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Submission of surgical specimens to the anatomic pathology laboratory: relevance and indications - Otolaryngology and oral, maxillofacial and head and neck surgery

English summary

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SUMMARY

Submission of surgical specimens to the anatomic pathology laboratory: relevance and indications

Otolaryngology and oral, maxillofacial and head and neck surgery

Introduction

Section 59 of the *Organization and Management of Institutions Regulation* (C.Q.L.R., chapter S-5, r. 5)[1] has generally been interpreted as meaning that all surgical specimens must be submitted to the anatomic pathology laboratory for analysis. This regulatory provision has, for many years, resulted in a large volume of specimens being submitted and analyzed. This generates potentially substantial costs and results in suboptimal analysis turnaround times. It is estimated that a significant proportion of these submissions may not be necessary because the anatomopathological examination is unlikely to provide information that would be useful for patient management.

To reduce the number of unnecessary requests for an anatomopathological examination and to promote optimal anatomic pathology laboratory resource utilization the ministère de la Santé et des Services sociaux asked the Institut national d'excellence en santé et en services sociaux (INESSS) to determine which surgical specimens could be considered for selective submission to the anatomic pathology laboratory and to spell out the conditions for submitting them. This fifth report, in a series of six, concerns specimens from otolaryngology and oral, maxillofacial and head and neck surgery.

Methodology

Using preestablished criteria, we conducted a systematic review of the scientific literature and of publications presenting positions, recommendations and guidance from learned societies and other organizations. In addition, contextual information and the perspectives of various stakeholders were gathered by an advisory committee consisting of individuals representing the various medical specialties concerned and by a monitoring committee consisting mainly of representatives from the professional orders and associations of the medical specialists concerned, and from different bodies, including the Régie de l'assurance maladie du Québec and the ministère de la Santé et des Services sociaux. These consultations enabled us to gather experiential knowledge, to document perceptions and the level of acceptability concerning the selective or non-selective submission of certain surgical materials and specimens to the anatomic

[1] *Compilation of Québec Laws and Regulation* (C.Q.L.R.). *Organization and Management of Institutions Regulation*, chapter V, BENEFICIARY'S RECORDS, section 59: "Where any part of a human body or any object is removed during surgery, a written report shall be prepared by the pathologist having examined that part of the human body or object. The original of the report shall be preserved in the beneficiary's record and a copy shall be kept by the laboratory, where an index cross-referenced by beneficiary and by pathology shall be constituted." (O.C. 1320-84, s. 59; O.C. 545-86, s. 25). Available at: http://legisquebec.gouv.qc.ca/en/ShowDoc/cr/S-5,%20r.%205/ (consulted on February 18, 2022).

pathology laboratory, and to determine the potential organizational, clinical, economic, ethical and legal issues.

The recommendations concerning surgical specimens from otolaryngology and oral, maxillofacial and head and neck surgery that could be selectively submitted to the anatomic pathology laboratory were developed through a 3-round simplified Delphi consultation process. This was carried out with the advisory committee's members using data and recommendations information extracted from the systematic literature search. The monitoring committee's members were then asked to assess the list of samples that could be selectively submitted and to assess the applicability, acceptability and potential impact of implementing the recommendations.

Results

Regarding the **overall clinical utility** of anatomopathological examinations of surgical specimens:

- The decision to submit or not submit surgical specimens to the anatomic pathology laboratory is usually based on clinical suspicion or the examinations' diagnostic or prognostic value;
- Changes in knowledge, technology and practice inevitably lead to changes in the clinical relevance of submitting or not submitting some of these specimens;
- Because of the nature and purpose of the surgical procedure or of the tissue's or organ's characteristics, many specimens taken must be systematically submitted to the anatomic pathology laboratory, while others should not. For some, the value of routine submission for an anatomopathological examination may be questioned. The decision should be made on a case-by-case basis according to the available scientific data, the best clinical practice recommendations, the clinical picture and the surgeon's judgment.

Regarding the **conditions for submitting** specimens for an anatomopathological examination:

- Several learned societies, including the College of American Pathologists, have proposed models for the selective submission of certain surgical specimens to the anatomic pathology laboratory in order to promote the efficient use of its resources;
- The lists of specimens that could be selectively submitted for an anatomopathological examination, as proposed in the guidelines reviewed and by certain Québec institutions, differ in terms of the number and type of specimens;
- Practice does not appear to be harmonized across Québec. Some public institutions in the health and social services network have already put in place a selective submission policy for certain surgical specimens, and others have not;

- Providing relevant clinical information (e.g., the procedure performed, the preoperative diagnosis, unusual intraoperative findings and special concerns) is key to performing an appropriate anatomopathological examination.

Regarding the **professional practice** of physicians who take specimens:

- There are appropriate ways other than submitting a specimen to the anatomic pathology laboratory to confirm that a specimen was taken (e.g., nurse confirmation and surgical notes);
- The standards for chart- and register-keeping by a physician are set out in regulations. Thus, the surgeon's surgical notes and surgery report are official documents in which any specimen taken during a surgical procedure must be documented and included in the patient's chart. The surgery report should be written or dictated within 24 hours of the procedure. This practice applies to physicians practicing in both the public and private institutions in the health and social services system and to dental surgeons practicing in public institutions.

Regarding the **clinical utility** of anatomopathological examinations of specimens from **otolaryngology and oral, maxillofacial and head and neck surgery**:

- For 40 surgical specimens initially identified, the risk of a clinically significant incidental finding was considered low for 21 specimens; 20 were based on the literature reviewed and the current selective submission lists identified, and 1 was proposed by the stakeholders consulted;
- Four surgical specimens were excluded from the selective-submission list because of the risk of an incidental finding on anatomopathological examination, the contribution of gross or microscopic findings to the prognosis, or medicolegal issues;
- Ten specimens for which the risk of a clinically significant incidental finding was considered low were specific to otolaryngology and oral, maxillofacial and head and neck surgery;
- Eleven surgical specimens were common to other areas of the anatomic pathology relevance project:
  - Six specimens were included on the selective-submission list with no changes;
  - The wording for four specimens was adapted to better reflect otolaryngology and oral, maxillofacial and head and neck surgery practice;
  - Specimens from epidermoid and sebaceous cysts were excluded from the selective-submission list for the field of otolaryngology and oral, maxillofacial and head and neck surgery. The risk of clinically significant incidental findings was considered too high for these specimens, since deeper lesions

can be discovered in practice (e.g., a median line or submuscular cyst). It appears that several differential diagnoses are associated with these lesions.

With regard to the **potential savings** associated with a change in practice in the submission of specimens for an anatomopathological examination:

- The selective-submission recommendations made by certain learned societies and organizations have led to a reduction in the workload associated with the analysis of specimens of limited or no clinical value;
- In otolaryngology and oral, maxillofacial and head and neck surgery, the reduction in the number of routine submissions to anatomic pathology laboratories for some of these high-volume specimens (e.g., tonsils from individuals under 18 years of age) should result in a faster completion of anatomopathological examinations whose results are clinically crucial, such as in oncology;
- Currently, it is difficult to estimate, even intuitively, the savings that could result from the selective submission of specimens for an anatomopathological examination, primarily because of the inability to identify and quantify in databases those anatomopathological analyses not considered relevant.

Conclusion

Upon the completion of this work, the selective-submission list for specimens from otolaryngology and oral, maxillofacial and head and neck surgery, for which the level of risk for the patient was considered low and the anatomopathological examination unlikely to provide any useful information for patient management, should contribute to more judicious anatomic pathology laboratory resource utilization. Gradual implementation involving consultation between the Council of physicians, dentists and pharmacists, the directors of professional services, the OPTILAB co-directors and other bodies responsible for the quality of care will be needed to facilitate the changes and ensure optimal risk and medical procedure quality management. Since the recommendations are based on the scientific knowledge available when they were developed, it is possible that they will be modified in light of future scientific advances that might make the anatomopathological examination of certain surgical specimens clinically useful. For this reason, the advisability of updating these recommendations will be assessed in four years, that is, in 2026.

Recommendations

In light of these findings, INESSS, in collaboration with the stakeholders consulted, has developed a set of recommendations aimed at promoting more judicious anatomic pathology laboratory resource utilization, without compromising the quality and safety of patient care and services. The first few recommendations are intended to be general in nature and apply to all the surgical disciplines in which specimens are taken and submitted for an anatomopathological examination[2].

[2] Certain provisions have been made in accordance with the current professional standards in Québec.

These recommendations appear in each of the six anatomic pathology relevance project reports. They are followed by a more specific recommendation for otolaryngology and oral, maxillofacial and head and neck surgery namely, a list of specimens that can be selectively submitted for an anatomopathological examination. Lastly, recommendations aimed at facilitating the implementation and monitoring of the proposed changes are made.

GENERAL RECOMMENDATIONS CONCERNING THE SUBMISSION OF SURGICAL SPECIMENS TO THE ANATOMIC PATHOLOGY LABORATORY
INESSS believes that certain surgical specimens might no longer need to be routinely submitted to the anatomic pathology laboratory for analysis in public institutions in the health and social services system. These specimens may be submitted on a selective basis according to clinical judgment.
To qualify for selective submission, a specimen should: ▪ be on a list of specimens eligible for selective submission to anatomic pathology; and ▪ arise from a surgical procedure for which no neoplastic or infectious process or other significant medical condition, which would warrant an anatomopathological opinion, is suspected by the clinician, based on the pre- and intraoperative findings.
All surgical specimens (organs, tissues, apparatuses, medical devices and foreign bodies) not sent to anatomic pathology must be visually examined by the surgeon to confirm that they do not exhibit any unexpected abnormalities and that the pre- and intraoperative findings are in line with expectations[3, 4].
The surgeon must record the removal, visual examination findings, intraoperative findings, and non-submission of the specimen to anatomic pathology in the patient's medical chart[9, 5].
The selective submission list proposed in this report should not, under any circumstances, be used as a substitute for clinical judgment. Therefore, the specimens on these lists can be sent to the anatomic pathology laboratory at any time at the clinician's discretion if there is some uncertainty or concern about the patient's health.
The relevant clinical information constituting the rationale for submitting a specimen on a selective submission list to the laboratory must be indicated on the examination requisition to guide the anatomopathological investigation[6].

[3] "All surgery reports must contain information about the procedure performed (the preoperative diagnosis, the procedure performed, the postoperative diagnosis, the normal or abnormal findings made during the procedure, including the organs examined and the type of examination, etc.). The surgery report must be written up or dictated within 24 hours" (translation). *La tenue des dossiers par le médecin en centre hospitalier de soins généraux et spécialisés – Guide d'exercice du Collège des médecins du Québec*, p. 29.

[4] Biological and biomedical waste disposal standards must be applied to specimens that are not sent to the anatomic pathology laboratory. *Regulation respecting biomedical waste, Environment Quality Act* (chapter Q-2, r. 12, s. 59), available at http://legisquebec.gouv.qc.ca/fr/ShowDoc/cr/Q-2,%20r.%2012.

[5] "At the end of the procedure, the surgeon must add a postoperative note summarizing the surgical findings, the procedure performed, the incidents, the blood loss, the intraoperative complications, if any, and the patient's condition at the end of the procedure." (translation). *La tenue des dossiers par le médecin en centre hospitalier de soins généraux et spécialisés – Guide d'exercice du Collège des médecins du Québec*, p. 19.

[6] "All requests for an anatomopathological examination must include the place of origin (hospital, office, operating room, outpatient clinic, etc.) and the patient's identity (last name, first name, address, sex, age, health insurance number and hospital chart number), the date of the specimen, the procedure performed, the pre- and postoperative diagnoses, the type and origin of the specimen, and any other relevant clinical information." (translation). *La tenue des dossiers par le médecin en centre hospitalier de soins généraux et spécialisés – Guide d'exercice du Collège des médecins du Québec*, p. 24.

SELECTIVE SUBMISSION RECOMMENDATIONS SPECIFIC TO OTOLARYNGOLOGY AND ORAL, MAXILLOFACIAL AND HEAD AND NECK SURGERY

After reviewing the information gathered, INESSS recommends that the following surgical specimens be submitted to the anatomic pathology laboratory on a selective basis for analysis, this throughout Québec.

! *This list is not a substitute for the clinician's judgment.*

OTOLARYNGOLOGY AND HEAD AND NECK SURGERY

- Adenoids in a person under 18 years of age
- Tonsils in a person under 18 years of age
- Otologic reconstruction and ossicle from a middle ear stapedectomy
- Tissue from a supraglottoplasty
- Tissue from a turbinoplasty
- Tissue from a tympanoplasty of normal clinical appearance

ORAL AND MAXILLOFACIAL SURGERY

- Dental appliance and restoration
- Mandibular condyle head and surrounding tissue if resected because of arthrosis or ankylosis
- Extracted tooth and associated tissue of normal clinical appearance
- Bone, ligament or muscle fragment from reconstructive surgery
- Submandibular or donor site liposuction
- Rib portion harvested for bone or cartilage grafting from a patient with no history of cancer
- Specimen from preprosthetic surgery, e.g., hyperplastic ridge, tuberosity (from a tuberoplasty), oral exostosis, torus

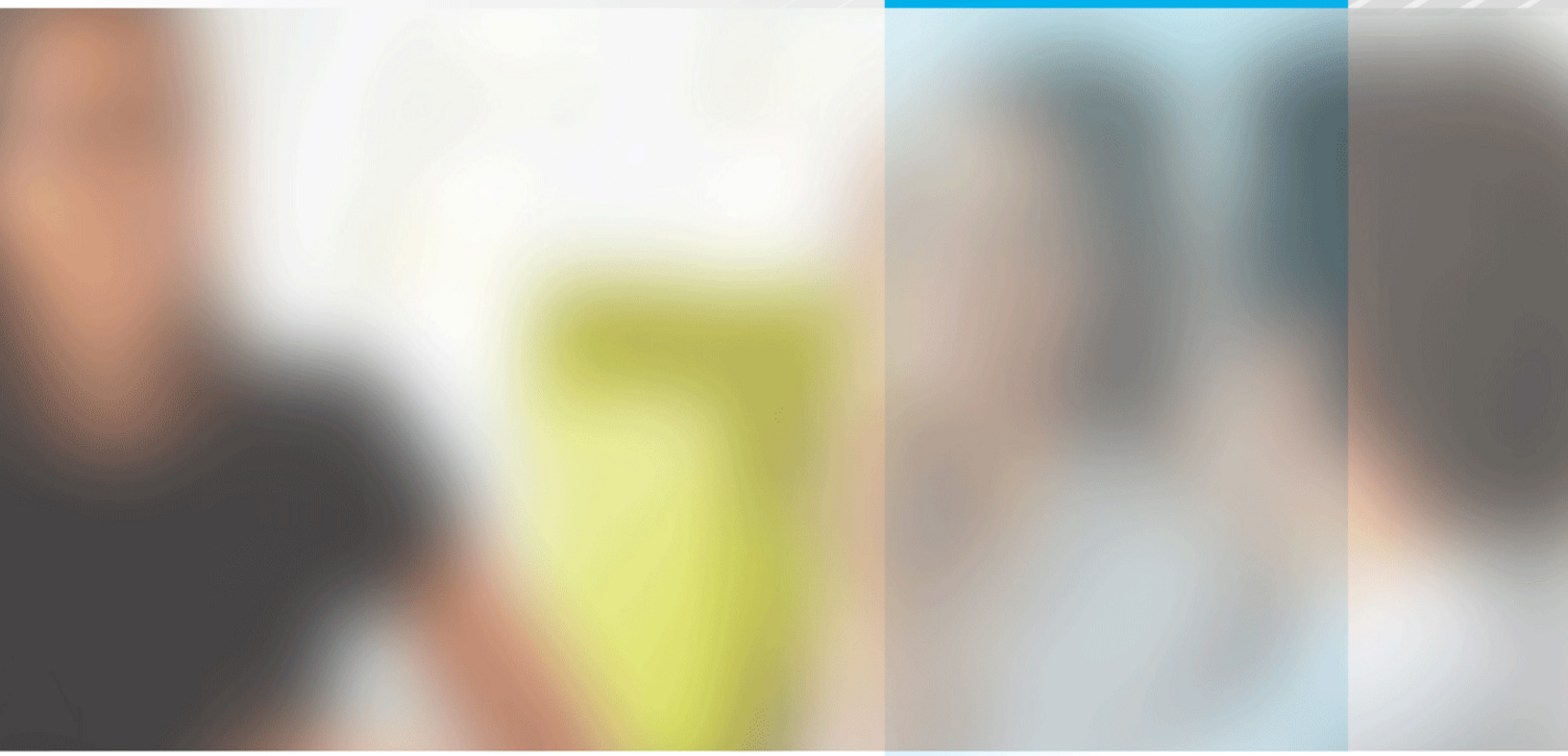
SPECIMENS COMMON TO DIFFERENT SUGICAL SPECIALTIES

- Blood clot from a hematoma or thrombus
- Foreign bodies
- Scars of normal appearance
- Scars from recent burns or from non-neoplastic surgery
- Implants and medical devices removed during a surgical procedure
- Tissue removed during debridement for a known cause
- Tissue resulting from a cosmetic (or reconstructive) correction, e.g., dog ears, rhinoplasty, scar revision, septoplasty, otoplasty, osteotomy, cleft lip and palate (excluding rhinophyma tissue)
- Excess subcutaneous tissue removed for gaining surgical access

* Although epidermoid and sebaceous cyst specimens were considered to be low risk in general surgery, plastic surgery, and dermatology, they were excluded from the selective submission list for the field of otolaryngology and oral, maxillofacial, and head and neck surgery. The risk of clinically significant incidental findings was considered too high for these specimens, as deeper lesions can be discovered in practice, e.g., a median line or submuscular cyst.

RECOMMENDATIONS FOR PROMOTING THE IMPLEMENTATION AND MONITORING OF A SELECTIVE SUBMISSION PROCESS FOR CERTAIN SPECIMENS

- The selective submission recommendations and list proposed in this report should be the subject of a structured dissemination and communication process targeting professional orders and associations as well as universities.
- A gradual implementation process for the recommendations should be planned to facilitate optimal change management. This process should be developed jointly with the Council of physicians, dentists and pharmacists, the directors of professional services, the OPTILAB co-directors and other bodies responsible for the quality of care. The process should include the development and implementation of a procedure for measuring compliance with the recommendations and quality of the practice.
- A mechanism for recording the reasons for not submitting a surgical specimen to the anatomic pathology laboratory, whether or not it is on the list, might be considered in the public institutions in the health and social services system. This mechanism, which should be simple and rapid, would reflect the exercise of clinical judgment.
- The coding of medical procedures and anatomopathological analysis should be revised and standardized to facilitate the collection and interpretation of medical administrative data and thus make it possible to monitor the optimization measures deployed.



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