

# Development of an Oral and Maxillofacial Pathology Database

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## Objective

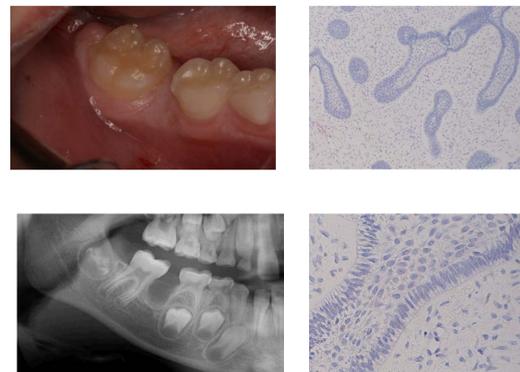
Our objective was to develop an oral pathology database using existing cases from the University of Michigan School of Dentistry Oral and Maxillofacial Pathology Biopsy Service. The intent of this database was to:

- (1) assist with clinical decision-making
- (2) develop self-assessment skills
- (3) encourage our students and clinicians to contribute to the educational process of future dental professionals

By enlisting student support in the initial phases of the database construction, our aim was to promote independent student-directed learning and to foster development of critical learning skills.

### Example Clinical Case:

**Age:** Mid-00s  
**Clinical Impression:** Abnormal follicle, central giant cell tumor, odontogenic cyst/tumor  
**Location:** Unilocular radiolucency between T and #30  
**Histology:** Long, narrow cords of odontogenic epithelium with peripheral nuclear palisading and reverse polarization in a primitive connective tissue stroma  
**Diagnosis:** Ameloblastic fibroma



## Timeline

### Phase I (Fall 2012)

Survey was administered to Class of 2014 DENT711: Selected Topics in Oral Pathology, focusing on changes students thought would help them develop critical thinking. Sample questions included:

- Should [an oral pathology database website] be created; what features would you find most helpful?
- The idea of a student-designed website to help other students with understanding oral pathology is being considered. Should this be implemented; what features would you find most helpful?

### Phase I Results:

- Survey results showed overwhelming support for case-based learning.
- 65% of students supported the idea of an oral pathology database with student involvement.
  - 69% of students indicated that they would like to have access to a large number of cases on a variety of topics.
  - 74% of students would like such a database to prepare for examinations.

### Phase IIA (2013)

Patient information (age, gender, medical and dental histories, chief complaint, and exam findings including intraoral photographs and radiographs) was de-identified and uploaded to an Excel spreadsheet.

This spreadsheet is used to link images and data to a website based on MiTools, available for any dental faculty or student to use.

Class of 2015 DENT711 Oral Pathology students were assigned random disease entities for which they had to provide a description, differential diagnosis, and peer-reviewed articles.

### Phase IIA Results:

In a post-class survey, there were some general responses regarding entering case information into the database:

- *“Sometimes coming up with a differential can be difficult. I think having the online guide that we helped with will really help with my clinical experience.”*
- *“It is very difficult to come up with differential diagnoses in the VICs. A lot of times you are running short on time and cannot think it through. I think that having the database will be extremely helpful. I find myself researching lesions as I wait for the consult to come in order to have a list of differentials. It would be nice to be able to think more quickly, or to have a quick reference tool similar to Lexicomp (what we use to reference drugs).”*



### Phase IIB (Ongoing)

The database is scheduled for availability to students in spring 2014, with cases entered on a continuous basis.

We also enlisted the support of Dr. John Gobetti, Professor Emeritus and previous director of Oral Medicine/Oral Diagnosis at the School of Dentistry; Dr. Gobetti donated clinical images spanning a forty year academic career treating patients with lesions affecting the head and neck area.

## Conclusion

- The success in the development of clinical diagnostic skills is dependent upon the “interactions” students have with the cases, disease entities, and with incorporating scientific evidence.
- Strong emphasis of this project on active learning will ensure student learning and clinician participation as well as continuity.

### Dr. Gobetti Collection:

*(Top)* Classic clinical presentation of reticular lichen planus, a relatively common, chronic dermatologic disease that often affects the oral cavity. Illustrated are fine, white lines called Wickham striae.  
*(Bottom)* Atrophy and ulceration of gingiva, or desquamative gingivitis, in a patient with erosive lichen planus is a less common presentation of the disease.

