

## *University of California, San Francisco (UCSF) Oral and Maxillofacial Surgery Training Program*

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The Dental School of the University of California (UC) in San Francisco was the first dental school to be established in the West and was initially a Dental Department within the Medical Department of the University of California and was housed within the Medical College Building. The first dental class commenced on June 1, 1882, and 8 students graduated on November 8, 1882 after what appears to have been a rigorous 4-month training program. The Dental School at that time had 6 professors, and 1 of them (William Edwin Taylor, MD) was assigned to the Department of Dental Surgery, and therefore was the first Chief of Dental Surgery. By 1883 the dental program was extended to a 2-year course and the dental surgery lectures now included anesthesia. In 1885, 13 students graduated with a DDS degree. By 1888, the Predoctoral Dental Program had increased to 3 years in length. By 1892, the dental school had severed its relationship with the Medical Department and moved to its own building. In 1901 to 1902 the Oral Surgery Department of the Dental School of the University of California in San Francisco extracted 2,882 teeth, administered nitrous oxide anesthesia to pa-

tients, and carried out the following major surgical procedures.

Fractured lower jaw: 3  
Necrosis of lower jaw : 3  
Impacted lower molars: 5  
Carcinoma of the jaw : 1  
Cleft palate: 3  
Empyema of the antrum: 5  
Trifacial neuralgia: 3  
Cellulitis of the cheek : 3  
Total cases: 26

The original Dental School Building was destroyed by the 1906 earthquake, and by 1909 a new clinic had opened on the beautiful Parnassus Heights Campus currently occupied by the University of California, San Francisco overlooking Golden Gate Park, The Golden Gate Bridge and the Pacific Ocean (Fig 1). The Oral Surgery Department had a total of 4 rooms consisting of a dark room, preparatory room, retiring and instrument room, and a large, well-lit surgery room. In 1921, Charles Dudley Gwinn joined the faculty as an instructor in dental extractions, becoming the Chief of Oral Surgery in 1928. He gave instruction in both general and local anesthe-

sia and physical diagnosis as well as extractions. The total faculty of the Oral Surgery Section had increased to 16 by 1925, and it was felt appropriate at that time to consider continuing education in oral surgery. Legislation was passed in 1924 relating to a master's degree in dental surgery. One year of graduate study was necessary to receive the additional degree, and the Oral Surgery Section was renamed the Department of Oral Surgery, Extractions and Anesthesiology. With the advanced program leading to a graduate degree in place, interest was stimulated in obtaining further training in oral surgery. Records indicate that a UC Dental graduate of 1929, Walter Waldorf, received an advanced degree in oral surgery in 1932 after spending 1 year in the department. He may represent the first graduate with oral and maxillofacial surgery training. Records exist of 3 additional graduates from this 1-year master's program prior to the Second World War.

One of these graduates, David Grimm, was appointed Chief of the Division of Oral Surgery in

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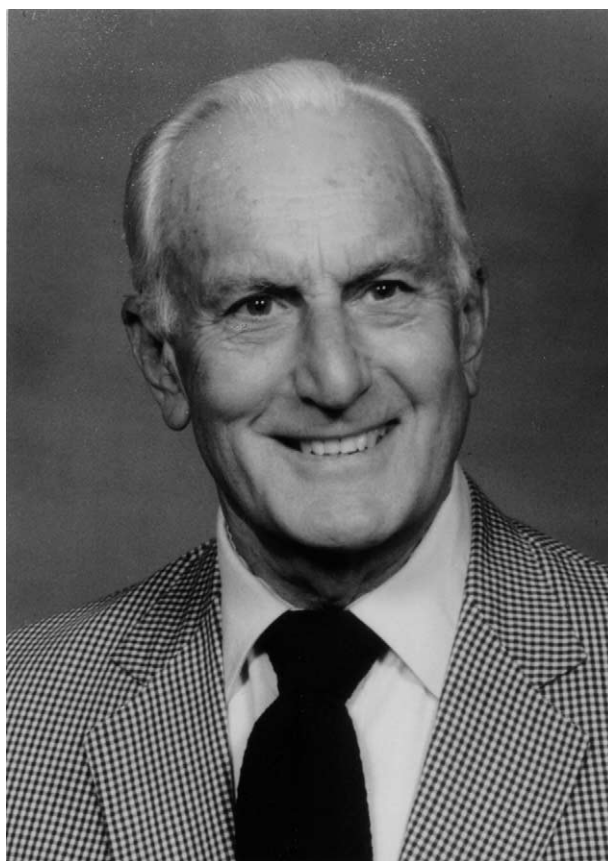
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**FIGURE 1.** Parnassus Heights Campus of the University of California, San Francisco (Schools of Dentistry, Medicine, Nursing, Pharmacy, and the Graduate School).

1954 and he realized the deficiency of the 1-year master's program, in that it was too lenient and did not address the needs of the oral surgery practitioner of that time. Realizing that a revamping of the entire program was necessary, David Grimm spent a year or more in this endeavor. He was insistent that any new program should include anesthesia, together with surgical training at exactly the same level as the medical residents. To reach this goal, Grimm spent countless hours at meetings and in heated discussions with the medical hierarchy. For a dentist to receive anesthesiology and surgical training under the guidance of doctors of medicine was unheard of in the 1940s. The Chief of Surgery at UC during these years was Leon Goldman, who did not always share the goals of the division of Oral Surgery. His daughter is Diane Feinstein, formerly the mayor of San Francisco and presently United States Senator from California. In the 1940s an occasional osteotomy for mandibular prognathism was performed, with David Grimm carrying out the bone cuts and the plastic surgeons carrying out the soft tissue dissection. The revamped Oral Surgery Program was rigorous and the oral surgery residents were required to have the same didactic background as the medical residents. They had to take basic science courses with the medical students in anatomy, bacteriology, physiology, biochemistry, pathology, pharmacology, and animal surgery. Once they had a successful passing grade in these courses they received 6 months of general anesthesia training and performed animal surgery with some of the excellent surgeons of the time. Dental surgery along with major oral surgery was undertaken during the final year of what became a 3-year training program leading to an MDS degree. This course was stressful and Donald Walker, the first to complete this

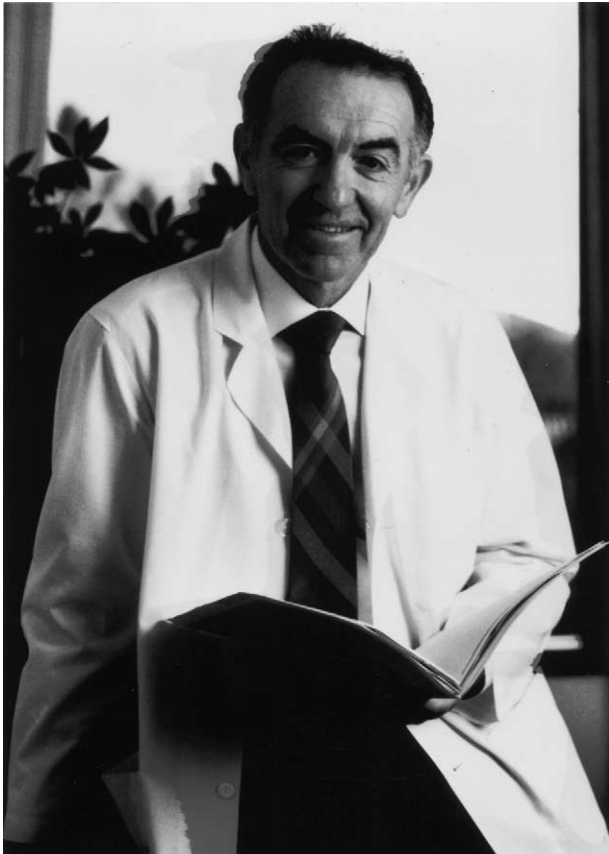


**FIGURE 2.** Raymond Heubsch, DDS, Chairman, Oral Surgery 1968–1976.

new 3-year program in 1953, developed a severe case of alopecia areata because of the stress of the program. He received no stipend and paid fees of \$250 per semester, though he did earn \$35 a month grading papers. Upon completion of the course, Donald Walker became a faculty member and was program director from 1958 to 1960. He contributed unselfishly for over 30 years to the Oral Surgery Program until his untimely death in 1986 in an airplane accident, which also took the life of a former UCSF chancellor, Francis A. Sooy. It is of interest to note that an announcement describing the new Oral Surgery Program stated that the “anesthesia course would qualify the graduates to give any type of anesthesia for any type of operation.”

In May of 1962, Captain Raymond Heubsch (Fig 2), retired

from the United States Navy, was appointed to the faculty as Assistant Professor of Oral Surgery and head of the Graduate Program. When final negotiations were underway between the dental school dean Willard Fleming and Heubsch, Ray bought up the fact that an Eastern School had offered him \$10,000 per year more than he was being offered by UC. Willard Fleming with his inevitable wit said, “Ray, that is the price one pays for living in San Francisco.” This remains a problem, and also a fact of life, to this day. The curriculum in the Graduate Program had markedly changed by 1969. There were concerns regarding the 3-year oral surgery program leading to the degree of Master of Dental Surgery. It was strongly advised at that time that the program be changed to a residency program, eliminating the MDS degree and conforming to



**FIGURE 3.** William Ware, DDS, MDS, Chairman, Oral Surgery 1976–1983.

comparable medical standards. Ray Heusch was responsible for this transition and the last MDS degree was awarded in 1971. From that time on, a certificate of completion of training has been given. By 1969 the Residency Program had increased from 1 resident per year to 2 residents per year. Ray Heusch (Fig 3) retired in 1976 and still lives in Walnut Creek, California and was succeeded by William Ware, who remained chairman until 1983. Ware was a dental graduate of UCSF in 1954, and was an early graduate of the Oral Surgery Program in 1957. He established a strong relationship with Wendall Wylie from the Department of Orthodontics, and between them they established the techniques of orthognathic surgery on the West Coast of the United States. Under Dr Ware's chairmanship, the program ex-

panded to include its rotation at San Francisco General Hospital and the Veterans Administration. Bill Ware was also responsible for the recruitment of several new faculty members including M.A. (Tony) Pogrel, a double-degree

oral surgeon. He was the first double-degree full-time faculty member since 1928; and was recruited from Great Britain to establish a program in surgical oncology within the Division of Oral and Maxillofacial Surgery. This would be complementary to the already well-established programs in orthognathic surgery, temporomandibular joint surgery, dentoalveolar surgery, and anesthesia. A strong trauma program also existed at San Francisco General Hospital. In 1981, the Program was increased to 4 years in length, with the first 4-year graduate receiving a certificate in 1985. Following the retirement of William Ware, Leonard B. Kaban, DMD, MD (Fig 4) was recruited from the Brigham & Women's Hospital and Childrens Hospital in Boston, MA to be the new chairman in 1985. Under Dr Kaban's leadership, the Division of Oral and Maxillofacial Surgery was able to administratively become one of the 5 departments within the School of Dentistry (Fig 5) and became a freestanding department in 1987 (the other departments being Stomatology, Restorative Dentistry, Growth and Development, and Dental Public Health and Hygiene). In 1987, under Dr Kaban's leadership, the number of possible residency tracks were diversified, and an integrated PhD degree in



**FIGURE 4.** Leonard B. Kaban, DMD, MD, Chairman, Department of Oral and Maxillofacial Surgery 1985–1994.



**FIGURE 5.** Dental Clinics building opened in 1980.

Oral Biology was available to residents. Also in 1987, the 4-year residency program increased its enrollment to 3 residents per year, and in 1991 an MD option was also made available. In 1994, the 4-year track was phased out and the program became a mandatory Oral and Maxillofacial Surgery/MD Program with a PhD option from that time to the present. Four residents have obtained an additional PhD degree since 1987 and a fifth is currently in training. Residents obtain their medical degree from either the University of California,

San Francisco, or the University of California, Davis. Tony Pogrel was appointed the program director in 1989. Leonard Kaban returned to Massachusetts General Hospital as the Walter Guralnick Endowed Chair of Oral and Maxillofacial Surgery and Tony Pogrel (**Fig 6**) was appointed Chairman of the Department of Oral and Maxillofacial Surgery in May of 1994 and currently retains that position. Under Tony Pogrel's chairmanship, the program has expanded and is currently accredited for 4 residents per year in its double degree program. Since 2004, the program has also offered a post residency fellowship in oral oncology. In 2004, Brian Schmidt, DDS, MD, PhD, a

UCSF alumnus, was appointed the program director.

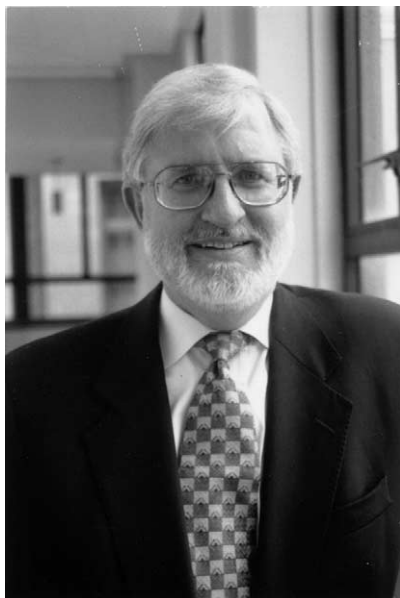
The Department of Oral and Maxillofacial Surgery at UCSF also includes an Orofacial Pain Clinic, a Hospital Dentistry Program, and a four-resident 1-year GPR program.

### **Current Status of the Oral and Maxillofacial Surgery Program University of California, San Francisco**

Professor and Chairman: M.A. Pogrel, DDS, MD

Program Director: Brian L. Schmidt, DDS, MD, PhD

The program admits 4 residents per year into a 6-year mandatory double degree program utilizing the University of California, San Francisco and the University of California, Davis, Schools of Medicine. The program can also incorporate a PhD degree, which adds 2 to 3 years to the program and currently has 1 resident in this program. The program also has a 1-year post residency fellowship in Oral Oncology. The program uses 3 institutions at the University of California, San Francisco, San Francisco General Hospital, and



**FIGURE 6.** M.A. (Tony) Pogrel, DDS, MD, Chairman, Department of Oral and Maxillofacial Surgery 1994–Present.



**FIGURE 7.** Resident Graduation, June 2005. *Back row:* Jae Jun, James Closmann, Jon Levine. *Middle row:* Junil Ahn, Brian Yang, Zachary Peacock, Charles McNeill, Janice Lee, Radhika Chigurupati, Newton Gordon. *Front row:* Brian Bast, Brian Schmidt, Tony Pogrel, Aziz Maghen, Carl Young, Patrick Duffy, Patricia Rudd.

the Veterans Administration Medical Center in San Francisco. Short rotations to the United Kingdom and India may also be available.

The Department of Oral and Maxillofacial Surgery houses the NIH Pain Center under the direction of Jon Levine, MD, PhD, a faculty mem-

ber within the department. Other externally funded research centers around the mechanisms of bone pain from oral cancer, with particular reference to nitric oxide synthetase levels and also bone induction using mesenchymal stem cells. Clinical research centers around the management of head and neck tu-

mors and the aspects of secondary cleft lip and palate deformity, with particular reference to distraction osteogenesis (Fig 7).

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## Reconstruction of Perioral Defects Following Resection for Oral Squamous Cell Carcinoma

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*and Brian L. Schmidt, DDS, MD, PhD‡*

**Purpose:** The aim of this study was to review and describe techniques for the reconstruction of large, complex perioral defects after resection of oral squamous cell carcinoma with emphasis on cosmetic and functional outcome.

**Patients and Methods:** A review of techniques and selected case presentations using different flap designs for the reconstruction of large perioral defects following resection of squamous cell carcinoma was performed. The Bernard and Karapandzic flaps were used for large lower lip defects. A Zisser flap technique was used to reconstruct a large commissure defect.

**Results:** All reconstructed patients had acceptable functional results and healed without complication. The large lower lip defects were easily closed with the Bernard and Karapandzic flaps. The commissure defect was reconstructed using the Zisser technique. While cosmesis was acceptable in all cases, the commissure was the most difficult region to reconstruct with a favorable appearance. There were no flap failures. The Karapandzic flap led to greater rounding of the commissure area and the composite resection resulted in a lack of lower lip support that was improved with prosthesis. Function was noted to be excellent in the Bernard and Karapandzic flaps, with the patients able to purse lips and blow up balloon-type devices.

**Conclusion:** The Bernard, Karapandzic, and Zisser flaps provide a predictable method to reconstruct large perioral defects following resection for oral cancer. Subsequent fabrication of a prosthesis can aid in lip support for the resected area.

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The reconstruction of perioral defects following ablation of cancer in the perioral region has been a chal-

lenge for oral and maxillofacial surgeons. Surgical management of oral squamous cell carcinoma (SCC) typically involves resection of the carcinoma with a 1 cm margin of normal appearing tissue. A large surgical defect is often encountered.<sup>1,2</sup> The goals of perioral reconstruction are esthetics and function, with oral competence and good lip control.

Various techniques have been proposed for reconstruction of large perioral defects by Abbe, Karapandzic, Estlander, Bernard, Zisser, and Gillies for reconstruction of large defects of the lips.<sup>3-8</sup> Abbe<sup>3</sup> utilized a cross lip technique to transpose tissue to the defect site. The size of the defect that can be reconstructed is limited by the amount of tissue that can be

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