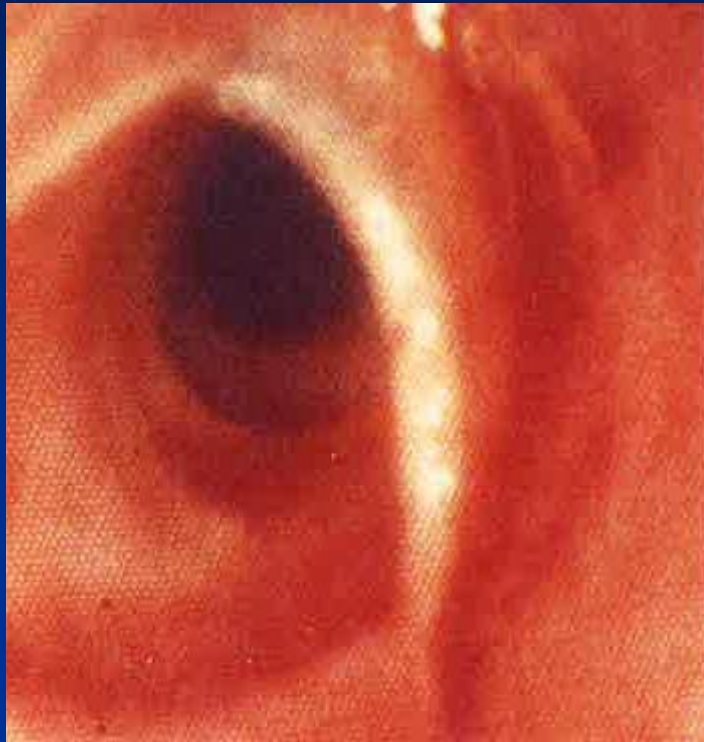
Diagnosis of GI cGVHD

Diagnostic	Distinctive	Other	Common
Esophageal web		Exocrine pancreatic Insufficiency	Anorexia, Nausea, Vomiting
Esophageal strictures or stenosis in the upper to mid third			Diarrhea Weight loss Failure to thrive (children)

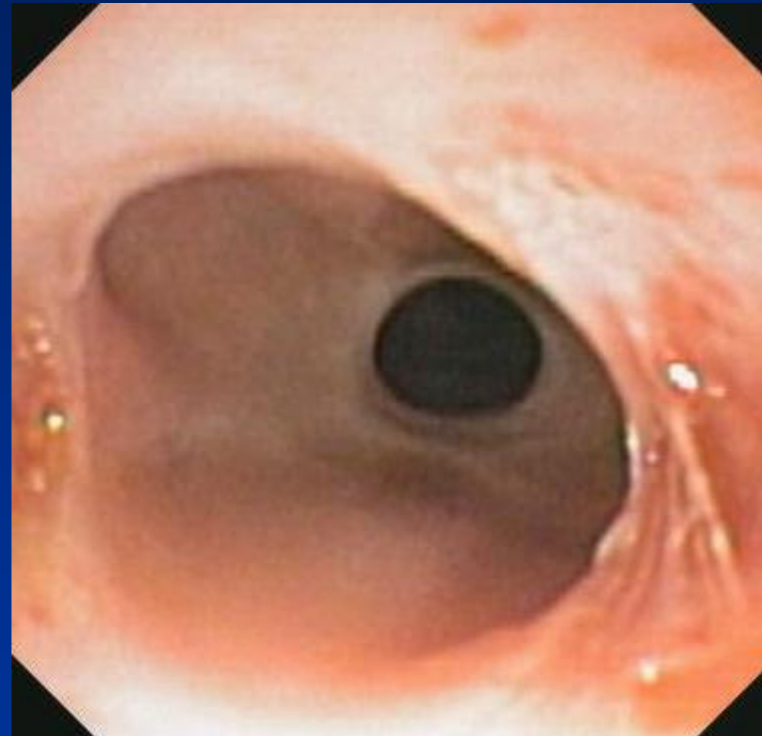
Role of GI biopsy: non-specific for cGVHD
used for isolated GI GVHD and differential diagnosis

Diagnostic Signs

Esophageal web



Esophageal stricture



post dilation

Organ scoring of GI chronic GVHD

❑ **No symptoms**	❑ Symptoms such as dysphagia, anorexia, nausea, vomiting, abdominal pain or diarrhea without significant weight loss (<5%)	❑ Symptoms associated with mild to moderate weight loss (5-15%)	❑ Symptoms associated with significant weight loss >15%, requires nutritional supplement for most calorie needs OR esophageal dilation

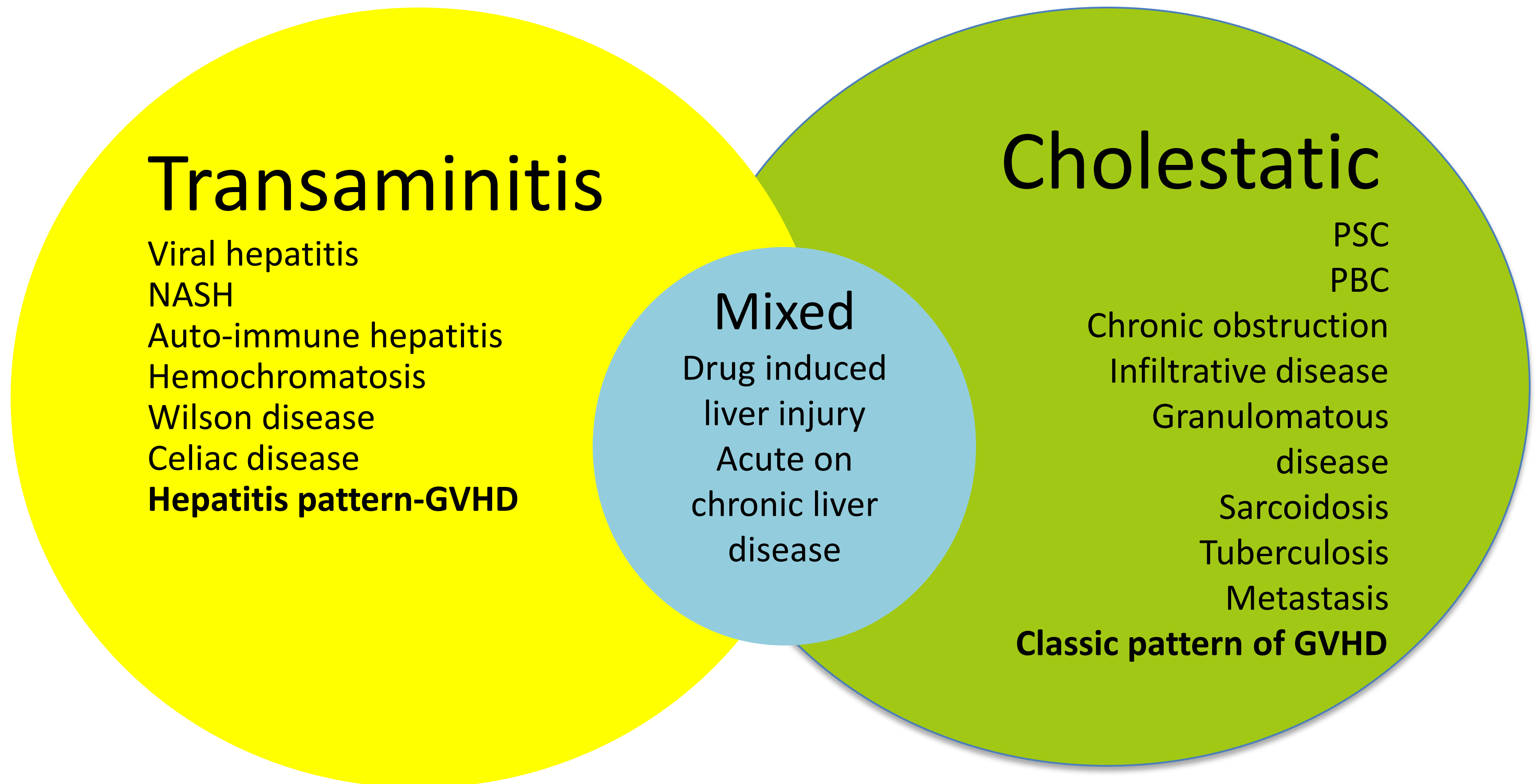
Differential diagnosis: Broad (infections, drug-induced, metabolic, functional)

Diagnosis of Liver cGVHD

Diagnostic	Distinctive	Other	Common
			Total bilirubin, AP, AST, ALT >2xULN

Role of biopsy: non-specific for cGVHD
probably under utilized
role in isolated liver GVHD and differential diagnosis
isolated liver GVHD can't be reliably classified as chronic

Pattern of liver enzyme elevation and differential diagnosis of GVHD



Organ scoring of liver chronic GVHD

❑ Normal LFT	❑ Elevated Bilirubin, AP, AST or ALT <2xULN	❑ Bilirubin >3mg/dl or AP, AST or ALT 2-5 xULN	❑ Bilirubin, AP, AST or ALT >5xULN

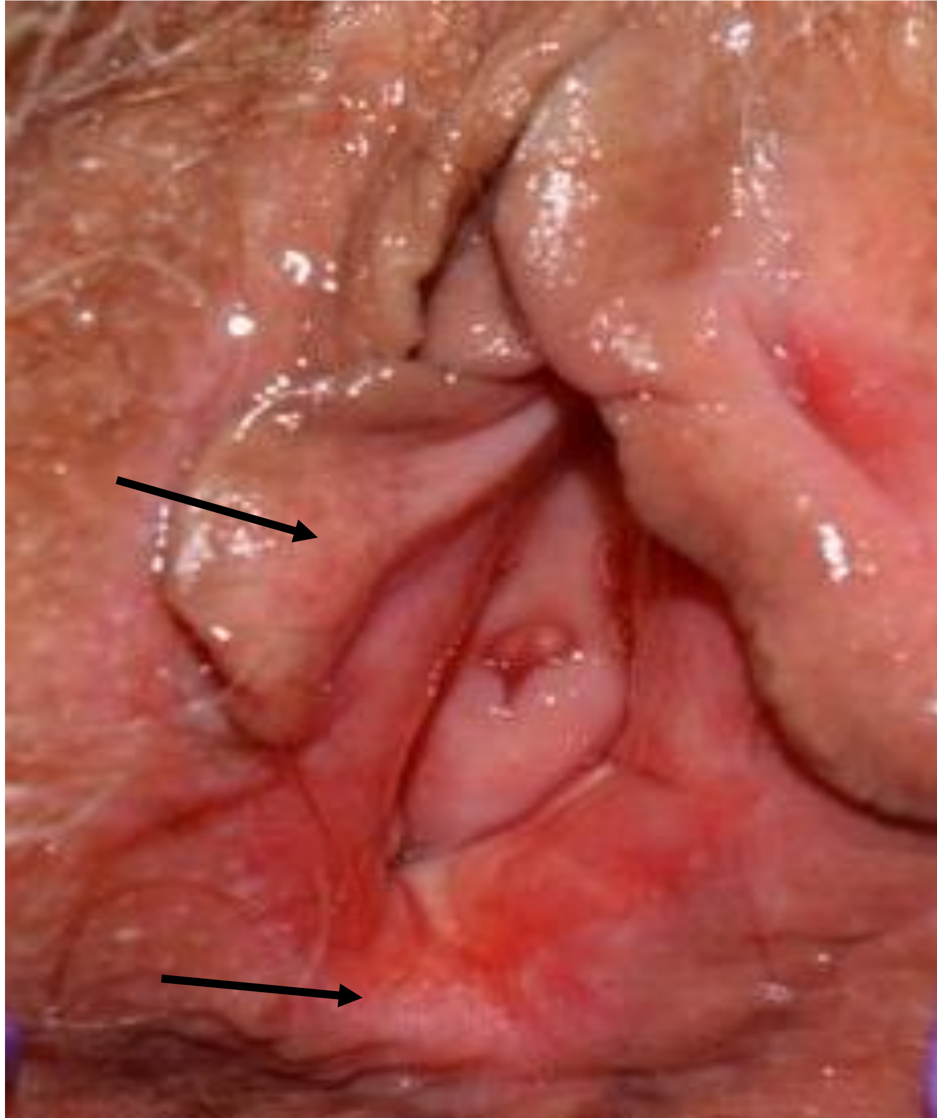
Differential diagnosis: Infection, drugs, metabolic, functional, extra-hepatic

Diagnosis of Genital cGVHD

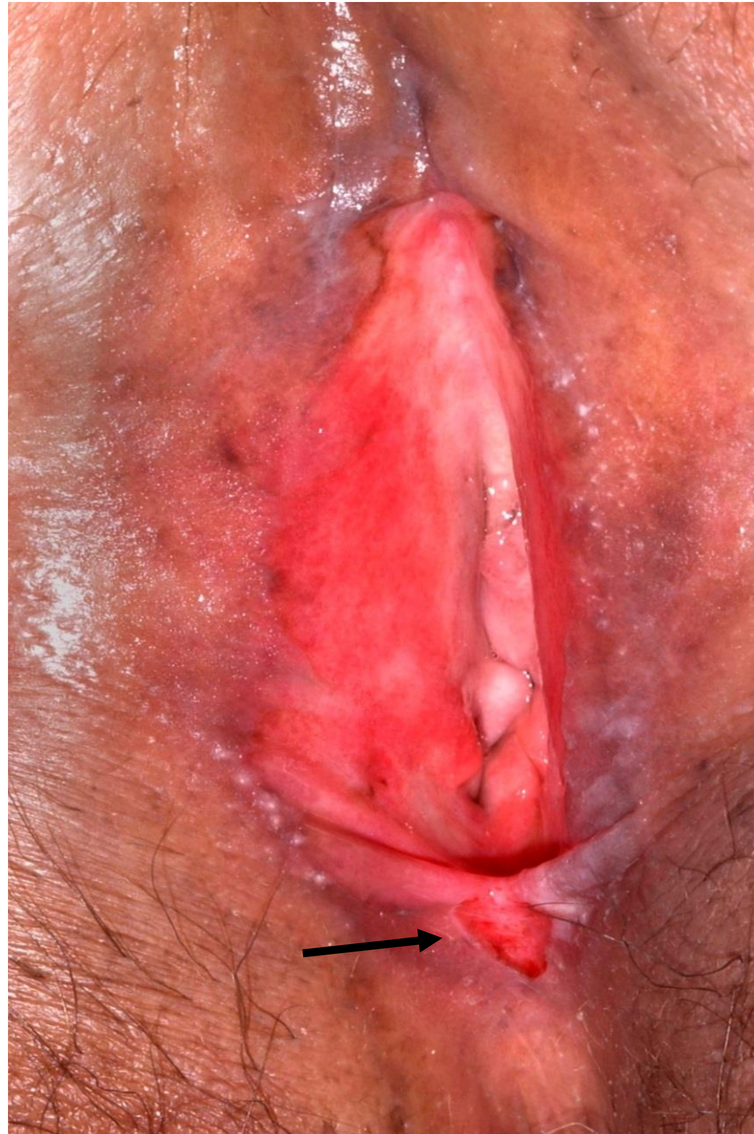
Diagnostic	Distinctive	Other	Common
Lichen planus-like features	Erosions		
Vaginal scarring	Fissures		
Vaginal stenosis	Ulcers		

Role of biopsy: diagnostic or non-specific for cGVHD
rarely done, mostly for differential diagnosis

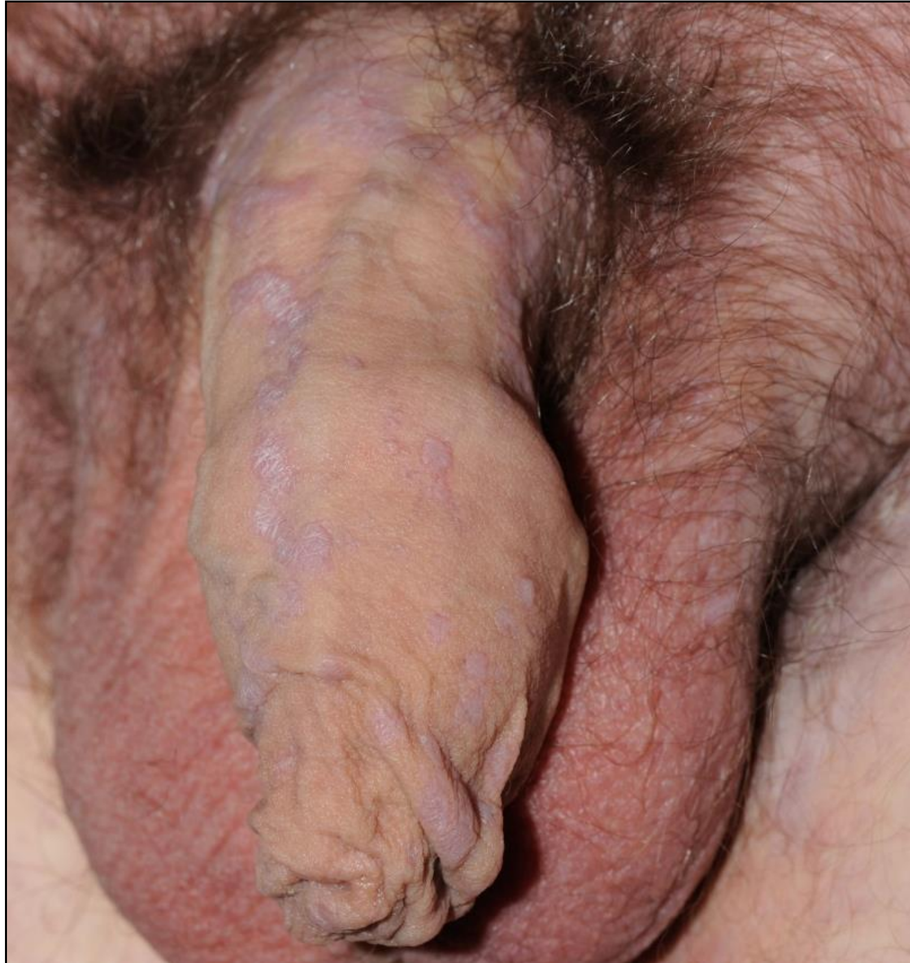
Diagnostic: Reticulated leukokeratosis (lichen-planus like) of the right labia minora and posterior forchette



Diagnostic: sclerosis (scarring) of the labia; note tear/fissure at posterior commissure (distinctive)



Diagnostic: Lichen planus-like, violaceous papules which may coalesce into ring-like small plaques



Organ scoring of genital (female) cGVHD

❑ No symptoms	❑ Symptomatic with mild distinct signs on exam AND no effect on coitus and minimal discomfort with exam	❑ Symptomatic with distinct signs on exam AND with mild dyspareunia or discomfort with exam	❑ Symptomatic with advanced signs (stricture, labia agglutination or severe ulceration) AND severe pain with coitus or inability to insert vaginal speculum

Symptoms: Spontaneous vulvar pain, pain or burning on urination, vulvar pain with tight jeans, riding the bike, during the foreplay, dyspareunia

Differential Diagnosis: infection, menopausal, malignancy, drugs effect

Diagnosis of Lung cGVHD

Diagnostic	Distinctive	Other	Common
Bronchiolitis obliterans (BO) diagnosed with lung biopsy	**BO (BOS) diagnosed with PFTs and radiology (CT)**		**BOOP (COP)**

Role of biopsy: diagnostic for cGVHD (BO)
risky
rarely done, mostly for differential diagnosis

NIH cGVHD Criteria for Clinical Diagnosis of BO (BOS)

All of the following:

- FEV1/FVC < 0.7 and FEV1<75% predicted
- RV>120% and HR CT inspiratory and expiratory cuts (air trapping, small airway thickening or bronchiectasis)
- No evidence of active respiratory infection
- ≥1 distinctive cGVHD manifestation in a separate organ

Filipovich et al, BBMT;11:945; 2005

Organ Scoring for Lung cGVHD

Done only after cGVHD is diagnosed in any organ
Lung Score >0 does not equal BO!!

	Score 0	Score 1	Score 2	Score 3
LUNGS*	No symptoms	Mild symptoms (shortness of breath after climbing one flight of steps)	Moderate symptoms (shortness of breath after walking on flat ground)	Severe symptoms (shortness of breath at rest; requiring 0_2)
FEV1 [ ] DLCO [ ]	FEV1 > 80% **OR** LFS=2	FEV1 60-79% **OR** LFS 3-5	FEV1 40-59% **OR** LFS 6-9	FEV1 <39% **OR** LFS 10-12

The LFS (***L***ung ***F***untion ***S***core) = FEV1 score + DLCO score (range 2-12):
>80% = 1; 70-79% = 2; 60-69% = 3; 50-59% = 4; 40-49% = 5; <40% = 6

The final NIH lung score (0-3) is determined by maximum of individual components
FEV1 is scored only if DLCO is not available and therefore LFS can not be calculated

Special place of lungs in the NIH global severity scoring of cGVHD

Lungs are not part of mild cGVHD!

Mild

- 1-2 organs (no lungs)
- Maximum organ score 1

Moderate

- Three or more organs with max score 1
- One organ with max score 2
- Lung score of 1

Severe

- Score of 3 in any organ or site
- Lung score of 2

*Global severity is replacing “limited-extensive” nomenclature

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