

# NOTE DE SERVICE

## MEMORANDUM

Date	2023-10-23	Memo n°: 20231020-02
À :	Utilisateurs des services de cytopathologie du CUSM	
To:	Service users of the MUHC Cytopathology Laboratory	
De/From:	Dr. Manon Auger	(person 2)
Titre:	Directrice du laboratoire de cytopathologie, CUSM	
Title:	Director of the Cytopathology Laboratory, MUHC	
Objet :	<b>Changements des glossaires diagnostiques pour les rapports de CYTOPATHOLOGIE</b>	
Subject:	<b>Changes to the diagnostic glossaries of CYTOPATHOLOGY reports</b>	

*see below for English version*

En réponse à de récents développements dans les glossaires standardisés internationaux pour les diagnostics de la cytologie de la thyroïde et pancréaticobiliaire (avec la 3ème édition du Système Béthesda pour la cytologie de la thyroïde ainsi que la 1ère édition du Système WHO pour la cytologie pancréaticobiliaire), il y aura une mise à jour des glossaires diagnostiques cytologiques utilisés au laboratoire de cytopathologie du CUSM, effectifs dès maintenant..

### **I. Changements au glossaire diagnostique pour la cytologie de la thyroïde, tels que recommandés par le Système Béthesda 2023**

- L'interprétation diagnostique "Insatisfaisant" due l' à hypocellularité/acellularité" ou pour raisons techniques (par exemple, mauvaise fixation) **ne sera plus utilisée**
  - **et sera remplacée par: "Non-diagnostique"**
- Le terme "Nodule Folliculaire Bénin" **ne sera plus utilisé;**
  - **et sera remplacé par: "Maladie/lésion Folliculaire Nodulaire"**
- Le terme "Cellule de Hurthle" **ne sera plus utilisé;**
  - **et sera remplacé par: "Oncocyte"**
    - *si utilisé dans le contexte d'un processus bénin non-néoplastique: ce sera : métaplasie oncocytaire (plutôt que «métaplasie de Hurthle »)*
    - *si utilisé dans le contexte d'une néoplasie: ce sera «Néoplasie folliculaire-néoplasie folliculaire oncocytaire» (plutôt que «Néoplasie à cellules de Hurthle »)*
- L'interprétation diagnostique " *Atypie de signification indéterminée (AUS)*" continuera à être sur-classifiée comme étant soit «atypie architecturale», «atypie oncocytaire» ou «atypie nucléaire»; toutefois, «AUS, atypie nucléaire» sera davantage soulignée pour la contraster des autres types d'AUS (c. à.d celles sans atypie nucléaire) qui seront désignées comment étant «AUS-autre»

## II. Changements au glossaire diagnostique pour la cytologie pancreaticobiliaire

- L'interprétation diagnostique «Insatisfaisant» due à l'hypocellularité/acellularité **ne sera plus utilisée**
  - **et sera remplacée par: «Non-diagnostique»**
- L'interprétation diagnostique «Néoplasie-Autre: Kyste Mucineux Néoplastique» **ne sera plus utilisé;**
  - **et sera remplacé par soit:**
    - si l'atypie est de bas grade: **«Néoplasie pancreaticobiliaire, de bas grade/risque** : Contenu kystique compatible avec un KYSTE MUCINEUX NÉOPLASIQUE DE BAS GRADE (PaN-low)»
    - si l'atypie est de haut grade: **«Néoplasie pancreaticobiliaire, de haut grade/risque** : Contenu kystique compatible avec un KYSTE MUCINEUX NÉOPLASIQUE DE HAUT GRADE (PaN-high) »
- Les diagnostics «*Tumeur neuroendocrine bien différenciée* » and «Néoplasie pseudopapillaire solide » sont maintenant catégorisées comme étant «malignes» (plutôt que «néoplasie-autre»

Si vous avez besoin de clarifications concernant ces changements, n'hésitez pas à contacter Dr. Manon Auger : [manon.auger@mcgill.ca](mailto:manon.auger@mcgill.ca) ou (514) 934-1934, poste: 38772.

Merci pour l'attention portée à ce sujet.

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In response to recent developments of international standardized diagnostic glossaries for thyroid and pancreaticobiliary cytology (with the 3<sup>rd</sup> edition of The Bethesda System for Reporting Thyroid Cytopathology, and the 1<sup>st</sup> edition of the WHO Reporting System for Pancreaticobiliary Cytopathology, respectively), there is an update of the diagnostic glossaries used at the MUHC Cytopathology Laboratory, effective now.

Please find below a few key explanations about the major changes, followed by the full diagnostic glossaries used for thyroid and pancreaticobiliary cytology (in French and English).

### I. Changes related to the diagnostic glossary for thyroid cytopathology, as recommended by the 2023 Bethesda System

- The diagnostic interpretation «Unsatisfactory» due to hypocellularity/acellularity or for technical problems (eg. poor fixation) **will no longer be used;**
  - **instead, it will be replaced by «non-diagnostic»**
- The terminology «Benign follicular nodule» **will no longer be used;**
  - **instead, it will be replaced by «Follicular nodular disease»**

- The terminology “Hurthle cell” **will no longer be used;**
  - **instead, it will be replaced by “oncocyctic”**
    - *if used in the context of a benign non-neoplastic lesion, it will be referred as “oncocyctic metaplasia” (instead of the Hurthle cell metaplasia)*
    - *if used in the context of a neoplasm, it will be referred as “follicular neoplasm-oncocyctic follicular neoplasm” (instead of Hurthle cell neoplasm)*
  
- The diagnostic interpretation “Atypia of Undetermined Significance” (AUS)” will continue to be sub-classified into “architectural atypia”, “oncocyctic atypia” or “nuclear atypia”, but “AUS, nuclear atypia” will be further emphasized as being flagged as “AUS-nuclear” versus the other types of AUS (i.e, those without nuclear atypia) will be flagged as “AUS-other”.

## **II. Changes to the diagnostic glossary for pancreaticobiliary cytology**

- The diagnostic interpretation “Unsatisfactory” due to hypocellularity/acellularity **will no longer be used;**
  - **instead, it will be replaced by “non-diagnostic”**
  
- The diagnostic interpretation “Neoplasm: Neoplastic mucinous cyst” **will no longer be used;**
  - **instead, it will be replaced by either**
    - **if low-grade atypia is present: “Pancreaticobiliary Neoplasm, low-risk/grade:** Cyst contents consistent with a LOW-GRADE NEOPLASTIC MUCINOUS CYST (PaN-low)”
    - or
    - **if high-grade atypia is present: “Pancreaticobiliary Neoplasm, high-risk/grade:** Cyst contents consistent with a HIGH-GRADE NEOPLASTIC MUCINOUS CYST (PaN-high)”
  
- The diagnoses “well-differentiated neuroendocrine tumor” and “solid pseudopapillary neoplasm” are now categorized under the “malignant” category (instead of “neoplastic-other”)

If you need further clarification on any of the above changes, please do not hesitate to contact Dr. Manon Auger at [manon.auger@mcgill.ca](mailto:manon.auger@mcgill.ca) or at (514) 934-1934, ext. 38772.

Thank you for your attention in this matter.

**GLOSSAIRE DE LA THYROÏDE - THYROID GLOSSARY**

**Mise à jour de la 3<sup>ème</sup> édition du système Bethesda (2023) pour la classification cytopathologique des nodules de la thyroïde**

**Update for 3<sup>rd</sup> edition (2023) of The Bethesda System for Reporting Thyroid Cytopathology**

***SPÉCIMEN NON DIAGNOSTIQUE: (Bethesda 2023: Catégorie diagnostique I)***

*Le spécimen est acellulaire/paucicellulaire. Une nouvelle aspiration à l'aiguille fine est recommandée, si indiqué cliniquement.*

**NON-DIAGNOSTIC(Bethesda 2023: Diagnostic Category I)**

The specimen is acellular/paucicellular. Recommend a repeat aspiration, if clinically indicated.

***SPÉCIMEN NON DIAGNOSTIQUE: (Bethesda 2023: Catégorie diagnostique I)***

*Le spécimen est non-diagnostique en raison de sa mauvaise fixation et conservation. Une aspiration à l'aiguille fine additionnelle est recommandée, si indiqué cliniquement.*

**NON-DIAGNOSTIC(Bethesda 2023: Diagnostic Category I)**

The specimen is non-diagnostic due to its poor fixation and preservation. Recommend a repeat aspiration, if clinically indicated.

***SPÉCIMEN NON DIAGNOSTIQUE: LIQUIDE/CONTENU DE KYST SEULEMENT (Bethesda 2023: Catégorie diagnostique I)***

*Le spécimen consiste principalement de macrophages spumeux, compatibles avec le contenu d'un kyste. Étant donné l'absence/ la paucité d'épithélium folliculaire, la nature exacte du kyste ne peut pas être déterminée. Une corrélation avec la taille et la complexité du kyste à l'échographie est recommandée pour orienter la suite de la prise en charge.*

**NON-DIAGNOSTIC: CYST FLUID ONLY (Bethesda 2023: Diagnostic Category I)**

The specimen consists largely of foamy macrophages, consistent with cyst contents. In view of the absence/paucity of follicular epithelium, the underlying nature of the cyst cannot be determined. Recommend correlation with cyst size and complexity on ultrasound to assist with further management of the lesion.

***BÉNIN(Bethesda 2023: Catégorie diagnostique II)***

**MALADIE/LESION FOLLICULAIRE NODULAIRE (nodule colloïde)**

**BENIGN (Bethesda 2023: Diagnostic Category II)**

**FOLLICULAR NODULAR DISEASE (colloid nodule)**

***BÉNIN(Bethesda 2023: Catégorie diagnostique II)***

**MALADIE/LESION FOLLICULAIRE NODULAIRE**

**BENIGN (Bethesda 2023: Diagnostic Category II)**

**FOLLICULAR NODULAR DISEASE**

**BÉNIN**(*Béthesda 2023: Catégorie diagnostique II*)  
MALADIE/LESION FOLLICULAIRE NODULAIRE (avec dégénérescence kystique)

**BENIGN (Bethesda 2023: Diagnostic Category II)**  
FOLLICULAR NODULAR DISEASE (with cystic degeneration)

**BÉNIN**(*Béthesda 2023: Catégorie diagnostique II*)  
MALADIE/LESION FOLLICULAIRE NODULAIRE (avec métaplasie oncocytaire).

**BENIGN (Bethesda 2023: Diagnostic Category II)**  
FOLLICULAR NODULAR DISEASE (with oncocytic metaplasia).

**BÉNIN**(*Béthesda 2023: Catégorie diagnostique II*)  
MALADIE/LESION FOLLICULAIRE NODULAIRE (avec métaplasie oncocytaire et dégénérescence kystique).

**BENIGN (Bethesda 2023: Diagnostic Category II)**  
FOLLICULAR NODULAR DISEASE (with oncocytic metaplasia and cystic degeneration)

**BÉNIN**(*Béthesda 2023: Catégorie diagnostique II*)  
Compatible avec un KYTE DU TRACTUS THYRÉOGLOSSE.

**BENIGN (Bethesda 2023: Diagnostic Category II)**  
Most consistent with THYROGLOSSAL DUCT CYST.

**BÉNIN**(*Béthesda 2023: Catégorie diagnostique II*)  
Compatible avec une THYRŌÏDITE CHRONIC LYMPHOCYTAIRE.

**BENIGN (Bethesda 2023: Diagnostic Category II)**  
Most consistent with CHRONIC LYMPHOCYTIC THYROIDITIS.

**BÉNIN**(*Béthesda 2023: Catégorie diagnostique II*)  
Compatible avec une THYRŌÏDITE GRANULOMATEUSE.

**BENIGN (Bethesda 2023: Diagnostic Category II)**  
Most consistent with GRANULOMATOUS THYROIDITIS.

**ANORMAL**  
ATYPIES DE SIGNIFICATION INDÉTERMINÉE (*Béthesda 2023: Catégorie diagnostique III*) (Voir commentaire).

**ABNORMAL**  
ATYPIA OF UNDETERMINED SIGNIFICANCE (**Bethesda 2023: Diagnostic Category III**) (See comment).

**COMMENT:** There are follicular cells with architectural atypia (AUS-other). The differential diagnosis includes follicular nodular disease versus a follicular neoplasm. Recommend additional investigations (repeat aspiration?) for clarification of diagnosis, if clinically indicated.

**ANORMAL**

**ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III)** (Voir commentaire).

**ABNORMAL**

**ATYPIA OF UNDETERMINED SIGNIFICANCE (Bethesda 2023: Diagnostic Category III)** (See comment).

**COMMENT:** There are follicular cells with architectural atypia (AUS-other). The differential diagnosis includes follicular nodular disease versus a follicular neoplasm; the former is favoured. Recommend additional investigations (repeat aspiration?) for clarification of diagnosis, if clinically indicated.

**ANORMAL**

**ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III)** (Voir commentaire).

**ABNORMAL**

**ATYPIA OF UNDETERMINED SIGNIFICANCE (Bethesda 2023: Diagnostic Category III)** (See comment).

**COMMENT:** There are follicular cells with architectural atypia (AUS-other), but evaluation is limited by the scant cellularity. The differential diagnosis includes follicular nodular disease versus a follicular neoplasm. Recommend additional investigations (repeat aspiration for better sampling?) for clarification of diagnosis, if clinically indicated.

**ANORMAL**

**ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III)** (Voir commentaire).

**ABNORMAL**

**ATYPIA OF UNDETERMINED SIGNIFICANCE (Bethesda 2023: Diagnostic Category III)** (See comment).

**COMMENT:** There are follicular cells with architectural atypia (AUS-other), but evaluation is limited by air-drying artefact. The differential diagnosis includes follicular nodular disease versus a follicular neoplasm. Recommend additional investigations (repeat aspiration?) for clarification of diagnosis, if clinically indicated.

**ANORMAL**

**ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III)** (Voir commentaire).

**ABNORMAL**

**ATYPIA OF UNDETERMINED SIGNIFICANCE (Bethesda 2023: Diagnostic Category III)** (See comment).

**COMMENT:** There are follicular cells with nuclear atypia (AUS-nuclear atypia). Recommend additional investigations (repeat aspiration?) for clarification of diagnosis, if clinically indicated.

**T-AUS-NA-SC ANORMAL**

**ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III)** (Voir commentaire).

**ABNORMAL**

**ATYPIA OF UNDETERMINED SIGNIFICANCE (Bethesda 2023: Diagnostic Category III)** (See comment).

**COMMENT:** There are follicular cells with nuclear atypia (AUS-nuclear atypia), but evaluation is limited

by the scant cellularity. Recommend additional investigations (repeat aspiration for better sampling?) for clarification of diagnosis, if clinically indicated.

**T-AUS-NA-AIR ANORMAL**

*ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III) (Voir commentaire).*

**ABNORMAL**

ATYPIA OF UNDETERMINED SIGNIFICANCE (**Bethesda 2023: Diagnostic Category III**) (See comment).

**COMMENT:** There are follicular cells with nuclear atypia (AUS-nuclear atypia), but evaluation is limited by air-drying artefact. Recommend additional investigations (repeat aspiration?) for clarification of diagnosis, if clinically indicated.

**T-AUS-NA-CB ANORMAL**

*ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III) (Voir commentaire).*

**ABNORMAL**

ATYPIA OF UNDETERMINED SIGNIFICANCE (**Bethesda 2023: Diagnostic Category III**) (See comment).

**COMMENT:** There are follicular cells with nuclear atypia (AUS-nuclear atypia), present in a cystic background. Recommend additional investigations (repeat aspiration?) for clarification of diagnosis, if clinically indicated.

**ANORMAL**

*ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III) (Voir commentaire).*

**ABNORMAL**

ATYPIA OF UNDETERMINED SIGNIFICANCE (**Bethesda 2023: Diagnostic Category III**) (See comment).

**COMMENT:** There are follicular cells with architectural and nuclear atypia (AUS-nuclear atypia). Recommend additional investigations (repeat aspiration?) for clarification of diagnosis, if clinically indicated.

**ANORMAL**

*ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III) (Voir commentaire).*

**ABNORMAL**

ATYPIA OF UNDETERMINED SIGNIFICANCE (**Bethesda 2023: Diagnostic Category III**) (See comment).

**COMMENT:** The specimen consists exclusively of oncocytic cells (AUS-other). The differential diagnosis includes follicular neoplasm (oncocytic follicular neoplasm) versus oncocytic metaplasia in a non-neoplastic lesion (eg, follicular nodular disease). Recommend additional investigations (repeat aspiration?) for clarification of diagnosis if clinically indicated.

**ANORMAL**

**ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023: Catégorie diagnostique III)** (Voir commentaire).

**ABNORMAL**

**ATYPIA OF UNDETERMINED SIGNIFICANCE (Bethesda 2023: Diagnostic Category III)** (See comment).

**COMMENT:** The specimen consists exclusively of oncocytic cells (AUS-other), but evaluation is limited by the scant cellularity. The differential diagnosis includes follicular neoplasm (oncocytic follicular neoplasm) versus oncocytic metaplasia in a non-neoplastic lesion. Recommend additional investigations (re-aspiration for better sampling?) for clarification of diagnosis if clinically indicated.

**ANORMAL**

**ATYPIES DE SIGNIFICATION INDÉTERMINÉE (Bethesda 2023 : Catégorie diagnostique III)** (Voir commentaire).

**ABNORMAL**

**ATYPIA OF UNDETERMINED SIGNIFICANCE (Bethesda 2023: Diagnostic Category III)** (See comment).

**COMMENT:** The specimen consists exclusively of oncocytic cells (AUS-other), but evaluation is limited by air-drying artefact. The differential diagnosis includes follicular neoplasm (oncocytic follicular neoplasm) versus oncocytic hyperplasia in the setting of follicular nodular disease or Hashimoto thyroiditis. Clinical-radiologic correlation is advised.

**ANORMAL**

**NÉOPLASIE FOLLICULAIRE. (Bethesda 2023: Catégorie diagnostique IV)** (Voir commentaire).

**ABNORMAL**

**FOLLICULAR NEOPLASM. (Bethesda 2023: Diagnostic Category IV)** (See comment).

**COMMENT:** The histopathologic follow-up of cases diagnosed as such includes follicular nodular disease, follicular adenoma, follicular carcinoma, and FVPTC, including its indolent counterpart NIFTP. Definitive distinction among these entities is not possible on cytologic material.

**ANORMAL**

**NÉOPLASIE FOLLICULAIRE. (Bethesda 2023: Catégorie diagnostique IV)** (Voir commentaire).

**ABNORMAL**

**FOLLICULAR NEOPLASM. (Bethesda 2023: Diagnostic Category IV)** (See comment).

**COMMENT:** Although the architectural features suggest a follicular neoplasm, some nuclear features raise the possibility of an invasive follicular variant of papillary carcinoma or its indolent counterpart, NIFTP; definitive distinction among these entities is not possible on cytologic material.

**ANORMAL**

**NÉOPLASIE FOLLICULAIRE (NÉOPLASIE FOLLICULAIRE ONCOCYTAIRE). (Bethesda 2023: Catégorie diagnostique IV)**

**ABNORMAL**

**FOLLICULAR NEOPLASM (ONCOCYTIC FOLLICULAR NEOPLASM). (Bethesda 2023: Diagnostic Category IV)**



**ANORMAL**

**NÉOPLASIE FOLLICULAIRE - (NÉOPLASIE FOLLICULAIRE ONCOCYTAIRE).**(Bethesda 2023: **Catégorie diagnostique IV**) (voir commentaire)

**ABNORMAL**

**FOLLICULAR NEOPLASM (ONCOCYTIC FOLLICULAR NEOPLASM).** (Bethesda 2023: **Diagnostic Category IV**) (see comment)

**COMMENT:** Cellular aspirate of follicular cells with oncocytic features, including occasional nuclear grooves and focal papillary architecture. The findings raise the possibility of an oncocytic neoplasm with papillary features, but a papillary thyroid carcinoma cannot be excluded.

**ANORMAL**

**SUSPECT DE MALIGNITÉ**(Bethesda 2023: **Catégorie diagnostique V**)  
**SUSPECT D'UN CARCINOME PAPILLAIRE DE LA THYROÏDE** (voir commentaire)

**ABNORMAL**

**SUSPICIOUS FOR MALIGNANCY** (Bethesda 2023: **Diagnostic Category V**)  
**SUSPICIOUS FOR PAPILLARY THYROID CARCINOMA.** (see comment)

**COMMENT:** There are some follicular cells with nuclear features which are suspicious but not entirely diagnostic of papillary thyroid carcinoma.

**ANORMAL**

**SUSPECT DE MALIGNITÉ**(Bethesda 2023: **Catégorie diagnostique V**)  
**SUSPECT D'UN CARCINOME PAPILLAIRE DE LA THYROÏDE** (Voir commentaire).

**ABNORMAL**

**SUSPICIOUS FOR MALIGNANCY** (Bethesda 2023: **Diagnostic Category V**)  
**SUSPICIOUS FOR PAPILLARY THYROID CARCINOMA** (See comment).

**COMMENT:** The cytomorphologic features are suspicious for FVPTC and its indolent counterpart NIFTP. Definitive distinction among these entities is not possible on cytologic material.

**ANORMAL**

**SUSPECT DE MALIGNITÉ**(Bethesda 2023: **Catégorie diagnostique V**)  
**SUSPECT D'UN CARCINOME MÉDULLAIRE DE LA THYROÏDE.** (Voir commentaire).

**ABNORMAL**

**SUSPICIOUS FOR MALIGNANCY** (Bethesda 2023: **Diagnostic Category V**)  
**SUSPICIOUS FOR MEDULLARY THYROID CARCINOMA** (See comment).

**COMMENT:** Evaluation is limited by scant cellularity precluding confirmatory immunocytochemistry. Serum chemistry for calcitonin and CEA and/or repeat FNA for calcitonin measurement in the washout fluid should be considered.

**ANORMAL**

**SUSPECT DE MALIGNITÉ**(Bethesda 2023: **Catégorie diagnostique V**)  
**SUSPECT D'UN CARCINOME ANAPLASIQUE DE LA THYROÏDE.** (Voir commentaire).

**ABNORMAL**

**SUSPICIOUS FOR MALIGNANCY** (Bethesda 2023: **Diagnostic Category V**)  
**SUSPICIOUS FOR ANAPLASTIC THYROID CARCINOMA** (See comment).

**COMMENT:** Evaluation is limited by scant cellularity. Recommend additional investigations (repeat FNA or surgical biopsy?) for clarification of diagnosis, if clinically indicated.

**ANORMAL**

**MALIN(Béthesda 2023: Catégorie diagnostique VI)**

**CARCINOME PAPILLAIRE DE LA THYROÏDE.** (Voir commentaire).

**ABNORMAL**

**MALIGNANT (Bethesda 2023: Diagnostic Category VI)**

**PAPILLARY THYROID CARCINOMA** (See comment).

**COMMENT:** A small proportion of cases (4-6%) diagnosed as PTC on FNA may prove to be NIFTP on histopathologic examination.

**ANORMAL**

**MALIN(Béthesda 2023: Catégorie diagnostique VI)**

**CARCINOME MÉDULLAIRE DE LA THYROÏDE.** (Voir commentaire).

**ABNORMAL**

**MALIGNANT (Bethesda 2023: Diagnostic Category VI)**

**MEDULLARY THYROID CARCINOMA.** (See comment).

**COMMENT:** Immunocytochemistry performed on the cell block show that the malignant cells are positive for calcitonin, chromogranin, synaptophysin, CD56, TTF1 and CEA, while negative for thyroglobulin, supporting the above diagnosis.

**ANORMAL**

**MALIN(Béthesda 2023: Catégorie diagnostique VI)**

**Carcinome de haut grade, compatible avec un CARCINOME ANAPLASIQUE DE LA THYROÏDE.** (Voir commentaire).

**ABNORMAL**

**MALIGNANT (Bethesda 2023: Diagnostic Category VI)**

**High-grade carcinoma most consistent with ANAPLASTIC THYROID CARCINOMA.** (See comment).

**COMMENT:** Immunocytochemistry performed on cell block show that the malignant cells are positive for PAX-8 and negative for TTF-1 and thyroglobulin, consistent with anaplastic thyroid carcinoma. Nevertheless, clinico-radiological correlation is advised to rule out the possibility of metastatic carcinoma.

**GI GLOSSARY / GLOSSAIRE DU SYSTÈME GASTROINTESTINAL**  
**PANCREAS / BILE DUCT BRUSHING / STROMAL TUMOUR**  
**(updates for WHO Reporting System for Pancreaticobiliary cytopathology, 1<sup>st</sup> ed)**

**NON-DIAGNOSTIC**

The specimen is of too scant cellularity for reliable assessment.

**NON-DIAGNOSTIC**

*Le spécimen est trop peu cellulaire pour une évaluation fiable.*

**NON-DIAGNOSTIC**

The specimen consists of only gastrointestinal mucosal contaminants from along the needle tract. No lesional material is present. The biopsy does not explain the well-defined pancreatic mass seen on imaging.

**NON DIAGNOSTIQUE**

*Le spécimen n'est constitué que de contamination de cellules de la muqueuse gastrointestinale provenant du trajet de l'aiguille. Aucun matériel lésionnel est identifié. La biopsie n'explique pas la masse pancréatique vue en imagerie.*

**NON-DIAGNOSTIC**

The specimen consists of only limited pancreatic acinar material, a few scattered ductal epithelial cells, and stromal fragments. The biopsy does not explain the well-defined pancreatic mass seen on imaging.

**NON DIAGNOSTIQUE**

*Le spécimen n'est constitué que de peu de matériel acinaire pancréatique, de quelques cellules canalaire et de fragments de stroma. La biopsie n'explique pas la masse pancréatique vue en imagerie.*

**NON-DIAGNOSTIC**

The specimen consists of cyst fluid with thin proteinaceous material only. (see comment)

**NON DIAGNOSTIQUE**

*Le spécimen n'est constitué que de contenu de kyste avec matériel protéique. (voir commentaire)*

**COMMENT:**

There is no thick extracellular mucin, there are no mucinous epithelial cells, and no biochemical testing for CEA, amylase/glucose is available to support a mucinous cyst. The underlying etiology of the cyst cannot be determined from this specimen Recommend follow-up and additional investigations (repeat FNA sampling for with cyst fluid analysis for CEA and amylase?) for clarification of diagnosis, if clinically indicated.

**Negative for malignancy**

Cytological features most consistent with ACUTE PANCREATITIS.

**Négatif pour malignité**

*Caractéristiques cytologiques compatibles avec une PANCRÉATITE AIGUE.*

**Negative for malignancy**

Cytological features most consistent with CHRONIC PANCREATITIS.

**Négatif pour malignité**

*Caractéristiques cytologiques compatibles avec une PANCRÉATITE CHRONIQUE.*

**Negative for malignancy**

Revised : Sept 20238

Révisé : Sept 2023

Cytological features most suggestive of AUTOIMMUNE PANCREATITIS (See comment).

***Négatif pour malignité***

*Caractéristiques cytologiques suggérant une PANCRÉATITE AUTOIMMUNE (Voir commentaire).*

COMMENT: There is an elevated number of IgG4 immuno-labeled plasma cells relative to background IgG immune-labeled plasma cells.

**Negative for malignancy**

Cytological features most consistent with LYMPHOEPITHELIAL CYST (See comment).

***Négatif pour malignité***

*Caractéristiques cytologiques compatibles avec un KYTE LYMPHOÉPITHÉLIAL (Voir commentaire).*

COMMENT: The specimen consists of anucleated squames, keratin debris and lymphocytes.

**Negative for malignancy**

Cyst contents most consistent with PSEUDOCYST (See comment).

***Négatif pour malignité***

*Contenu kystique compatible avec un PSEUDOKYSTE (Voir commentaire).*

COMMENT: The specimen consists of non-mucinous cyst fluid with degenerative debris and/or inflammation and yellow-hematoidin pigment. The amylase level is markedly elevated (value= U/L). The CEA level is not elevated above 192 ng/ml. No epithelial cyst-lining component is seen.

**Negative for malignancy**

**Neoplastic: Benign**

Cyst contents consistent with SEROUS CYSTADENOMA (See comment).

***Négatif pour malignité***

***Néoplasique : Bénin***

*Contenu kystique compatibles avec un CYSTADÉNOME SÉREUX (Voir commentaire).*

COMMENT: The diagnosis is supported by non-mucinous cyst contents, hemosiderin-laden macrophages without pseudocyst-type cyst debris, low CEA (value= ng/mL) and low amylase (value= U/L).

**ABNORMAL**

Suspicious for malignancy. Atypical monomorphic polygonal cell population suggestive, but not diagnostic of well-differentiated neuroendocrine tumor (See comment).

***ANORMAL***

*Suspect de malignité*

*Population cellulaire atypique monomorphe polygonale suggérant, mais non diagnostique une tumeur neuro-endocrine bien différenciée (Voir commentaire).*

COMMENT: There is insufficient material to perform ancillary to confirm the diagnosis. Recommend follow-up and additional investigations (repeat FNA for cell block preparation?) for clarification of diagnosis, if clinically indicated.

**ABNORMAL**

Revised : Sept 2023

Révisé : Sept 2023

Suspicious for malignancy  
Atypical monomorphic polygonal cell population suggestive, but not diagnostic of solid pseudopapillary neoplasm (See comment).

***ANORMAL***

*Suspect de malignité*

*Population cellulaire atypique monomorphe polygonale suggérant, mais non diagnostique une néoplasie solide non-papillaire (Voir commentaire).*

COMMENT: There is insufficient material to perform ancillary to confirm the diagnosis. Recommend follow-up and additional investigations (repeat FNA for cell block preparation?) for clarification of diagnosis, if clinically indicated.

**ABNORMAL**

Atypical

Cyst contents with atypical, but degenerated cells of uncertain origin and significance (See comment).

***ANORMAL***

*Atypique*

*Contenu kystique avec cellules atypiques mais dégénérées, d'origine et de signification indéterminées (Voir commentaire).*

COMMENT: Malignancy cannot be excluded. Recommend follow-up and additional investigations (repeat FNA for cell block preparation?) for clarification of diagnosis, if clinically indicated.

**ABNORMAL**

**Pancreaticobiliary Neoplasm, low-risk/grade**

Cyst contents consistent with a LOW-GRADE NEOPLASTIC MUCINOUS CYST (PaN-low)  
(see comment).

***ANORMAL***

*Néoplasie pancréaticobiliaire, de bas grade/risque*

Contenu kystique compatible avec un KYSTE MUCINEUX NÉOPLASIQUE DE BAS GRADE  
(PaN-low)  
(Voir commentaire).

COMMENT: The diagnosis is supported by thick, colloid-like extracellular mucin, degenerative debris within mucin, elevated CEA (value= ng/ml). The mucinous epithelium shows low-grade atypia (low-grade dysplasia or intermediate grade dysplasia). The differential diagnosis includes low-grade intraductal papillary mucinous neoplasm and low-grade mucinous cystic neoplasm. Correlation with imaging is required,

**ABNORMAL**

**Pancreaticobiliary Neoplasm, low-risk/grade**

Cyst contents consistent with a LOW-GRADE NEOPLASTIC MUCINOUS CYST (PaN-low)  
(see comment).

***ANORMAL***

*Néoplasie pancréaticobiliaire, de bas grade/risque (PaN-low)*

Contenu kystique compatible avec un KYSTE MUCINEUX NÉOPLASIQUE DE BAS GRADE  
(Voir commentaire).

COMMENT: The diagnosis is supported by thick, colloid-like extracellular mucin, degenerative debris within mucin, elevated CEA (value= ng/ml). Grade is indeterminate because of the absence of mucinous epithelium., but high-grade epithelial atypia is absent, as is necrosis. The differential diagnosis includes low-grade intraductal papillary mucinous neoplasm and low-grade mucinous cystic neoplasm. Correlation with imaging is required,

**ABNORMAL**

**Pancreaticobiliary Neoplasm, high-risk/grade**

Cyst contents consistent with a HIGH-GRADE NEOPLASTIC MUCINOUS CYST (PaN-high)  
(see comment).

**ANORMAL**

**Néoplasie pancréaticobiliaire, de haut grade/risque** (PaN-high)

Contenu kystique compatible avec un KYSTE MUCINEUX NÉOPLASIQUE DE HAUT GRADE  
(PaN-high)  
(Voir commentaire).

COMMENT: The diagnosis is supported by thick, colloid-like extracellular mucin, degenerative debris within mucin, elevated CEA (value= ng/ml).

The mucinous epithelium shows high-grade atypia (high-grade dysplasia).

**ABNORMAL**

**Malignant**

WELL DIFFERENTIATED NEUROENDOCRINE TUMOR (See comment)..

**ANORMAL**

**Malin**

**TUMEUR NEUROENDOCRINE BIEN DIFFÉRENCIÉE** (Voir commentaire).

COMMENT: The diagnosis is supported by immunocytochemical staining of the epithelial cells for synaptophysin, CD56 and chromogranin.

**ABNORMAL**

**Malignant**

SOLID PSEUDOPAPILLARY NEOPLASM (See comment).

**ANORMAL**

**Malin**

**NEOPLASIE PSEUDOPAPILLAIRE SOLIDE** (Voir commentaire).

COMMENT: The diagnosis is supported by immunocytochemical staining of the epithelial cells for beta-catenin.

**ABNORMAL**

**Suspicious for malignancy**

Markedly atypical epithelial cells suspicious for, but not diagnostic of adenocarcinoma (See comment).

**ANORMAL**

**Suspect de malignité**

*Atypies cellulaires marquées suspectes, mais non diagnostiques, d'un adénocarcinome* (Voir commentaire).

COMMENT: Recommend follow-up and additional investigations (repeat FNA?) for clarification of diagnosis, if clinically indicated.

**ABNORMAL**

Revised : Sept 202311

Révisé : Sept 2023

**Suspicious for malignancy**

Markedly atypical epithelial cells in a mucinous background suspicious for (IPMN, mucinous cystic neoplasm, or mucinous cyst) with invasive carcinoma.

*ANORMAL*

*Suspect de malignité*

*Atypies cellulaires marquées dans un fond mucineux suspect (IPMN, néoplasme kystique mucineux, ou kyste mucineux) d'un carcinome envahissant.*

COMMENT: Recommend follow-up and additional investigations (repeat FNA?) for clarification of diagnosis, if clinically indicated.

**ABNORMAL**

**Malignant**

**ADENOCARCINOMA.**

*ANORMAL*

*Malin*

*ADÉNOCARCINOME.*

**ABNORMAL**

**Malignant**

**ACINAR CELL CARCINOMA.**

*ANORMAL*

*Malin*

*CARCINOME DES CELLULES ACINAIRES*

**BILE DUCT BRUSHING - ABNORMAL**

**ABNORMAL**

Atypical

Atypical ductal cells present (See comment).

*ANORMAL*

*Atypique*

*Cellules canallaires atypiques présentes (Voir commentaire).*

COMMENT: The specimen shows mildly atypical ductal epithelium. Although reactive changes are favoured, recommend follow-up and additional investigations for clarification of diagnosis, if clinically indicated.

**ABNORMAL**

Atypical

Atypical ductal cells present (See comment).

*ANORMAL*

*Atypique*

*Cellules canallaires atypiques présentes (Voir commentaire).*

COMMENT: The specimen shows moderately atypical ductal epithelium. It is unclear as to whether the atypical glandular cells are reactive or neoplastic. Recommend follow-up and additional investigations for clarification of diagnosis, if clinically indicated.

## **GI- STROMAL TUMOUR**

### **GI-GIST**

#### **ABNORMAL**

Cellular fragments of spindle cell neoplasm. Most consistent with GASTROINTESTINAL STROMAL TUMOUR (See comment).

#### **ANORMAL**

*Fragments cellulaires de néoplasme à cellules fusiformes. Compatible avec une TUMEUR STROMALE GASTRO-INTESTINALE (Voir commentaire.)*

COMMENT: DOG1, CD34 and C-KIT immunostains are positive and support the diagnosis. Desmin and S100 are negative.