NAVAL SUBMARINE MEDICAL RESEARCH LABORATORY

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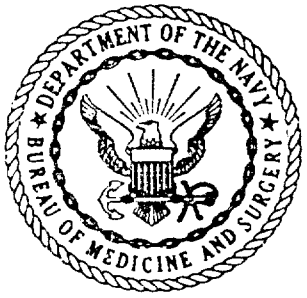

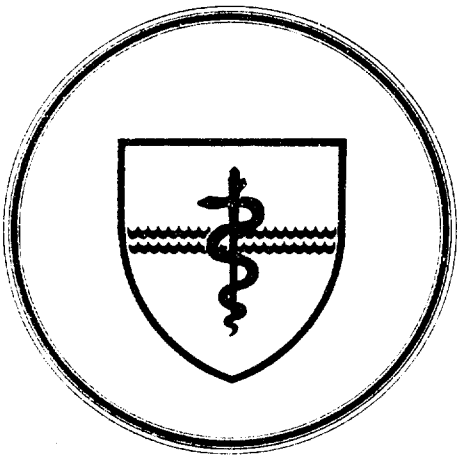

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Documentation for the Computer Assisted Diagnostic Program

for Dental Pain

by

Karen Fisherkeller, Cindy Burgess-Russotti, and Dale Hamilton

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Commanding Officer
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DOCUMENTATION FOR THE COMPUTER ASSISTED DIAGNOSTIC PROGRAM FOR DENTAL PAIN

by

Karen FISHERKELLER, Cindy BURGESS-RUSSOTTI,

and

Dale HAMILTON

NAVAL SUBMARINE MEDICAL RESEARCH LABORATORY

MEMO REPORT NO. M89-1

Naval Medical Research and Development Command
Research Work Unit No. MM33C30.002-5004

Approved and Released by:

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SUMMARY PAGE

THE PROBLEM

To provide documentation for the Computer Based Program for Dental Pain.

THE FINDINGS

This memo report provides documentation for the dental program. The program is designed for use with trauma and non-trauma related dental injuries and for the differential diagnosis of soft tissue lesions. Included in the documentation is a copy of the dental questionnaires, a list of the symptoms and diagnoses considered by the program, identification of responses used in branching to subsequent questions (branch points), identification of responses used in the diagnostic rules, and the rules used to arrive at a diagnosis.

APPLICATION

This memo report will be of use to programmers in their understanding of the computer based dental program.

ADMINISTRATIVE INFORMATION

This memo report was developed under Naval Medical Research and Development Command Research Work Unit MM33C30.002-5004. It was submitted for review on October 20, 1988, approved for publication on 10 April 1989, and designated as NSMRL Memo Report No. M89-1.

ABSTRACT

A computer based dental program has been developed by the Great Lakes Dental Research Institute, Great Lakes, Illinois, and the Naval Submarine Medical Research Laboratory, NAVSUBASE NLON, Groton, CT. It is a rule-based diagnostic system for use with trauma and non-trauma related dental emergencies and for the differential diagnosis of soft tissue lesions. The purpose of this report is to provide documentation for the program. Included in the documentation is a copy of the dental questionnaires, a list of the symptoms and diagnoses considered by the program, identification of responses used in branching to subsequent questions, identification of responses used by the diagnostic rules, and the rules to arrive at a diagnosis.

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INTRODUCTION

A computer based dental program has been developed at the Great Lakes Dental Research Institute, Great Lakes, Illinois. It is a rule based system for use with trauma and non-trauma related dental emergencies and for the differential diagnosis of soft tissue lesions. The program employs a branching logic to ask questions and to obtain information from the user. After entering patient information, a diagnosis is made by comparing symptom findings against a set of diagnostic rules. The user is provided with both possible and probable dental diagnoses and treatment information.

The dental program was originally written on an Apple computer. The Naval Submarine Medical Research Laboratory, NAVSUBASE NLON, Groton, CT, adapted the program to MS-DOS format and implemented it on an IBM-PC/AT desktop computer. The purpose of this memo report is to provide documentation for the dental program. Included in the documentation is: a copy of the dental questionnaires, a list of the symptoms and diagnoses considered by the program, identification of responses used in branching to subsequent questions (branch points), identification of responses used in the diagnostic rules, and the rules used to arrive at a diagnosis.

The purpose of this publication is to document the knowledge base (questions, rules, and logic flow) embodied in the program provided by the Naval Dental Research Institute for adaptation to the IBM-PC environment. This publication makes no evaluation of the expert information comprising the knowledge base.

SECTION I

Dental Questionnaires

There are a total of 10 questionnaires associated with the computer based dental diagnosis program. The user selects the appropriate questionnaire based on the type of dental injury, whether it is a trauma related injury, a non-trauma related injury, or a soft tissue lesion. There is 1 questionnaire each for trauma related injuries and soft tissue lesions and 8 questionnaires for non-trauma related injuries. Non-trauma related questionnaires are classified into injuries of: Tooth Specific; Teeth, Generalized/Multiple; Gingiva, Specific Area; Gingiva, Generalized; Oral Mucosa, Tooth Associated; Temporomandibular Joint/Muscle; Dental Extraction Site; and Tissue Swelling. A complete set of dental questionnaires is given in Appendix A.

Each questionnaire consists of a list of questions, branch points, and a cover sheet. Branch points are printed in bold face

and direct the user to subsequent questions based on the response(s) to previous question(s). While most branch points are straightforward because the branch is based on a response to a single question, some are more complicated. For example, a branch point in the Tooth Specific Questionnaire directs the user to "ANSWER THE NEXT THREE QUESTIONS ONLY IF YES(1) TO EITHER Q39 OR Q40, AND NO(2) TO Q21, Q29, AND Q34". Branch points reflect the logic used by the computer to collection information. If the user follows the branches given in the questionnaire, he will collect only that information which is required by the computer for a diagnosis.

The cover sheet is used to record the date, patient identification, symptom findings and diagnosis. Branch points are listed on the cover sheet as well as in the questionnaire.

SECTION II

Dental Questions

There are 77 questions used by the computer based dental program to collect information for trauma and non-trauma related dental emergencies. An additional 12 questions are used to collect information for the differential diagnosis of soft tissue lesions. The number of questions required by the program to provide a diagnosis vary from 12 to 47 and depend on the type of dental problem. A complete set of questions used by the dental diagnosis program is provided in Appendix B.

Dental Diagnoses

There are 35 diagnoses considered by the dental program in evaluating trauma and non-trauma related dental emergencies. In addition, the program provides differential diagnoses for 49 soft tissue lesions. In providing a diagnosis for trauma and non-trauma related dental emergencies, the computer displays those diagnoses which it considers to be possible and/or probable. The program does not always provide a diagnosis; occasionally it cannot reach a diagnosis based on the information given, and a statement to that effect is provided to the user. In the diagnosis of soft tissue lesion(s), a differential list is provided based on the symptom responses entered into the program. Diagnoses which are starred indicate a possible life- or mission-threatening situation. Diagnoses considered by the dental program are listed in Appendix C.

SECTION III

Responses Used by Branch Points

The computer-based diagnostic program for dental emergencies employs branching logic to obtain information from the user. Branch points direct the program to subsequent questions based on the user's response to previous question(s). Appendix D lists the 206 responses used by the computer-based dental program for the diagnosis of trauma and non-trauma related dental injuries and the 71 responses used for the differential diagnosis of soft tissue lesions. Next to each response is a letter code (Q and *Q) identifying the responses which are used by the program to branch to subsequent questions. "Q" or "*Q" next to a response means that selecting the presence of this response (Q) or the absence of this response (*Q) affects which questions are subsequently asked by the program.

Responses Used by Diagnostic Rules

Appendix D also identifies responses which are used in the rules of the dental program to arrive at a diagnosis. "D" or "*D" next to a response means that the presence or absence of the response, respectively, is used by the rules to arrive at diagnostic decision.

SECTION IV

Diagnostic Rules

The program uses a set of rules to provide a diagnosis for trauma and non-trauma related dental emergencies and for the differential diagnosis of soft tissue lesion(s). There are 70 rules used for the diagnosis of trauma and non-trauma related emergencies and an additional 49 rules used for the differential diagnosis of soft tissue lesion(s). These rules are listed in Appendix E.

SECTION V

Summary

The purpose of this report is to provide documentation for the computer-based diagnostic program for dental emergencies. The original Apple version of the program contained no documentation. This documentation is necessary before the program can be either evaluated in a laboratory setting or used in an operational environment.

First, we have developed a set of dental questionnaires which allow the user to collect patient data and then, at some later time, enter the data into the computer-based program. Branch points have been identified and listed in each of the questionnaires so that the user can choose to collect only that information which is required by the program to arrive at a diagnosis. Second, the documentation provides a complete list of questions used by the program in its evaluation of trauma and non-trauma related dental injuries and in the differential diagnosis of soft tissue lesions, as well as a list of dental diagnoses considered by the program. Third, the documentation identifies which symptom responses are used by the computer program to a) branch to subsequent questions and b) arrive at a diagnostic decision. Last, the documentation lists the 70 rules used by the program to evaluate trauma and non-trauma related dental emergencies and the 49 rules used by program in its differential diagnosis of soft tissue lesions.

APPENDIX A

Dental Questionnaires

There are a total of 10 questionnaires used by the computer based dental program. There is 1 questionnaire each for trauma related injuries and soft tissue lesions and 8 questionnaires for non-trauma related injuries.

Questionnaire for
TRAUMA RELATED DENTAL INJURIES

1. Select the area of trauma.

    1. Tooth or teeth (evaluate individually)
    2. Other oral or facial tissues or structures
    3. Both teeth and other oral/facial tissues/structures

2. Ask the patient to open and close while looking in a mirror. Examine the patient carefully. Is the occlusion (bite)

    1. Unchanged?
    2. Changed slightly?
    3. Changed appreciably?

3. Does the patient have a head injury or did he lose consciousness, vomit, or have a history of amnesia associated with the trauma?

    1. Yes
    2. No

On Question 1, if "TOOTH OR TEETH" (1), then go to Question 12.

4. Paresthesia or anesthesia (partial or complete numbness), if present, is primarily associated with which one of the following?

    1. Lower teeth and/or lower lip and chin
    2. Upper teeth and/or upper lip
    3. Lower eyelid and/or lateral areas of nose and/or cheek
    4. None of the above

5. There is evidence of

1. Enopthalmia or exopthalmia.
2. Visual disturbances (primarily diplopia).
3. Subconjunctival hemorrhage (medial or lateral).
4. Increased intercanthal distance (eyes look/feel further apart).
5. Visual asymmetry of the cheek.
6. Pain or crepitus when palpating high into the buccal vestibule, near the 2nd and 3rd molars, with your index finger.
7. More than one of the above.
8. None of the above.

6. Does the mandible deviate to the injured side when opening?

1. Yes
2. No

7. Is it painful to open or close?

1. Yes
2. No

8. If available, does a current radiograph suggest any fractured bones?

1. Yes
2. No
3. Not available

9. Grasp the mandible with both hands using your thumbs and index fingers (thumbs on teeth, fingers on skin adjacent to border of mandible). Without using undue force, gently attempt to move different segments of the mandible. Can bony segments of the mandible be displaced or easily moved?

1. Yes
2. No

10. Again, using your thumbs and index fingers (fingers and thumbs on facial and palatal surfaces of maxillary teeth segments), attempt to gently displace bony segments of the maxillary arch. Can bony segments of the maxillar be displaced or easily moved?

1. Yes
2. No

11. Palpate the facial bones, including the zygomatic arch and infraorbital rims. Is there evidence of a stepping, displacement, or depression of the facial bones?

1. Yes
2. No

12. There is evidence of bleeding

1. From abrasions or lacerations.
2. Into tissue spaces (ex. Floor of mouth, vestibule, etc).
3. From the gingival margin(s).
4. #1 and #2
5. #1 and #3
6. #2 and #3
7. All of the above
8. None of the above

On Question 1, if "OTHER ORAL OR FACIAL TISSUES OR STRUCTURES" (2), then stop data collection here.

13. Traumatically involved teeth must be evaluated individually. The particular tooth in question is

1. Displaced lingually or facially.
2. Intruded into the socket.
3. Partially extruded from the socket.
4. Totally avulsed (knocked out).
5. Not displaced.

On Question 13, if the tooth was "DISPLACED" (1), "INTRUDED" (2), or "NOT DISPLACED" (5), then go to Question 17.

14. Have more than 3 hours elapsed from the time of injury?

1. Yes
2. No

15. Is the tooth generally intact (no major fractures, cracks, chips)?

1. Yes
2. No

On Question 13, if the tooth was "PARTIALLY EXTRUDED" (3), then go to Question 17.

16. Does the socket of the avulsed tooth appear intact?

1. Yes
2. No

17. As related by the patient and from information in the dental record, if available, was the tooth otherwise healthy?

1. Yes
2. No

18. Has the injured tooth ever had endodontic (root canal) treatment?

1. Yes
2. No

On Question 13, if the tooth was "TOTALLY AVULSED" (4), then stop data collection here.

19. The tooth in question

1. Is extremely mobile.
2. Is slightly mobile.
3. Has no increased mobility.

On Question 19, if "NO INCREASED MOBILITY" (3), then go to Question 21.

20. Do adjacent teeth move when the injured tooth is moved?

1. Yes
2. No

21. There is

1. Definitely a fracture line, crack or part of the tooth missing.
2. A possible fracture line or crack in the tooth.
3. No evidence of a fracture line or crack in the tooth.

On Question 21, if there is "NO EVIDENCE OF A FRACTURE LINE" (3), then stop data collection now.

22. Does the possible fracture line or crack involve the crown of the tooth? Does the fracture line or crack or the part of the tooth missing involve the crown of the tooth?

1. Yes
2. No

23. Does the possible fracture line or crack extend below the gingival tissues? Does the fracture line, crack, or area where the part is missing extend below the gingival (gum tissues)?

1. Yes
2. No

On Question 18, if "YES" (1), then go to Question 25.

24. The pulp (nerve)

1. Has not been exposed.
2. Has been exposed and is less than 1mm in diameter.
3. Has been exposed and is greater than 1mm in diameter.

On Question 24, if the pulp "HAS NOT BEEN EXPOSED" (1), then continue, otherwise stop here.

25. Is the dentin exposed?

1. Yes
2. No

Questionnaire for
SOFT TISSUE LESION

1. Select from the menu the type of soft tissue lesion.

Q2	1.	Gingival changes
Q3	2.	Tissue color changes
Q9	3.	Vesicles, bullae, or ulcers
Q10	4.	Oral Nodules or enlargements
Q11	5.	Tongue
Q12	6.	Neck/Face/Cheek masses
STOP	7.	Quit

2. What is the nature of the gingival problem?

STOP	1.	Desquamation
STOP	2.	Atrophy or ulceration
STOP	3.	Localized hyperplastic, hemorrhagic lesions
STOP	4.	Generalized hyperplastic, hemorrhagic lesions
STOP	5.	Localized hyperplastic, non-hemorrhagic lesions
STOP	6.	Generalized hyperplastic, hemorrhagic lesions
STOP	7.	Cystic lesions
Q 1	8.	None of the above

3. What is the color of the tissue lesion(s)?

Q4	1.	White
Q5	2.	Red
Q6	3.	Brown and/or black
Q7	4.	Blue and/or purple
Q8	5.	Yellow
Q1	6.	None of the above

4. What is the nature of the white lesion(s)?

STOP	1.	Keratotic non-sloughing, non-ulcerated, non-eroded, non- papillary lesion(s)
STOP	2.	Keratotic non-sloughing, non-ulcerated, non-eroded, papillary lesions(s)
STOP	3.	Keratotic non-sloughing, non-ulcerated, eroded, non-papillary lesion(s)
STOP	4.	Keratotic non-sloughing, non-ulcerated, eroded, papillary lesion(s)
Q1	5.	Non-keratotic sloughing lesion(s)

5. What is the nature of the red lesion(s)?

STOP	1.	Single exophytic lesion
STOP	2.	Single non-exophytic lesion
STOP	3.	Generalized or multiple exophytic lesions
STOP	4.	Generalized or multiple non-exophytic lesions
Q1	5.	None of the above

6. What is the nature of the brown and/or black lesion(s)

STOP	1.	Single exophytic lesion
STOP	2.	Single non-exophytic lesion
STOP	3.	Generalized or multiple lesions
STOP	4.	Generalized or multiple non-exophytic lesions
Q1	5.	None of the above

7. What is the nature of the blue and/or purple lesion(s)

STOP	1.	Single lesion
STOP	2.	Generalized or multiple lesions
Q1	3.	None of the above

8. What is the nature of the yellow lesion(s)

STOP	1.	Single lesion
STOP	2.	Generalized or multiple lesions
Q1	3.	None of the above

9. Which of the following describe the condition?

STOP	1.	Acute vesicles
STOP	2.	Chronic vesicles
STOP	3.	Acute bullae
STOP	4.	Chronic bullae
STOP	5.	Acute ulcers
STOP	6.	Chronic ulcers
Q1	7.	None of the above

10. Which of the following descriptions applies?

STOP	1.	Small firm non-hemorrhagic
STOP	2.	Extensive firm non-hemorrhagic
STOP	3.	Single firm non-hemorrhagic
STOP	4.	Multiple firm non-hemorrhagic
STOP	5.	Single bony lump or nodule
STOP	6.	Multiple or extensive bony englargements or nodules
Q1	7.	None of the above

11. Which of the follwing categories applies?

STOP	1.	Macroglossia (enlarged tongue)
STOP	2.	Microglossia (small tongue)
STOP	3.	Cleft in tongue
STOP	4.	Fissured tongue
STOP	5.	Supernumerary tongue
STOP	6.	Smooth tongue
STOP	7.	Glossodynia (pain in tongue)
Q1	8.	None of the above

12. Which of the following applies to the mass(es)?

STOP	1.	Acute parotid swelling
STOP	2.	Chronic parotid swelling
STOP	3.	Acute discrete nodules, non-parotid area
STOP	4.	Chronic discrete nodules, non-parotid area
STOP	5.	Acute extensive diffuse swelling, non-parotid area
STOP	6.	Chronic extensive diffuse swelling, non-parotid area
Q1	7.	None of the above

Questionnaire for
TOOTH SPECIFIC, NON-TRAUMA RELATED

1. Does the area of concern appear to be either a flap of inflamed tissue partially covering an erupting tooth or an area of tissue (not always grossly inflamed) surrounding an erupting tooth?

    1. Yes
    2. No

On Question 1, if "NO" (2), then go to Question 5.

2. Is the tooth a 3rd molar (wisdom tooth)?

    1. Yes
    2. No

3. Has the patient had a similar problem

    1. Once previously?
    2. Off-and-on?
    3. Never before?

4. How long has the immediate problem lasted?

    1. For the last few days
    2. For the last few weeks
    3. Long standing

5. The degree of discomfort is

    1. Mild.
    2. Moderate.
    3. Severe (interferes sleep or work).

On Question 1, if "NO" (2), then go to Question 20.

6. Aside from possible racial pigmentation, if present, what is the color of the gingival tissues (gum)?

    1. Pink
    2. Red
    3. Pink with red gingival margins
    4. Either #2 or #3 above, but with area having a white membranous coating that can be removed

7. In the area of concern, do the gingival (gum) tissues bleed when probed or does the patient report bleeding when brushing?

1. Yes
2. No

On Question 2, if "YES" (1), then stop data collection here.

8. In the area of concern, do the gingival papillae appear

1. Scalloped and not swollen (normal)?
2. Swollen and enlarged?
3. Ulcerated or blunted?

9. Is an extremely foul odor present?

1. Yes
2. No

10. Does the patient have an elevated temperature, palpable lymph nodes of the head and neck region, or malaise?

1. Yes
2. No

11. Is a very prominent, but localized, swelling of the gingival or mucosal tissues present?

1. Yes
2. No

On Question 11, if "NO" (2), then go to Question 16.

12. Does the swelling have a diffuse inflammatory appearance, or does the swelling appear to be fluctuant, or is there evidence of a purulent exudate (pus)?

1. Yes
2. No

13. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for peridontal disease?

1. Yes
2. No

14. Has the patient had a history of periodontal abscesses?

1. Yes
2. No

15. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

If "YES" (1) to Questions 11 and 12, then go to Question 20.

If "NO" (2) to Questions 12, 13, and 14 and "NO" (2) or "UNABLE TO DETERMINE" (3) to Question 15, then stop here.

16. Do the teeth feel tight or like something is caught between them?

1. Yes
2. No

17. Does the patient relate a history of food being trapped or caught between the teeth in the area of concern?

1. Yes
2. No

On Question 9, if "YES" (1) then go to Question 19.

18. Does the patient complain of a bad taste or odor in his (or her) mouth?

1. Yes
2. No

19. Does the patient have shallow, ragged, painful ulcers covered by a gray/white membrane and surrounded by a reddish halo?

1. Yes
2. No

If "YES" (1) to either Questions 13, 14, or 15, then go to Question 20, otherwise stop here.

20. Is there significant discomfort when the area is exposed to hot or cold?

1. Yes
2. No
3. Not at present, but very recently

On Question 20, if "NO" (2), then skip the next question.

21. Does or did the discomfort linger after exposure to hot or cold (as opposed to going away immediately after removal of the hot or cold)?

1. Yes
2. No

On Question 20, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

22. Is exposed dentin present or is the discomfort primarily to cold or touch and located near the gingival (gum tissue) margin(s)?

1. Yes
2. No

23. Is the pain spontaneous (occur for no particular reason)?

1. Yes
2. No

On Question 20, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

24. When present, the pain has lasted:

1. Less than an hour.
2. An hour or longer.

25. Do eating sweets or sugar elicit the pain?

1. Yes
2. No
3. Not known

26. Do caries (decay) appear associated with the tooth either clinically or on an old x-ray?

1. Yes
2. No
3. Not known

27. Is the tooth/teeth sensitive to percussion (tapping with a metal instrument)?

1. Yes
2. No

28. Is there discomfort when the area near the apices (ends) of the teeth are palpated or near the apex (end) of the tooth is palpated?

1. Yes
2. No

29. Is a fistula, fluctuant swelling, or localized diffuse inflammatory swelling present near the apex/apices of the tooth/teeth?

1. Yes
2. No

30. Has the tooth had prior endodontic (root canal) treatment either started or completed?

1. Yes
2. No

On Question 1, if "YES" (1), then stop data collection now.

31. Does a restoration (filling) appear defective in the area of concern?

1. Yes
2. No

32. Is there clinical evidence of a fracture line or crack in the tooth?

1. Yes
2. No

33. Is the problem located in the maxillary posterior teeth?

1. Yes
2. No

On Question 33, if "NO" (2), then skip the next two questions.

34. Does the discomfort increase when the patient bends over (lowering the position of the head)?

1. Yes
2. No

35. Has the patient recently had a cold or sinus problem?

1. Yes
2. No

On Question 29, if "NO" (2), then go to Question 39.

36. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for peridontal disease?

1. Yes
2. No

37. Has the patient had a history of periodontal abscesses?

1. Yes
2. No

38. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

39. Does the tooth have increased mobility?

1. Yes
2. No

40. Does the patient have a brand new restoration (filling) or dental crown/bridgework on or opposing the sore tooth?

1. Yes
2. No

Answer the next three questions only if "YES" (1) to either Questions 39 or 40, and "NO" (2) or unanswered to Questions 21, 29, and 34.

41. Is there evidence of significant wear on the occlusal surfaces (flat spots, facets)?

1. Yes
2. No

42. Does the patient either grind or clench his teeth or chew gum regularly?

1. Yes
2. No

43. Are the teeth sore?

1. Yes
2. No

Continue data collection only if "YES" to Questions 20 and 32, and either "No" to Question 29 or "YES" to Questions 27, 30, or 31.

44. Does the fracture line or crack or the part of the tooth missing involve the crown of the tooth?

1. Yes
2. No

45. Does the fracture line or crack or area where the part is missing extend below the gingival (gum) tissues?

1. Yes
2. No

On Question 30, if "YES" (1), then go to Question 47.

46. The pulp (nerve)

1. Has not been exposed.
2. Has been exposed and is smaller than 1 mm in diameter.
3. Has been exposed and is larger than 1 mm in diameter.

On Question 46, if the pulp "HAS NOT BEEN EXPOSED" (1), then continue, otherwise stop here.

47. Is the dentin exposed?

1. Yes
2. No

Questionnaire for
TOOTH GENERALIZED/MULTIPLE ADJACENT

1. The degree of discomfort is

    1. Mild.
    2. Moderate.
    3. Severe (interferes with sleep or work).

2. The pain or discomfort is

    1. Continuous.
    2. Intermittent.

3. Is there significant discomfort when the area is exposed to hot or cold?

    1. Yes
    2. No
    3. Not at present, but very recently

On Question 3, if "NO" (2), then go to Question 5.

4. Does or did the discomfort linger after exposure to hot or cold (as opposed to going away immediately after removal of the hot or cold)?

    1. Yes
    2. No

On Question 3, if "YES" (1), then go to Question 6.

5. Is the pain spontaneous (occur for no particular reason)?

    1. Yes
    2. No

On Question 3, if "NO" (2) or "NOT AT PRESENT" (3), then go to Question 7.

6. Is exposed dentin present or is the discomfort primarily to cold or touch and located near the gingival (gum tissue) margin(s)?

    1. Yes
    2. No

7. Do eating sweets or sugar elicit the pain?

1. Yes
2. No
3. Not known

8. Are the teeth sensitive to percussion (tapping with a metal instrument or biting)?

1. Yes
2. No

9. Is there discomfort when the area near the apices (ends) of the teeth are palpated or near the apex (end) of the tooth is palpated?

1. Yes
2. No

10. Is a fistula, fluctuant swelling, or localized diffuse inflammatory swelling present near the apex/apices of the tooth/teeth?

1. Yes
2. No

11. Is the problem located in the maxillary posterior teeth?

1. Yes
2. No

On Question 11, if "NO" (2), then skip the next two questions.

12. Does the discomfort increase when the patient bends over (lowering the position of the head)?

1. Yes
2. No

13. Has the patient recently had a cold or sinus problem?

1. Yes
2. No

On Question 10, if "NO" (2), then go to Question 17.

14. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for peridontal disease?

1. Yes
2. No

15. Has the patient had a history of periodontal abscesses?

1. Yes
2. No

16. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

17. Do the teeth have increased mobility?

1. Yes
2. No

18. Does the patient have a brand new restoration (filling) or dental crown/bridgework on or opposing the sore tooth?

1. Yes
2. No

19. Is there evidence of significant wear on the occlusal surfaces (flat spots, facets)?

1. Yes
2. No

20. Does the patient either grind or clench his teeth or chew gum regularly?

1. Yes
2. No

21. Are the teeth sore?

1. Yes
2. No

Questionnaire for
GINGIVA SPECIFIC, NON-TRAUMA RELATED

1. Has the patient had a similar problem

    1. Once previously?
    2. Off-and-on?
    3. Never before?

2. How long has the immediate problem lasted?

    1. For the last few days
    2. For the last few weeks
    3. Long standing

3. The degree of discomfort is

    1. Mild.
    2. Moderate.
    3. Severe (interferes sleep or work).

4. Does the area of concern appear to be either a flap of inflamed tissue partially covering an erupting tooth or an area of tissue (not always grossly inflamed) surrounding an erupting tooth?

    1. Yes
    2. No

On Question 4, if "NO" (2), then go to Question 6.

5. Is the tooth a 3rd molar (wisdom tooth)?

    1. Yes
    2. No

6. Aside from possible racial pigmentation, if present, what is the color of the gingival tissues (gum)?

    1. Pink
    2. Red
    3. Pink with red gingival margins
    4. Either #2 or #3 above, but with area having a white membranous coating that can be removed

7. In the area of concern, do the gingival (gum) tissues bleed when probed or does the patient report bleeding when brushing?

1. Yes
2. No

On Question 5, if "YES" (1), then stop data collection here.

8. In the area of concern, do the gingival papillae appear:

1. Scalloped and not swollen (normal)?
2. Swollen and enlarged?
3. Ulcerated or blunted?

9. Is an extremely foul odor present?

1. Yes
2. No

10. Does the patient have an elevated temperature, palpable lymph nodes of the head and neck region, or malaise?

1. Yes
2. No

11. Is a very prominent, but localized, swelling of the gingival or mucosal tissues present?

1. Yes
2. No

On Question 11, if "NO" (2), then go to Question 16.

12. Does the swelling have a diffuse inflammatory appearance, or does the swelling appear to be fluctuant, or is there evidence of a purulent exudate (pus)?

1. Yes
2. No

13. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for periodontal disease?

1. Yes
2. No

14. Has the patient had a history of periodontal abscesses?

1. Yes
2. No

15. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

On Questions 12 thru 15, if "NO" (2), then stop data collection here.

On Question 12, if "YES" (1), then go to Question 20.

16. Do the teeth feel tight or like something is caught between them?

1. Yes
2. No

17. Does the patient relate a history of food being trapped or caught between the teeth in the area of concern?

1. Yes
2. No

On Question 9, if "YES" (1), then go to Question 19.

18. Does the patient complain of a bad taste or odor in his (or her) mouth?

1. Yes
2. No

19. Does the patient have shallow, ragged, painful ulcers covered by a gray/white membrane and surrounded by a reddish halo?

1. Yes
2. No

On Question 11, if "NO" (2), then stop data collection here.

20. Is there significant discomfort when the area is exposed to hot or cold?

1. Yes
2. No
3. Not at present, but very recently

On Question 20, if "NO" (2), then skip the next question.

21. Does or did the discomfort linger after exposure to hot or cold (as opposed to going away immediately after removal of the hot or cold)?

1. Yes
2. No

On Question 20, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

22. Is exposed dentin present or is the discomfort primarily to cold or touch and located near the gingival (gum tissue) margin(s)?

1. Yes
2. No

23. Is the pain spontaneous (occur for no particular reason)?

1. Yes
2. No

On Question 20, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

24. When present, the pain has lasted:

1. Less than an hour.
2. An hour or longer.

25. Do eating sweets or sugar elicit the pain?

1. Yes
2. No
3. Not known

26. Do caries (decay) appear associated with the tooth either clinically or on an old x-ray?

1. Yes
2. No
3. Not known

27. Is the tooth/teeth sensitive to percussion (tapping with a metal instrument)?

1. Yes
2. No

28. Is there discomfort when the area near the apices (ends) of the teeth are palpated or near the apex (end) of the tooth is palpated?

1. Yes
2. No

29. Is a fistula, fluctuant swelling, or localized diffuse inflammatory swelling present near the apex/apices of the tooth/teeth?

1. Yes
2. No

30. Has the tooth had prior endodontic (root canal) treatment either started or completed?

1. Yes
2. No

Questionnaire for
GINGIVA GENERALIZED, NON-TRAUMA RELATED

1. Has the patient had a similar problem

    1. Once previously?
    2. Off-and-on?
    3. Never before?

2. How long has the immediate problem lasted?

    1. For the last few days
    2. For the last few weeks
    3. Long standing

3. The degree of discomfort is:

    1. Mild.
    2. Moderate.
    3. Severe (interfers sleep or work).

4. Aside from possible racial pigmentation, if present, what is the color of the gingival tissues (gum)?

    1. Pink
    2. Red
    3. Pink with red gingival margins
    4. Either #2 or #3 above, but with area having a white membranous coating that can be removed

5. Do the gingival (gum) tissues bleed when probed or does the patient report bleeding when brushing?

    1. Yes
    2. No

6. Do the gingival papillae appear:

    1. Scalloped and not swollen (normal)?
    2. Swollen and enlarged?
    3. Ulcerated or blunted?

7. Is an extremely foul odor present?

    1. Yes
    2. No

8. Does the patient have an elevated temperature, palpable lymph nodes of the head and neck region or malaise?

1. Yes
2. No

9. Does the patient have shallow, ragged, painful ulcers covered by a gray/white membrane and surrounded by a reddish halo?

1. Yes
2. No

Stop data collection here

Questionnaire for
ORAL MUCOSA, TOOTH ASSOCIATED

1. Does the area of concern appear to be either a flap of inflamed tissue partially covering an erupting tooth or an area of tissue (not always grossly inflamed) surrounding an erupting tooth?

   1. Yes
   2. No

On Question 1, if "NO" (2), then go to Question 5.

2. Is the tooth a 3rd molar (wisdom tooth)?

   1. Yes
   2. No

3. Has the patient had a similar problem

   1. Once previously?
   2. Off-and-on?
   3. Never before?

4. How long has the immediate problem lasted?

   1. For the last few days
   2. For the last few weeks
   3. Long standing

5. The degree of discomfort is:

   1. Mild.
   2. Moderate.
   3. Severe (interferes with sleep or work).

On Question 1, if "NO" (2), then go to Question 20.

6. Aside from possible racial pigmentation, if present, what is the color of the gingival tissues (gum)?

   1. Pink
   2. Red
   3. Pink with red gingival margins
   4. Either #2 or #3 above, but with area having a white membranous coating that can be removed

7. In the area of concern, do the gingival (gum) tissues bleed when probed or does the patient report bleeding when brushing?

1. Yes
2. No

On Question 2, if "YES" (1), then stop data collection here.

8. In the area of concern, do the gingival papillae appear:

1. Scalloped and not swollen (normal)?
2. Swollen and enlarged?
3. Ulcerated or blunted?

9. Is an extremely foul odor present?

1. Yes
2. No

10. Does the patient have an elevated temperature, palpable lymph nodes of the head and neck region, or malaise?

1. Yes
2. No

11. Is a very prominent, but localized, swelling of the gingival or mucosal tissues present?

1. Yes
2. No

On Question 11, if "NO" (2), then go to Question 16.

12. Does the swelling have a diffuse inflammatory appearance or does the swelling appear to be fluctuant, or is there evidence of a purulent exudate (pus)?

1. Yes
2. No

13. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for peridontal disease?

1. Yes
2. No

14. Has the patient had a history of periodontal abscesses?

1. Yes
2. No

15. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

If "YES" (1) to Questions 11 and 12, then go to Question 20.

If "NO" (2) to Questions 12, 13, and 14 and "NO" (2) or "UNABLE TO DETERMINE" (3) to Question 15, then stop here.

16. Do the teeth feel tight or like something is caught between them?

1. Yes
2. No

17. Does the patient relate a history of food being trapped or caught between the teeth in the area of concern?

1. Yes
2. No

On Question 9, if "YES" (1) then go to Question 19.

18. Does the patient complain of a bad taste or odor in his (or her) mouth?

1. Yes
2. No

19. Does the patient have shallow, ragged, painful ulcers covered by a gray/white membrane and surrounded by a reddish halo?

1. Yes
2. No

On Question 11, if "NO" (2), then stop data collection here.

20. Is there significant discomfort when the area is exposed to hot or cold?

1. Yes
2. No
3. Not at present, but very recently

On Question 20, if "NO" (2), then skip the next question.

21. Does or did the discomfort linger after exposure to hot or cold (as opposed to going away immediately after removal of the hot or cold)?

1. Yes
2. No

On Question 20, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

22. Is exposed dentin present or is the discomfort primarily to cold or touch and located near the gingival (gum tissue) margin(s)?

1. Yes
2. No

23. Is the pain spontaneous (occur for no particular reason)?

1. Yes
2. No

On Question 20, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

24. When present, the pain has lasted

1. Less than an hour.
2. An hour or longer.

25. Do eating sweets or sugar elicit the pain?

1. Yes
2. No
3. Not known

26. Do caries (decay) appear associated with the tooth either clinically or on an old x-ray?

1. Yes
2. No
3. Not known

27. Is the tooth/teeth sensitive to percussion (tapping with a metal instrument)?

1. Yes
2. No

28. Is there discomfort when the area near the apices (ends) of the teeth are palpated or near the apex (end) of the tooth is palpated?

1. Yes
2. No

29. Is a fistula, fluctuant swelling, or localized diffuse inflammatory swelling present near the apex/apices of the tooth/teeth?

1. Yes
2. No

30. Has the tooth had prior endodontic (root canal) treatment either started or completed?

1. Yes
2. No

On Question 1, if "YES" (1), then stop data collection now.

31. Does a restoration (filling) appear defective in the area of concern?

1. Yes
2. No

32. Is there clinical evidence of a fracture line or crack in the tooth?

1. Yes
2. No

33. Is the problem located in the maxillary posterior teeth?

1. Yes
2. No

On Question 33, if "NO" (2), then skip the next two questions.

34. Does the discomfort increase when the patient bends over (lowering the position of the head)?

1. Yes
2. No

35. Has the patient recently had a cold or sinus problem?

1. Yes
2. No

On Question 29, if "NO" (2), then go to Question 39.

36. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for peridontal disease?

1. Yes
2. No

37. Has the patient had a history of periodontal abscesses?

1. Yes
2. No

38. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

39. Does the tooth have increased mobility?

1. Yes
2. No

40. Does the patient have a brand new restoration (filling) or dental crown/bridgework on or opposing the sore tooth?

1. Yes
2. No

Answer the next three questions only if "YES" (1) to either Questions 39 or 40, and "NO" (2) or unanswered to Questions 21, 29, and 34.

41. Is there evidence of significant wear on the occlusal surfaces (flat spots, facets)?

1. Yes
2. No

42. Does the patient either grind or clench his teeth or chew gum regularly?

1. Yes
2. No

43. Are the teeth sore?

1. Yes
2. No

Continue data collection only if "YES" to Questions 20 and 32, and either "No" to Question 29 or "YES" to Questions 27, 30, or 31.

44. Does the fracture line or crack or the part of the tooth missing involve the crown of the tooth?

1. Yes
2. No

45. Does the fracture line or crack or area where the part is missing extend below the gingival (gum) tissues?

1. Yes
2. No

On Question 30, if "YES" (1), then go to Question 47.

46. The pulp (nerve)

1. Has not been exposed.
2. Has been exposed and is smaller than 1 mm in diameter.
3. Has been exposed and is larger than 1 mm in diameter.

On Question 46, if the pulp "HAS NOT BEEN EXPOSED" (1), then continue, otherwise stop here.

47. Is the dentin exposed?

1. Yes
2. No

Questionnaire for
TEMPOROMANDIBULAR, JOINT/MUSCLES

1. Does the patient have clicking or popping of the temporomandibular joint?

    1. Yes
    2. No

2. Is the temporomandibular joint tender to palpation either facially or through the external auditory canal?

    1. Yes
    2. No

3. Are the muscles of mastication tender to palpation?

    1. Yes
    2. No

4. Does the patient's mandible deviate laterally on opening?

    1. Yes
    2. No

5. Is the patient's ability to open his mouth compromised or limited?

    1. Yes
    2. No

6. Does the patient have a history of previous temporomandibular joint problems or treatment?

    1. Yes
    2. No

7. Has the patient recently been under increased stress (marital, job, financial, legal, health)?

    1. Yes
    2. No

8. Is there evidence of significant wear on the occlusal surfaces (flat spots, facets)?

    1. Yes
    2. No

9. Does the patient either grind or clench his teeth or chew gum regularly?

1. Yes
2. No

10. Are the teeth sore?

1. Yes
2. No

On Question 8, if "NO" (2), then stop data collection here.

11. Does the tooth have increased mobility?

1. Yes
2. No

12. Does the patient have a brand new restoration (filling) or dental crown/bridgework on or opposing the sore tooth?

1. Yes
2. No

Questionnaire for
DENTAL EXTRACTION

1. How long has the immediate problem lasted?

    1. For the last few days
    2. For the last few weeks
    3. Long standing

2. The degree of discomfort is

    1. Mild.
    2. Moderate.
    3. Severe (interferes with sleep or work).

3. Which of the following most closely approximates when the extraction was performed?

    1. 3 to 5 days ago
    2. 6 days to 4 weeks ago
    3. From 4 to 8 weeks ago
    4. None of the above

4. Which one of the follwing characterize the problem associated with the extraction site area?

    1. A steady pain in the extraction site area, often referred to as the preauricular area. The patient may have an earache on the same side.
    2. A small, well-demarcated area that is tender to touch and which feels like there is something sharp or jagged under the tissue.
    3. A localized diffuse swelling which may be fluctuant or have purulence evident.
    4. Other

5. Was the dental extraction site associated with a lower posterior tooth?

    1. Yes
    2. No

Continue data collection, if the answer was (3) on Question 4 and (NOT 3) to either Questions 1 or 3

OR

if the answer was (3) on Question 4 and (1) on Question 1, and (NOT 3) on Question 3. Otherwise stop here.

6. Is there significant discomfort when the area is exposed to hot or cold?

1. Yes
2. No
3. Not at present, but very recently

On Question 6, if "NO" (2), then skip the next question.

7. Does or did the discomfort linger after exposure to hot or cold (as opposed to going away immediately after removal of the hot or cold)?

1. Yes
2. No

On Question 6, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

8. Is exposed dentin present or is the discomfort primarily to cold or touch and located near the gingival (gum tissue) margin(s)?

1. Yes
2. No

9. Is the pain spontaneous (occur for no particular reason)?

1. Yes
2. No

On Question 6, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

10. When present, the pain has lasted

1. Less than an hour.
2. An hour or longer.

11. Do eating sweets or sugar elicit the pain?

1. Yes
2. No
3. Not known

12. Do caries (decay) appear associated with the tooth either clinically or on an old x-ray?

1. Yes
2. No
3. Not known

13. Is the tooth/teeth sensitive to percussion (tapping with a metal instrument)?

1. Yes
2. No

14. Is there discomfort when the area near the apices (ends) of the teeth are palpated or near the apex (end) of the tooth is palpated?

1. Yes
2. No

15. Is a fistula, fluctuant swelling, or localized diffuse inflammatory swelling present near the apex/apices of the tooth/teeth?

1. Yes
2. No

16. Has the tooth had prior endodontic (root canal) treatment either started or completed?

1. Yes
2. No

17. Does a restoration (filling) appear defective in the area of concern?

1. Yes
2. No

18. Is there clinical evidence of a fracture line or crack in the tooth?

1. Yes
2. No

On Question 15, if "NO" (2), then go to question 22.

19. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for periodontal disease?

1. Yes
2. No

20. Has the patient had a history of periodontal abscesses?

1. Yes
2. No

21. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

22. Does the tooth have increased mobility?

1. Yes
2. No

23. Does the patient have a brand new restoration (filling) or dental crown/bridgework on or opposing the sore tooth?

1. Yes
2. No

Continue data collection only if "YES" (1) to Questions 6 and 18 and, either "NO" (2) to Question 15 or "YES" to Questions 13, 16, or 17. Otherwise stop here.

24. Does the fracture line or crack or the part of the tooth missing involve the crown of the tooth?

1. Yes
2. No

25. Does the fracture line or crack or area where the part is missing extend below the gingival (gum) tissues?

1. Yes
2. No

On Question 16, if "YES" (1), then go to Question 27.

26. The pulp (nerve)

1. Has not been exposed.
2. Has been exposed and is smaller than 1 mm in diameter.
3. Has been exposed and is larger than 1 mm in diameter.

On Question 26, if the pulp "HAS NOT BEEN EXPOSED" (1), then continue, otherwise stop here.

27. Is the dentin exposed?

1. Yes
2. No

Questionnaire for
TISSUE SWELLING, NON-TRAUMA RELATED

1. The swelling is located on

    1. The face.
    2. Oral mucosa or gingiva, near teeth.
    3. Other oral tissues, not near teeth.

On Question 1, if "OTHER ORAL TISSUES" (3), then go to Questionnaire for SOFT TISSUE LESIONS.

2. How long has the immediate problem lasted?

    1. For the last few days
    2. For the last few weeks
    3. Long standing

3. The degree of discomfort is:

    1. Mild.
    2. Moderate.
    3. Severe (interferes with sleep or work).

4. Does the patient have an elevated temperature, palpable lymph nodes of the head and neck region, or malaise?

    1. Yes
    2. No

5. Does the swelling have a diffuse inflammatory appearance or does the swelling appear to be fluctuant, or is there evidence of a purulent exudate (pus)?

    1. Yes
    2. No

Stop data collection here, if "THE FACE" (1) to Question 1 or "NO" (2) to Question 5.

6. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for peridontal disease?

    1. Yes
    2. No

7. Has the patient had a history of periodontal abscesses?

    1. Yes
    2. No

8. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

9. Is there significant discomfort when the area is exposed to hot or cold?

1. Yes
2. No
3. Not at present, but very recently

On Question 9, if "NO" (2), then skip the next question.

10. Does or did the discomfort linger after exposure to hot or cold (as opposed to going away immediately after removal of the hot or cold)?

1. Yes
2. No

On Question 9, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

11. Is exposed dentin present or is the discomfort primaril to cold or touch and located near the gingival (gum tissue) margin(s)?

1. Yes
2. No

12. Is the pain spontaneous (occur for no particular reason)?

1. Yes
2. No

On Question 9, if "NO" (2) or "NOT AT PRESENT" (3), then skip the next question.

13. When present, the pain has lasted:

1. Less than an hour.
2. An hour or longer.

14. Do eating sweets or sugar elicit the pain?

1. Yes
2. No
3. Not known

15. Do caries (decay) appear associated with the tooth either clinically or on an old x-ray?

1. Yes
2. No
3. Not known

16. Is the tooth/teeth sensitive to percussion (tapping with a metal instrument)?

1. Yes
2. No

17. Is there discomfort when the area near the apices (ends) of the teeth are palpated or near the apex (end) of the tooth is palpated?

1. Yes
2. No

18. Is a fistula, fluctuant swelling, or localized diffuse inflammatory swelling present near the apex/apices of the tooth/teeth?

1. Yes
2. No

19. Has the tooth had prior endodontic (root canal) treatment either started or completed?

1. Yes
2. No

APPENDIX B
DENTAL QUESTIONS

The following 77 questions are used to collect information for the diagnosis of trauma and non-trauma related dental injuries.

1. Which of the following most closely approximates when the extraction was performed?

    1. 3 to 5 days ago
    2. 6 days to 4 weeks ago
    3. From 4 to 8 weeks ago
    4. None of the above

2. Which one of the following characterize the problem associated with the extraction site area?

    1. A steady pain in the extraction site area, often referred to as the preauricular area. The patient may have an earache on the same side.
    2. A small, well-demarcated area that is tender to touch and which feels like there is something sharp or jagged under the tissue.
    3. A localized diffuse swelling which may be fluctuant or have purulence evident.
    4. Other

3. Was the dental extraction site associated with a lower posterior tooth?

    1. Yes
    2. No

4. Has the patient had a similar problem:

    1. Once previously?
    2. Off-and-on?
    3. Never before?

5. How long has the immediate problem lasted?

    1. For the last few days
    2. For the last few weeks
    3. Long standing

6. When present, the pain has lasted?

1. Less than an hour
2. An hour or longer

7. The degree of discomfort is

1. Mild.
2. Moderate.
3. Severe (interferes with sleep or work).

8. The pain or discomfort is

1. Continuous.
2. Intermittent.

9. Is there a history of or evidence in the patient's record of prior diagnosis or treatment for periodontal disease?

1. Yes
2. No

10. Has the patient had a history of periodontal abscesses?

1. Yes
2. No

11. In the area of concern, is the probing depth (with a periodontal probe) greater than 4 mm?

1. Yes
2. No
3. Unable to determine

12. Is there significant discomfort when the area is exposed to hot or cold?

1. Yes
2. No
3. Not at present, but very recently

13. Does or did the discomfort linger after exposure to hot or cold (as opposed to going away immediately after removal of the hot or cold)?

1. Yes
2. No

14. Is exposed dentin present or is the discomfort primarily to cold or touch and located near the gingival (gum tissue) margin(s)?

1. Yes
2. No

15. Is the pain spontaneous (occur for no particular reason)?

1. Yes
2. No

16. Do eating sweets or sugar elicit the pain?

1. Yes
2. No
3. Not known

17. Do caries (decay) appear associated with the tooth either clinically or on an old x-ray?

1. Yes
2. No
3. Not known

18. Is the tooth/teeth sensitive to percussion (tapping with a metal instrument)?

1. Yes
2. No

19. Is there discomfort when the area near the apices (ends) of the teeth are palpated or near the apex (end) of the tooth is palpated?

1. Yes
2. No

20. Is a fistula, fluctuant swelling, or localized diffuse inflammatory swelling present near the apex/apices of the tooth/teeth?

1. Yes
2. No

21. Has the tooth had prior endodontic (root canal) treatment either started or completed?

    1. Yes
    2. No

22. Does a restoration (filling) appear defective in the area of concern?

    1. Yes
    2. No

23. Is there clinical evidence of a fracture line or crack in the tooth?

    1. Yes
    2. No

24. Is the problem located in the maxillary posterior teeth?

    1. Yes
    2. No

25. Does the discomfort increase when the patient bends over (lowering the position of the head)?

    1. Yes
    2. No

26. Has the patient recently had a cold or sinus problem?

    1. Yes
    2. No

27. Does the area of concern appear to be either a flap of inflamed tissue partially covering an erupting tooth or an area of tissue (not always grossly inflamed) surrounding an erupting tooth?

    1. Yes
    2. No

28. Is the tooth a 3rd molar (wisdom tooth)?

    1. Yes
    2. No

29. Aside from possible racial pigmentation, if present, what is the color of the gingival tissues (gum)?

1. Pink
2. Red
3. Pink with red gingival margins
4. Either #2 or #3 above, but with area having a white membranous coating that can be removed

30. In the area of concern, do the gingival (gum) tissues bleed when probed or does the patient report bleeding when brushing?

1. Yes
2. No

31. In the area of concern, do the gingival papillae appear:

1. Scalloped and not swollen (normal)?
2. Swollen and enlarged?
3. Ulcerated or blunted?

32. Is an extremely foul odor present?

1. Yes
2. No

33. The swelling is located on

1. The face.
2. Oral mucosa or gingiva, near teeth.
3. Other oral tissues, not near teeth.

34. Does the patient have an elevated temperature, palpable lymph nodes of the head and neck region or malaise?

1. Yes
2. No

35. Is a very prominent, but localized, swelling of the gingival or mucosal tissues present?

1. Yes
2. No

36. Does the swelling have a diffuse inflammatory appearance or does the swelling appear to be fluctuant, or is there evidence of a purulent exudate (pus)?

1. Yes
2. No

37. Do the teeth feel tight or like something is caught between them?

1. Yes
2. No

38. Does the patient relate a history of food being trapped or caught between the teeth in the area of concern?

1. Yes
2. No

39. Does the patient complain of a bad taste or odor in his (or her) mouth?

1. Yes
2. No

40. Does the patient have shallow, ragged, painful ulcers covered by a gray/white membrane and surrounded by a reddish halo?

1. Yes
2. No

41. Does the patient have clicking or popping of the temporomandibular joint?

1. Yes
2. No

42. Is the temporomandibular joint tender to palpation either facially or through the external auditory canal?

1. Yes
2. No

43. Are the muscles of mastication tender to palpation?

1. Yes
2. No

44. Does the patient's mandible deviate laterally on opening?

1. Yes
2. No

45. Is the patient's ability to open his mouth compromised or limited?

1. Yes
2. No

46. Does the patient have a history of previous temporomandibular joint problems or treatment?

1. Yes
2. No

47. Has the patient recently been under increased stress (marital, job, financial, legal, health)?

1. Yes
2. No

48. Is there evidence of significant wear on the occlusal surfaces (flat spots, facets)?

1. Yes
2. No

49. Does the patient either grind or clench his teeth or chew gum regularly?

1. Yes
2. No

50. Are the teeth sore?

1. Yes
2. No

51. Does the tooth have increased mobility?

1. Yes
2. No

52. Does the patient have a brand new restoration (filling) or dental crown/bridgework on or opposing the sore tooth?

1. Yes
2. No

53. Select the area of trauma.

1. Tooth or teeth (evaluate individually)
2. Other oral or facial tissues or structures
3. Both teeth and other oral/facial tissues/structures

54. Ask the patient to open and close while looking in a mirror. Examine the patient carefully. Is the occlusion (bite)

1. Unchanged?
2. Changed slightly?
3. Changed appreciably?

55. Does the patient have a head injury or did he lose consciousness, vomit, or have a history of amnesia associated with the trauma?

1. Yes
2. No

56. Paresthesia or anesthesia (partial or complete numbness), if present, is primarily associated with which one of the following?

1. Lower teeth and/or lower lip and chin
2. Upper teeth and/or upper lip
3. Lower eyelid and/or lateral areas of nose and/or cheek
4. None of the above

57. There is evidence of:

1. Enopthalmia or exopthalmia.
2. Visual disturbances (primarily diplopia).
3. Subconjunctival hemorrhage (medial or lateral).
4. Increased intercanthal distance (eyes look/feel further apart).
5. Visual asymmetry of the cheek.
6. Pain or crepitus when palpating high into the buccal vestibule, near the 2nd and 3rd molars, with your index finger.
7. More than one of the above.
8. None of the above.

58. Does the manible deviate to the injured side when opening?

1. Yes
2. No

59. Is it painful to open or close?

1. Yes
2. No

60. If available, does a current radiograph suggest any fractured bones?

1. Yes
2. No
3. Not available

61. Grasp the mandible with both hands using your thumbs and index fingers (thumbs on teeth, fingers on skin adjacent to border of mandible). Without using undue force, gently attempt to move different segments of the mandible. Can bony segments of the mandible be displaced or easily moved?

1. Yes
2. No

62. Again, using your thumbs and index fingers (fingers and thumbs on facial and palatal surfaces of maxillary teeth segments), attempt to gently displace bony segments of the maxillary arch. Can bony segments of the maxillar be displaced or easily moved?

1. Yes
2. No

63. Palpate the facial bones, including the zygomatic arch and infraorbital rims. Is there evidence of a stepping, displacement, or depression of the facial bones?

1. Yes
2. No

64. There is evidence of bleeding

1. From abrasions or lacerations.
2. Into tissue spaces (ex. Floor of mouth, vestibule, etc).
3. From the gingival margin(s).
4. #1 and #2.
5. #1 and #3.
6. #2 and #3.
7. All of the above.
8. None of the above.

65. Traumatically involved teeth must be evaluated individually. The particular tooth in question is

1. Displaced lingually or facially.
2. Intruded into the socket.
3. Partially extruded from the socket.
4. Totally avulsed (knocked out).
5. Not displaced.

66. Have more than 3 hours elapsed from the time of injury?

1. Yes
2. No

67. Is the tooth generally intact (no major fractures, cracks, chips)?

1. Yes
2. No

68. Does the socket of the avulsed tooth appear intact?

1. Yes
2. No

69. As related by the patient and from information in the dental record, if available, was the tooth otherwise healthy?

1. Yes
2. No

70. Has the injured tooth ever had endodontic (root canal) treatment?

1. Yes
2. No

71. The tooth in question:

1. Is extremely mobile.
2. Is slightly mobile.
3. Has no increased mobility.

72. Do adjacent teeth move when the injured tooth is moved?

1. Yes
2. No

73. There is:

1. Definitely a fracture line, crack or part of the tooth missing.
2. A possible fracture line or crack in the tooth.
3. No evidence of a fracture line or crack in the tooth.

74. Does the possible fracture line or crack involve the crown of the tooth? Does the fracture line or crack or the part of the tooth missing involve the crown of the tooth?

1. Yes
2. No

75. Does the possible fracture line or crack extend below the gingival tissues? Does the fracture line, crack, or area where the part is missing extend below the gingival (gum tissues)?

1. Yes
2. No

76. The pulp (nerve):

1. Has not been exposed.
2. Has been exposed and is less than 1mm in diameter.
3. Has been exposed and is greater than 1mm in diameter.

77. Is the dentin exposed?

1. Yes
2. No

Soft Tissue Lesions

The following 12 questions are used to collect information for the differential diagnosis of soft tissue lesions.

1. Select the type of soft tissue lesion.

    1. Gingival changes
    2. Tissue color changes
    3. Vesicles, bullae, or ulcers
    4. Oral Nodules or enlargements
    5. Tongue
    6. Neck/Face/Cheek masses
    7. Quit

2. What is the nature of the gingival problem?

    1. Desquamation
    2. Atrophy or ulceration
    3. Localized hyperplastic, hemorrhagic lesions
    4. Generalized hyperplastic, hemorrhagic lesions
    5. Localized hyperplastic, non-hemorrhagic lesions
    6. Generalized hyperplastic, hemorrhagic lesions
    7. Cystic lesions
    8. None of the above

3. What is the color of the tissue lesion(s)?

    1. White
    2. Red
    3. Brown and/or black
    4. Blue and/or purple
    5. Yellow
    6. None of the above

4. What is the nature of the white lesion(s)?

    1. Keratotic non-sloughing, non-ulcerated, non-eroded, non-papillary lesion(s)
    2. Keratotic non-sloughing, non-ulcerated, non-eroded, papillary lesions(s)
    3. Keratotic non-sloughing, non-ulcerated, eroded, non-papillary lesion(s)
    4. Keratotic non-sloughing, non-ulcerated, eroded, papillary lesion(s)
    5. Non-keratotic sloughing lesion(s)

5. What is the nature of the red lesion(s)?

    1. Single exphytic lesion
    2. Single non-exophytic lesion
    3. Generalized or multiple exophytic lesions
    4. Generalized or multiple non-exophytic lesions
    5. None of the above

6. What is the nature of the brown and/or black lesion(s)?

    1. Single exophytic lesion
    2. Single non-exophytic lesion
    3. Generalized or multiple lesions
    4. Generalized or multiple non-exophytic lesions
    5. None of the above

7. What is the nature of the blue and/or purple lesion(s)?

    1. Single lesion
    2. Generalized or multiple lesions
    3. None of the above

8. What is the nature of the yellow lesion(s)?

    1. Single lesion
    2. Generalized or multiple lesions
    3. None of the above

9. Which of the following describe the condition?

    1. Acute vesicles
    2. Chronic vesicles
    3. Acute bullae
    4. Chronic bullae
    5. Acute ulcers
    6. Chronic ulcers
    7. None of the above

10. Which of the following descriptions applies?

    1. Small firm non-hemorrhagic
    2. Extensive firm non-hemorrhagic
    3. Single firm non-hemorrhagic
    4. Multiple firm non-hemorrhagic
    5. Single bony lump or nodule
    6. Multiple or extensive bony englargements or nodules
    7. None of the above

11. Which of the following categories applies?

1. Macroglossia (enlarged tongue)
2. Microglossia (small tongue)
3. Cleft in tongue
4. Fissured tongue
5. Supernumerary tongue
6. Smooth tongue
7. Glossodynia (pain in tongue)
8. None of the above

12. Which of the following applies to the mass(es)?

1. Acute parotid swelling
2. Chronic parotid swelling
3. Acute discrete nodules, non-parotid area
4. Chronic discrete nodules, non-parotid area
5. Acute extensive diffuse swelling, non-parotid area
6. Chronic extensive diffuse swelling, non-parotid area
7. None of the above

APPENDIX C
Dental Diagnoses

Listed below are the 35 diagnoses considered by the dental program in evaluating trauma and non-trauma related dental injuries.

Localized alveolar osteitis (dry socket)
Osseous sequestrum
Abscess/infection/cellulitis
Periodontal abscess
Reversible pulpitis
Irreversible pulpitis
Acute apical abscess
Acute apical periodontitis
Carious lesion (decay)
Dentin hypersensitivity
Maxillary sinusitis
Endodontic/periodontic combined problem
Defective restoration
Acute herpetic gingivostomatitis
Periocoronitis/erupting tooth
Necrotizing ulcerative gingivitis
Acute ginigivitis
Food impaction
Myofascial pain/muscle spasms
Internal derangement of the temporomandibular joint
Occlusal trauma
Fractured crown small pulp exposure
Fractured crown large pulp exposure
Total avulsion of tooth, good candidate for replantation
Total avulsion of tooth, poor candidate for replantation
Displacement/mobility of tooth favorable prognosis
Displacement/mobility of tooth guarded prognosis
Fractured crown pulp not exposed
Enamel fracture
Root fracture
Fractured alveolar bone
Fractured mandible
Fractured maxilla
Fractured facial bones
Neurologic injury

Soft Tissue Lesions

Listed below are the 49 soft tissue lesions considered by the diagnostic program. The program provides a list of differential diagnoses for each of the 49 conditions. Diagnoses which are starred indicate a possible life- or mission-threatening situation.

1. Desquamative lesions of gingiva
   - Desquamative gingivitis
   - Hormonal changes (ex. Puberty)
   - *Bullous lichen planus
   - *Benign mucous membrane pemphigoid
   - Nutritional deficiencies
   - Pernicious anemia
   - Atopic and contact stomatitis
   - *Drug idiosyncrasies
   - *Erythema multiforme
   - Primary herpes simplex
   - *Pemphigus vulgaris
   - *Epidermolysis bullosa

2. Atrophy or ulceration of gingiva
   - Necrotizing ulcerative gingivitis (nug, anug)
   - *Diabetes mellitus (uncontrolled)
   - *Leukemia (late)
   - *Cyclic neutropenia
   - Syphilis
   - Gonorrhea
   - Herpetic gingivostomatitis (primary)
   - *Erythema multiforme
   - Habits/trauma
   - Nutritional deficiency
   - *Lupus vulgaris
   - *Porphyria
   - Apthous stomatitis
   - Periadenitis mucosa necrotica recurrens (Sutton's disease)

3. Localized hyperplastic, hemorrhagic lesions of gingiva
   - Pyogenic granuloma
   - Peripheral giant cell granuloma
   - Food impaction (early)
   - *Metastatic tumor
   - *Mycotic infection
   - Fistulous tract from periapical abscess/parulis
   - *Hyperparathyroidism (brown tumor)
   - *Local malignancy
   - *Pericoronitis
   - Epulis granulomatosum
   - Antral polyp from oroantral fistula
   - Pulp polyp
   - Hemangioma
   - *Kaposi's sarcoma

4. Generalized hyperplastic, hemorrhagic lesions of gingiva
   - *Leukemia (early)
   - Gingivitis
   - Hormonal changes (ex. Puberty)
   - Xerostomia (dry mouth)
   - Mouth breathing
   - *Diabetes (uncontrolled)
   - *Wegener's granulomatosis
   - *Cyclic neutropenia
   - *Cushing's syndrome
   - *Yellow fever
   - Scurvy
   - Vitamin A deficiency
   - *Crohn's disease

5. Localized hyperplastic, non-hemorrhagic lesions of gingiva
   - Irritation fibroma
   - Epulis fissuratum
   - Giant cell fibroma
   - Peripheral ossifying fibroma
   - Pulp polyp
   - Traumatic neuroma
   - Neurofibroma

6. Generalized hyperplastic, non-hemorrhagic lesions of the gingiva
   - Idiopathic gingival fibromatosis
   - Hereditary gingival fibromatosis
   - Gingival hyperplasia, drug-induced (ex. Dilantin)
   - Amyloidosis
   - Hemifacial hypertrophy

7. Cystic lesions of gingiva
   - Eruption cyst
   - Gingival cyst
   - Parulis
   - Nasoalveolar cyst
   - Nasopalatine duct cyst

8. Keratotic non-sloughing, non-ulcerated, non-eroded, non-papillary, lesions
   - Linea alba
   - Hyperkeratosis (leukoplakia)
   - Nicotine stomatitis
   - Snuff/tobacco pouch
   - Actinic cheilosis
   - Leukoedema
   - Scar tissue
   - Lichen planus
   - Syphlitic glossitis
   - White sponge nevus
   - Benign hereditary intra-epithelial dyskeratosis
   - Pachyonychia congenita
   - Dyskeratosis congenita
   - Acanthosis nigricans (buccal only)
   - Hyperkeratosis palmo-plantaris and gingivae
   - Submucous fibrosis
   - Skin graft
   - Hypovitaminosis A
   - Syphilitic glossitis (rare)

9. Keratotic non-sloughing, non-ulcerated, non-eroded, papillary lesions
   - Fordyce granules
   - White hairy tongue
   - Verrucous hyperkeratosis
   - Papilloma/papillomatosis
   - Verruca vulgaris
   - *Verrucous carcinoma
   - *Koplick spots (measles)
   - Verrucous xanthoma
   - Epidermoid cyst
   - Lymphoepithelial cyst
   - Acanthosis nigricans
   - *Darier's disease

10. Keratotic non-sloughing, ulcerated, eroded, non-papillary lesions

- Hyperkeratosis (speckled leukoplakia)
- Nicotine stomatitis
- Actinic cheilosis
- Chronic cheek biting
- Geographic tongue
- Benign migratory stomatitis (ectopic geographic tongue)
- *Erosive lichen planus
- *Premalignant epithelial dysplasia
- *Carcinoma in situ
- *Squamous cell carcinoma
- Syphilitic glossitis
- Discoid lupus erythematosus
- *Reiter's disease
- Oral psoriasis

11. Keratotic non-sloughing, ulcerated, eroded, papillary lesions

- *Verrucous carcinoma
- *Squamous cell carcinoma

12. Sloughing, non-keratotic lesions

- Materia alba/plaque
- Sloughing traumatic lesions
- Candidiasis (moniliasis
- White-coated tongue
- Chemical burn (ex. Asa)
- Thermal burn
- Stomatitis venenata
- Stomatitis medicamentosa
- Radiation mucositis
- *Diptheria
- *Ulcer/bed (various diseases)
- *Noma (rare)
- *Heavy metal poisoning
- Snuff-dipper's lesion'

13. Single exophytic red lesions

- Hematoma
- Hemangioma
- *Pericoronitis
- Pyogenic granuloma
- Peripheral giant cell granuloma
- *Squamous cell carcinoma
- *Mycotic infection
- Median rhomboid glossitis
- Traumatic angiomatous lesion
- Eruption cyst
- Abscess (periodontal or endodontic)

14. Single non-exophytic red lesions
    - Hemangioma, sturge-weber syndrome
    - Burns (thermal or chemical)
    - Non-specific inflammation
    - Trauma (ex. Denture sore)
    - *Carcinoma in situ
    - *Squamous cell carcinoma
    - *Erythroplakia
    - *Ulcers (see ulcers)
    - Median rhomboid glossitis

15. Generalized or multiple exophytic red lesions
    - Gingivitis (see other gingival disease)
    - Hemangiomas
    - Hematomas/purpuras
    - Lymphangioma
    - Papillary hyperplasia of the palate
    - Lingual varicosities
    - *Pyostomatitis vegetans

16. Generalized or multiple non-exophytic red lesions
    - Hemangiomas, Sturge-Weber syndrome
    - Hereditary hemorrhagic telangiectasia
    - *Erythema multiforme
    - *Allergic reaction
    - Non-specific inflammation
    - Radiation stomatitis/xerostomia
    - Denture sore mouth (candidiasis)
    - *Scarlet fever
    - *Measles
    - Geographic tongue
    - Vitamin deficiencies
    - Nicotine stomatitis (early)
    - *Petechiae:
        - Leukemias
        - Anemias
        - Purpuras
        - Hemophilias
        - Mononucleosis
        - Fellatio trauma
        - Other trauma
        - Chronic cough
    - *Lupus erythematosus

17. Single exophytic brown and/or black lesions
    Hematoma
    Pigmented nevi
    Pigmented irritation fibroma
    *Malignant melanoma
    Black hairy tongue
    *Peripheral giant cell granuloma (long-standing)

18. Single non-exophytic brown and/or black lesions
    Amalgam tatoo
    Non-amalgam tatoo
    Ephelis/lentigo (freckle)
    *Malignant melanoma
    Graphite tatoo from pencil

19. Generalized or multiple exophytic brown and/or black lesions
    *Malignant melanoma
    *Purpuras (long-standing)

20. Generalized or multiple non-exophytic brown and/or black lesions
    *Malignant melanoma
    Physiologic melanosis (racial pigmentation)
    Peutz-Jeghers syndrome
    *Addison's disease
    *Heavy metal poisoning
    *Drug ingestion (chloroquine)
    Syphilis (secondary)

21. Single blue and/or purple lesions
    Mucocele
    Ranula
    Eruption cyst
    Hematoma
    Hemangioma
    Traumatic angiomatous lesion
    Blue nevus
    *Mucoepidermoid carcinoma
    *Malignant melanoma
    *Cystic pleomorphic adenoma

22. Generalized or multiple blue and/or purple lesions
    Lingual varicosities
    Hemangiomas
    Lymphangiomas
    *Purpuras
    *Cyanosis

23. Single yellow lesions
    - Lipoma
    - Epidermoid/dermoid cyst
    - Lymphoepithelial cyst
    - Xanthoma
    - Superficial abscess/fistula
    - Benign lymphoid aggregate
    - Yellow hairy tongue
    - Benign lymphoepithelial cyst (floor of mouth)
    - Verrucous xanthoma

24. Generalized or multiple yellow lesions
    - Fordyce granules
    - *Jaundice/icterus
    - Crusting:
        - Actinic cheilitis
    - Crusting from herpes
        - Herpes Zoster
        - Herpes Simplex
    - Benign lymphoid aggregate
    - Tonsillar (keratotic) plugs
    - Lipoid proteinosis
    - *Carotenemia
    - *Pyostomatitis vegetans

25. Acute vesicular lesions
    - Herpes Simplex
    - Herpes Zoster
    - Herpangina
    - Hand-foot-mouth disease
    - Chickenpox
    - *Allergic reactions
    - Dermatitis herpetiformis
    - *Erythema multiforme (early)

26. Chronic vesicular lesions (pseudovesicles)
    - Mucocele
    - Parulis
    - Benign lymphoid aggregate

27. Acute bullous lesions
    - *Allergic reaction
    - *Erythema multiforme

28. Chronic bullous lesions
    *Desquamative gingivitis
    *Benign mucous membrane pemphigoid
    *Bullous pemphigoid
    *Pemphigus vulgaris
    *Familial benign chronic pemphigus
    *Bullous lichen planus
    *Epidermolysis bullosa
    *Acrodermatitis enteropathica

29. Acute ulcers
    *All acute vesicular and bullous diseases
      Apthous stomatitis
      Syphilis (chancre)
      Gonorrhea
      Necrotizing ulcerative gingivitis (NUG)
      Acute necrotizing ulcerative gingivitis (ANUG)
      Traumatic ulcer
      Chemical burn
      Thermal burn
      Herpetic gingivostomatitis

30. Chronic ulcers
      All chronic bullous lesions
      Large apthous ulcer
      Periadenitis mucosa necrotica recurrens
      Syphilis (gumma)
    *Granulomatous mycotic infections
    *Malignancy
      Keratoacanthoma
    *Blood dyscrasias
    *Noma (rare)
    *Behcet's syndrome
    *Midline lethal granuloma
    *Wegener's granulomatosis
    *Tuberculosis
      Draining fistula/parulis
      Lupus erythematosus
    *Sarcoidosis
    *Necrotizing sialometaplasia
      Warty dyskeratoma
    *Traumatic ulcer

31. Small firm non-hemorrhagic lobulated lesions
    - Papilloma
    - *Verruca vulgaris
    - Lingual tonsil
    - Folate papilla
    - Median rhomboid glossitis
    - Keratoacanthoma
    - Cutaneous horn
    - Nevi
    - *Basal cell carcinoma
    - Neurofibroma
    - Circumvallate papilla (taste bud)

32. Extensive firm non-hemorrhagic lobulated lesions
    - Gingival fibromatoses (see gingiva)
    - Amyloidosis
    - Fissured tongue
    - Macroglossia
    - Buccal fat pads
    - Tori

33. Single firm non-hemorrhagic nodules
    - Irritation fibroma
    - Epulis fissuratum
    - Peripheral ossifying fibroma
    - Lingual thyroid
    - Granular cell myoblastoma
    - Fibrolipoma
    - Benign neural tumors
    - Benign salivary tumors
    - Choristoma/hamartoma
    - Extraosseous odontogenic tumor
    - Rhabdomyoma
    - Oral-facial-digital syndrome
    - Lymph node

34. Multiple firm non-hemorrhagic nodules
    Papillary hyperplasia of the palate
    Papillomatosis
    Hairy tongue
    Accessory tonsillar tissue
    Focal epithelial hyperplasia
    Nneurofibromatosis
    Multiple mucosal neuromas syndrome
    Nicotine stomatitis (palate)
    Amyloidosis
    *Sarcoidosis
    *Verruca vulgaris, multiple lesions
    Focal dermal hypoplasia syndrome
    Darier's disease
    *Acanthosis nigricans
    *Crohn's disease
    Oral-facial-digital syndrome
    Lipoid proteinosis
    *Pyostomatitis vegetans
    Pemphigus vegetans
    Condyloma acuminatum
    Fordyce granules

35. Single bony lumps or nodules
    Torus palatinus (may appear lobulated)
    Torus mandibularis
    Osteoma/exostosis
    *Central expanding bone or odontogenic tumor

36. Multiple or extensive bony enlargements or nodules
    Torus mandibularis
    Torus palatinus (may appear lobulated)
    *Multiple osteomas/gardner's syndrome
    Buccal exostoses
    *Central expanding bone or odontogenic tumor
    Fibrous dysplasia
    *Paget's disease of bone
    Cherubism
    Acromegaly/gigantism
    Hemifacial hypertrophy
    Generalized cortical hyperostosis (van buchem disease)

37. Macroglossia
    - Beckwith's hypoglycemic syndrome
    - Melkersson-rosenthal syndrome
    - Multiple mucosal neuromas syndrome
    - Isolated macroglossia
    - Amyloidosis
    - Neurofibromatosis
    - Acromegaly/cretinism
    - Pellagra
    - Thiamine (B1) deficiency
    - Adult hypothyroidism
    - Hemifacial hypertrophy
    - Angiomas
    - Xerostomia
    - *Diabetes mellitus (uncontrolled)
    - *Other tumors
      - Lymphangioma
      - Hemangioma

38. Microglossia
    - *Progressive muscular atrophy
    - Oral-facial-digital syndrome
    - Lingual carcinoma, post-surgery

39. Clefts
    - Idiopathic cleft
    - With cleft palate
    - With median cleft of mandible
    - Oral-facial-digital syndrome

40. Fissured tongue
    - Inherited
    - Associated with geographic tongue
    - Melkersson-Rosenthal syndrome

41. Supernumerary tongue
    - First and second branchial arch syndrome

42. Smooth tongue
- Vitamin B complex deficiency
- Pernicious anemia
- *Diabetes mellitus
- Anxiety with hypertension
- *Cardiac decompensation
- *Plummer-Vinson syndrome
- Xerostomia
- Congenital absence of papillae
- Geographic tongue
- Median rhomboid glossitis
- *Epidermolysis bullosa/other vesiculo-bullous lesions
- Other anemias

43. Glossodynia (pain in tongue)
- Vitamin B complex deficiency
- Pernicious anemia
- Iron deficiency anemia
- Diabetes mellitus (uncontrolled)
- Local irritants/habits
- *Drug reactions
- Contact allergy
- Excessive smoking, alcohol, or spices
- Sjogren's syndrome
- Psychosomatic
- Inflamed lingual tonsil
- *Sprue
- Hairy tongue
- Decreased intermaxillary space
- Temporomandibular joint dysfunction
- Candidiasis

44. Acute parotid-area swellings
- *Mumps/other parotitis
- *Sialolithiasis
- *Drug reactions
- *Mikulicz's syndrome
- *Salivary malignancy

45. Chronic parotid-area swellings
- Recurrent subacute parotitis
- Chronic ductal obstruction
- Benign salivary tumor
- Sjogren's syndrome
- Diabetes mellitus
- Benign lymphoepithelial lesion
- Chronic alcoholism

46. Acute discrete nodules, non-parotid area
    *Acute lymphadenitis
    *Infectious mononucleosis
    *Non-hodgkins lymphomas
    *Hodgkin's disease
    *Sialadenitis (submandibular)
    *Metastatic tumors

47. Chronic discrete nodules, non-parotid area
      Lipoma
      Sebaceous cyst
      Branchial cleft cyst
      Thyroglossal duct cyst
      Epidermoid/dermoid cyst
      Thyroid enlargement
      Parathyroid enlargement
    *Carotid body tumor
    *Benign salivary tumor (submandibular)
    *Tuberculosis
    *Sarcoidosis
    *Benign mesenchymal tumors

48. Acute extensive diffuse swellings, non-parotid area
    *Cellulitis
    *Ludwig's angina
      Ranula
    *Sialolithiasis (submandibular)
      Cat-scratch disease
    *Lymphomas
    *Metastatic tumors
    *Primary cervical malignancies

49. Chronic extensive diffuse swellings, non-parotid area
      Sialolithiasis (submandibular)
    *Benign salivary tumor
    *Cushing's syndrome (buffalo hump)
      Benign hereditary cervical lipomatosis

APPENDIX D
Responses Used by Branch Points and by Diagnostic Rules

Appendix D lists all possible symptom responses used by the computer based dental program for the diagnosis of trauma and non-trauma related dental emergencies and for the differential diagnosis of soft tissue lesions. "Q" or "*Q" next to a response means that selecting the presence of this response (Q) or the absence of this response (*Q) affects which questions are subsequently asked by the program. "D" or "*D" next to a response means that the presence of this response (D) or the absence of this response (*D) is used by the rules to arrrive at a diagnostic decision. For example, Q, D and *D next to response #40 (page D - (2)) means that the presence of this response (Q) affects which questions are subsequently asked by the program and the presence (D) or absence (*D) of this response is used in the rules to arrive at a diagnostic decision. Preceeding each response is the variable name used by the program in referencing the response. For example, the variable name for response #40 is PC=1.

Listed below are the 206 responses used by the program to evaluate trauma and non-trauma related dental emergencies.

Symptoms Used for Trauma and Non-trauma Related Dental Emergencies

Q	*Q	D	*D	
Q				1. XX=1 Discomfort or pain, non-trauma related.
Q				2. XX=2 Discomfort or pain, trauma-related.
Q				3. XX=3 A clinical changee in oral/facial tissues
Q				4. XX=4 Definitions.
Q				5. XX=5 Treatment recommendations.
Q				6. XX=6 Quit.
Q				7. X=1 Tooth specific, non-trauma related.
Q		D	*D	8. X=2 Teeth, generalized or multiple adjacent, non-trauma related.
Q		D		9. X=3 Gingiva, specifc area, non-trauma related.
Q				10. X=4 Gingiva, generalized, non-trauma related.
Q				11. X=5 Oral mucosa, tooth-associated, non-trauma related.
Q				12. X=6 Other oral soft tissues, non-trauma related.
Q				13. X=7 Temporomandibular joint/muscles, non-trauma related.
Q				14. X=8 Dental extraction site, non-trauma related.
Q		D		15. X=9 Tissue swelling, non-trauma related, non-trauma related.
		D	*D	16. D=11 Extraction performed 3 to 5 days ago.
				17. D=12 Extraction performed 6 days to 4 weeks ago.
			*D	18. D=13 Extraction performed 4 to 8 weeks ago.
			*D	19. D=14 Extraction performed "None of the above".
		D		20. D=21 A steady pain in the extraction site area. Pt. may have an earache on the same side.
		D		21. D=22 Problem associated with extraction site is a small, well-demarcated area that is tender to touch and which feels like there is something sharp or jagged under the tissue.
		D		22. D=23 Problem associated with extraction site is a localized diffuse swelling which may be fluctuant or have purulence evident.
		D		23. D=31 Dental extraction site associated with a lower posterior tooth.
				24. D=32 Dental extraction site not associated with a lower posterior tooth.

Q	*Q	D	*D	
				25. TM=1 The patient has had a similar problem once previously.
				26. TM=2 The patient has had a similar problem off and on.
				27. TM=3 The patient has never had a similar problem.
		D		28. D=U1 Immediate problem has lasted only a few days.
				29. D=U2 Immediate problem has lasted for the last few weeks.
			*D	30. D=U3 Immediate problem is long standing.
		D	*D	31. HR=1 Pain has lasted less than 1 hour.
		D	*D	32. HR=2 Pain has lasted an hour or longer
Q			*D	33. PN=1 Degree of discomfort is mild.
Q		D		34. PN=2 Degree of discomfort is moderate.
Q		D	*D	35. PN=3 Degree of discomfort is severe (interferes with sleep or work).
Q		D		36. CI=1 Pain or discomfort is continuous.
				37. CI=2 Pain or discomfort is intermittent.
Q		D	*D	38. PB=1 There is a hx of prior dx/tx of periodontal disease.
Q		D		39. PB=2 There is no hx of prior dx/tx for periodontal disease.
Q		D	*D	40. PC=1 There is a hx of periodontal abscesses.
Q		D		41. PC=2 There is no hx of periodontal abscesses.
Q	*Q	D	*D	42. PE=1 Probing depth in area of concern is greater than 4mm.
				43. PE=2 Probing depth is area of concern is not greater than 4mm.
				44. PE=3 Can't determine if probing depth is greater than 4mm.
Q		D	*D	45. E1=1 Significant discomfort when the area is exposed to hot/cold.
Q				46. E1=2 No significant discomfort when the area is exposed to hot/cold.
Q				47. E1=3 Not at present, but recently there was discomfort when area was exposed to hot/cold.
	*Q	D	*D	48. E2=1 Discomfort lingers after exposure to hot or cold.
		D		49. E2=2 Discomfort does not linger after exposure to hot or cold.

Q	*Q	D	*D	
Q		D		50. E6=1 Exposed dentin is present or the discomfort is primarily to cold or touch and located near the gingival margin.
				51. E6=2 Exposed dentin is not present and the discomfort is not due primarily to cold or touch and it is not located near the gingival margin.
		D	*D	52. E3=1 Pain is spontaneous.
		D		53. E3=2 Pain is not spontaneous.
		D		54. E4=1 Eating sweets or sugar elicits pain.
				55. E4=2 Eating sweets or sugar does not elicit pain.
				56. E4=3 It is not known whether eating sweets or sugar elicits pain.
		D	*D	57. E5=1 Caries appear associated with the tooth.
				58. E5=2 Caries do not appear associated with the tooth.
				59. E5=3 It is not known whether caries are associated with the tooth.
Q		D		60. E7=1 Tooth is sensitive to percussion.
		D		61. E7=2 Tooth/teeth not sensitive to percussion.
		D		62. E8=1 Discomfort when the area near the apex/apices of the tooth/teetth are palpated.
		D		63. E8=2 No discomfort when the area near the apex/apices of the tooth/teeth are palpated.
Q	*Q	D	*D	64. E9=1 There is a fistula, fluctuant swelling or localized diffuse inflammatory swelling present near the apex of the tooth.
Q		D		65. E9=2 Fistula, fluctuant swelling, or localized diffuse swelling not present near apex of tooth.
Q		D	*D	66. EB=1 Tooth has had prior endodontic tx.
		D		67. EB=2 Tooth has not had prior endodontic tx.
Q		D	*D	68. EC=1 Restoration appears defective in the area of concern.
				69. EC=2 Restoration does not appear defective in the area of concern.

Q	*Q	D	*D	
Q		D	*D	70. EE=1 There is clinical evidence of a fracture line or crack in the tooth.
				71. EE=2 There is no clinical evidence of a fracture line or crack in the tooth.
		D		72. EG=1 Problem is located in maxillary posterior teeth.
Q				73. EG=2 Problem is not located in maxillary posterior teeth.
	*Q	D	*D	74. EI=1 Discomfort increases when pt. bends over.
				75. EI=2 Discomfort does not increase when pt. bends over.
		D	*D	76. EH=1 Pt. has had a recent cold or sinus problem.
				77. EH=2 Pt. has not had a recent cold or sinus problem.
		D	*D	78. P1=1 Area of concern appears to be a flap of inflamed tissue (not always grossly inflamed) partially covering or surrounding an erupting tooth.
Q				79. P1=2 Area of concern does not appear to be a flap of inflamed tissue (not always grossly inflamed) partially covering or surrounding an erupting tooth.
Q		D		80. UZ=1 Tooth is a third molar (wisdom tooth).
				81. UZ=2 Tooth is not a third molar (wisdom tooth).
			*D	82. P2=1 Gingival tissues appear pink.
		D		83. P2=2 Gingival tissues appear red.
		D		84. P2=3 Gingival tissues appear pink with red gingival margins.
		D	*D	85. P2=4 Color of gingival tissues are red or pink with red gingival margins, but with areas having a gray-white membranous coating that can be removed.
		D		86. P3=1 Gingival tissues bleed when probed or patient reports bleeding when brushing.
				87. P3=2 Gingival tissues do not bleed when probed and patient does not report bleeding when brushing.

Q	*Q	D	*D	
				88. P4=1 Gingival papillae appear scalloped and not swollen.
		D		89. P4=2 Gingival papillae appear swollen or enlarged.
		D	*D	90. P4=3 Gingival papillae appear ulcerated or blunted.
Q		D		91. P5=1 Extremely foul odor is present.
				92. P5=2 Extremely foul odor is not present.
Q		D		93. SW=1 Swelling is located on the face.
Q				94. SW=2 Swelling is located on oral mucosa or gingiva, near teeth.
Q				95. SW=3 Swelling is located on other oral tissues, not near teeth.
		D	*D	96. P6=1 Patient has an elevated temp, palpable lymph nodes of the head and neck region, or malaise.
		D		97. P6=2 Patient does not have an elevated temp, palpable lymph nodes of the head and neck region, or malaise.
Q		D	*D	98. P7=1 Prominent, localized, swelling of the gingival or mucosal tissues present.
Q				99. P7=2 Prominent, localized, swelling of the gingival or mucosal tissues not present.
Q		D	*D	100. P8=1 Swelling has diffuse inflammatory appearance or it appears fluctuant, or there is evidence of a purulent exudate.
Q				101. P8=2 Swelling does not have a diffuse inflammed appearance, it does not appear fluctuant, and there is no evidence of pus.
		D		102. P9=1 Teeth feel tight or like something is caught between them.
				103. P9=2 Teeth do not feel tight or like something is caught between them.
		D		104. PG=1 Patient relates a history of food being trapped or caught between the teeth.
				105. PG=2 Patient does not relate a history of food being trapped or caught between the teeth.

Q	*Q	D	*D	
		D		106. PV=1 Patient complains of bad taste or odor in his mouth.
				107. PV=2 Patient does not complain of bad taste or odor in his mouth.
		D	*D	108. PH=1 Patient has shallow, ragged painful ulcers covered by a gray/white membrane and surrounded by a reddish halo.
		D		109. PH=2 Patient does not have shallow, ragged painful ulcers covered by a gray/white membrane and surrounded by a reddish halo.
		D		110. X1=1 Patient has clicking or popping of temporomandibular joint.
				111. X1=2 Patient does not have clicking or popping of temporomandibular joint.
		D		112. X2=1 Temporomandibular joint is tender to palpation either facially or through the external auditory canal.
				113. X2=2 Temporomandibular joint is not tender to palpation either facially or through the external auditory canal.
		D		114. X3=1 Muscles of mastication tender to palpation.
				115. X3=2 Muscles of mastication are not tender to palpation.
		D		116. X4=1 Patient's mandible deviates laterally on opening.
				117. X4=2 Patient's mandible does not deviate laterally on opening.
		D		118. X5=1 Patient's ability to open his mouth is compromised or limited.
				119. X5=2 Patient's ability to open his mouth is not compromised or limited.
		D		120. X6=1 Patient has a hx of previous TMJ problems.
				121. X6=2 Patient does not have a hx of previous TMJ problems.
		D		122. X7=1 Patient has recently been under increased stress.
				123. X7=2 Patient has not recently been under increased stress.

Q	*Q	D	*D	
Q		D		124. OW=1 Evidence of significant wear on the occlusal surfaces.
				125. OW=2 No evidence of significant wear on the occlusal surfaces.
Q		D		126. X8=1 Patient either grinds or clenches teeth or chews gum regularly.
				127. X8=2 Patient does not grind or clench teeth or chew gum regularly.
Q		D		128. X9=1 Teeth are sore.
				129. X9=2 Teeth are not sore.
Q		D		130. EA=1 Tooth has increased mobility.
Q				131. EA=2 Tooth does not have increased mobility.
Q		D		132. NF=1 New restoration or dental crown/bridgework on or opposing sore tooth.
Q		D		133. NF=2 No new restoration or dental crown/bridgework on or opposing sore tooth.
Q				134. TA=1 Trauma related injury to tooth or teeth.
Q			*D	135. TA=2 Trauma related injury to other oral or facial tissues or structures.
				136. TA=3 Trauma related injury to both teeth and other oral or facial tissues or structures.
		D		137. TB=1 The occlusion is unchanged while pt. open and closes mouth.
		D		138. TB=2 The occlusion is changed slightly while pt. open and closes mouth.
		D		139. TB=3 The occlusion is changed appreciably while pt. open and closes mouth.
		D		140. C=1 Pt. has head injury or lost consciousness, vomited or has hx of amnesia associated with trauma.
				141. C=2 Pt. has not had head injury or lost consciousness, vomited or hx of amnesia associated with trauma.
		D		142. PZ=1 Paresthesia or anesthesia is primarily associated with lower teeth and/or lower lip and chin.
		D		143. PZ=2 Paresthesia or anesthesia is primarily associated with upper teeth and/or upper lip.
		D		144. PZ=3 Paresthesia or anesthesia is primarily associated with lower eyelid and/or lateral areas of nose and/or cheek.
				145. PZ=4 None of the above.

Q	*Q	D	*D	
				146. ZY=1 Evidence of enopthalmia or exopthalmia.
				147. ZY=2 Evidence of visual disturbances (primarily opia).
				148. ZY=3 Evidence of subconjunctival hemorrhage (medial or lateral).
				149. ZY=4 Evidence of increased intercanthal distance (eyes look/feel further apart).
				150. ZY=5 Evidence of visual asymmetry of cheek.
				151. ZY=6 Evidence of pain or crepitus when palpating high into the buccal vestibule.
		D		152. ZY=7 More than one of the above.
			*D	153. ZY=8 None of the above.
		D		154. TC=1 Mandible deviates to side when opening.
				155. TC=2 Mandible does not deviate to side when opening.
		D		156. TG=1 It is painful to open and close.
				157. TG=2 It is not painful to open and close.
		D		158. TI=1 Current radiograph suggests fractured bone(s).
				159. TI=2 Current radiograph does not suggest fractured bone(s).
				160. TI=3 Current radiograph is not available.
		D	*D	161. TJ=1 By examination, bony segments of the mandible can be easily moved or displaced.
				162. TJ=2 By examination, bony segments of the mandible can not be easily moved or displaced.
		D	*D	163. TK=1 By examination, bony segments of maxilla can be easily moved or displaced.
				164. TK=2 By examination, bony segments of maxilla can not be easily moved or displaced.
		D		165. TL=1 From palpating facial bones, there is evidence of a stepping, displacement or depression of facial bones.
				166. TL=2 From palpating facial bones, there is no evidence of a stepping, displacement or depression of facial bones.

Q	*Q	D	*D	
Q				167. TH=1 Evidence of bleeding from abrasions or lacerations.
		D		168. TH=2 Evidence of bleeding into tissue spaces.
				169. TH=3 Evidence of bleeding from the gingival margin(s).
Q		D		170. TH=4 Evidence of bleeding from abrasions/lacerations and into tissue spaces.
Q				171. TH=5 Evidence of bleeding from abrasions/lacerations and from gingival margin(s).
		D		172. TH=6 Evidence of bleeding into tissue spaces and from gum margin(s).
Q		D		173. TH=7 Evidence of bleeding from abrasions/lacerations, into tissue spaces and from gum margin(s).
			*D	174. TH=8 No evidence of bleeding.
Q		D		175. F1=1 Traumatically involved tooth is displaced lingually or facially.
Q		D		176. F1=2 Traumatically involved tooth intrudes into the socket.
		D		177. F1=3 Traumatically involved tooth is partially extruded from socket.
Q		D	*D	178. F1=4 Traumatically involved tooth is totally avulsed.
Q		D		179. F1=5 Traumatically involved tooth is not displaced.
		D		180. TN=1 More than three hours have elapsed since injury.
		D		181. TN=2 Less than 3 hours have elapsed from time of injury.
		D		182. TO=1 The tooth is generally intact.
		D		183. TO=2 The tooth is not generally intact.
		D		184. TP=1 Socket of the avulsed tooth appears intact.
		D		185. TP=2 Socket of tooth does not appear intact.
		D		186. TR=1 Based on pt. info. and records, the tooth was otherwise healthy.
		D		187. TR=2 Based on pt. info. and records, the tooth was not otherwise healthy.
Q		D	*D	188. TS=1 Injured tooth has had endodontic tx.
				189. TS=2 Injured tooth has not had endodontic tx.

Q	*Q	D	*D	
		D		190. TT=1 Tooth is extremely mobile.
		D		191. TT=2 Tooth is slightly mobile.
Q			*D	192. TT=3 Tooth has no increased mobility.
		D	*D	193. TU=1 Adjacent teeth move when injured tooth is moved.
				194. TU=2 Adjacent teeth do not move when injured tooth is moved.
		D		195. TW=1 Definitely a fracture line or part of the tooth missing.
		D		196. TW=2 Possible fracture line or crack in the tooth.
Q			*D	197. TW=3 No evidence of a fracture line or crack in the tooth.
		D		198. TV=1 (Possible) Fracture line or crack involves the crown of the tooth.
				199. TV=2 (Possible) Fracture line or crack does not involve the crown of the tooth.
		D	*D	200. FL=1 (Possible) Fracture line or crack extends below gum tissue.
		D		201. FL=2 (Possible) Fracture line or crack does not extend below gum tissue.
			*D	202. TY=1 Pulp has not been exposed.
Q		D		203. TY=2 Pulp has been exposed and is smaller than 1mm in diameter.
Q		D		204. TY=3 Pulp has been exposed and is larger than 1mm in diameter.
		D		205. TZ=1 Dentin is exposed.
		D		206. TZ=2 Dentin is not exposed.

Symptoms Used for the Differential Diagnosis of Soft Tissue Lesions

Listed below are the 71 responses used by the dental program to provide a differential diagnosis of soft tissue lesions.

Q	*Q	D	*D	
Q		D		1. SA=1 The type of soft tissue lesion involves gingival changes.
Q		D		2. SA=2 The type of soft tissue lesion involves tissue color changes.
Q		D		3. SA=3 The type of soft tissue lesion involves vesicles, bullae or ulcers.
Q		D		4. SA=4 The type of soft tissue lesion involves oral nodules or enlargements.
Q		D		5. SA=5 The type of soft tissue lesion involves the tongue.
Q		D		6. SA=6 The type of soft tissue lesion involves neck/face/cheek masses.
Q				7. SA=7 Quit program.
Q		D		8. SB=1 The nature of the gingival problem involves desquamation.
Q		D		9. SB=2 The nature of the gingival problem involves atrophy or ulceration.
Q		D		10. SB=3 The nature of the gingival problem involves localized hyperplastic, hemorrhagic lesions.
Q		D		11. SB=4 The nature of the gingival problem involves generalized hyperplastic, hemorrhagic lesions.
Q		D		12. SB=5 The nature of the gingival problem involves localized hyperplastic, non-hemorrhagic lesions.
Q		D		13. SB=6 The nature of the gingival problem involves generalized hyperplastic, non-hemorrhagic lesions.
Q		D		14. SB=7 The nature of the gingival problem involves cystic lesions.
Q				15. SB=8 None of the above.

Q	D	16. SC=1 The color of the tissue lesion(s) is white.
Q	D	17. SC=2 The color of the tissue lesion(s) is red.
Q	D	18. SC=3 The color of the tissue lesion(s) is brown and/or black.
Q	D	19. SC=4 The color of the tissue lesion(s) is blue and/or purple.
Q	D	20. SC=5 The color of the tissue lesion(s) is yellow.
Q		21. SC=6 None of the above.
Q	D	22. MW=1 The nature of the white lesion(s) is keratotic, non-sloughing, non-ulcerated, non-eroded, non-papillary.
Q	D	23. MW=2 The nature of the white lesion(s) is keratotic, non-sloughing, non-ulcerated, non-eroded, papillary.
Q	D	24. MW=3 The nature of the white lesion(s) is keratotic, non-sloughing, non-ulcerated, eroded, non-papillary.
Q	D	25. MW=4 The nature of the white lesion(s) is keratotic, non-sloughing, non-ulcerated, eroded, papillary.
Q		26. MW=5 The nature of the white lesion(s) is non-keratotic, sloughing.
Q	D	27. MR=1 The nature of the red lesion(s) is a single exophytic lesion.
Q	D	28. MR=2 The nature of the red lesion(s) is a single non-exophytic lesion.
Q	D	29. MR=3 The nature of the red lesion(s) is generalized or multiple exophytic lesions.
Q	D	30. MR=4 The nature of the red lesion(s) is generalized or multiple non-exophytic lesions.
Q		31. MR=5 None of the above.
Q	D	32. MB=1 The nature of the brown and/or black lesion(s) is a single, exophytic lesion.
Q	D	33. MB=2 The nature of the brown and/or black lesion(s) is a single, non-exophytic lesion.
Q	D	34. MB=3 The nature of the brown and/or black lesion(s) is generalized or multiple exophytic lesions.
Q	D	35. MB=4 The nature of the brown and/or black lesion(s) is generalized or multiple non-exophytic lesions.
Q		36. MB=5 None of the above.

Q	*Q	D	*D	
Q		D		37. MP=1 The nature of the blue and/or purple lesion(s) is a single lesion.
Q		D		38. MP=2 The nature of the blue and/or purple lesion(s) is generalized or multiple lesions.
Q				39. MP=3 None of the above.
Q		D		40. MY=1 The nature of the yellow lesion(s) is a single lesion.
Q		D		41. MY=2 The nature of the yellow lesion(s) is generalized or multiple lesions.
Q				42. MY=3 None of the above.
Q		D		43. SH=1 The condition involves acute vesicles.
Q		D		44. SH=2 The condition involves chronic vesicles.
Q		D		45. SH=3 The condition involves acute bullae.
Q		D		46. SH=4 The condition involves chronic bullae.
Q		D		47. SH=5 The condition involves acute ulcers.
Q		D		48. SH=6 The condition involves chronic ulcers.
Q				49. SH=7 The condition involves none of the above.
Q		D		50. SI=1 The oral nodule or enlargement is small firm non-hemorrhagic.
Q		D		51. SI=2 The oral nodule or enlargement is extensive firm non-hemorrhagic.
Q		D		52. SI=3 The oral nodule or enlargement is single firm non-hemorrhagic.
Q		D		53. SI=4 The oral nodule or enlargement is multiple firm non-hemorrhagic.
Q		D		54. SI=5 The oral nodule or enlargement is a single bony lump or nodule.
Q		D		55. SI=6 The oral nodule or enlargement involves multiple or extensive bony enlargements or nodules.
Q				56. SI=7 None of the above.
Q		D		57. SJ=1 Macroglossia (enlarged tongue).
Q		D		58. SJ=2 Microglossia (small tongue).
Q		D		59. SJ=3 Cleft in tongue.
Q		D		60. SJ=4 Fissure tongue.
Q		D		61. SJ=5 Supernumerary tongue.
Q		D		62. SJ=6 Smooth tongue.
Q		D		63. SJ=7 Glossodynia (pain in tongue).
Q				64. SJ=8 None of the above.

Q	*Q	D	*D	
Q		D		65. SK=1 Concerning the mass(es), there is acute parotid swelling.
Q		D		66. SK=2 Concerning the mass(es), there is chronic parotid swelling.
Q		D		67. SK=3 Concerning the mass(es), there is acute discrete nodules, non-parotid area.
Q		D		68. SK=4 Concerning the mass(es), there is chronic discrete nodules, non-parotid area.
Q		D		69. SK=5 Concerning the mass(es), there is acute extensive diffuse swelling, non-parotid area.
Q		D		70. SK=6 Concerning the mass(es), there is chronic extensive diffuse swelling, non-parotid area.
Q				71. SK=7 None of the above.

APPENDIX E
Diagnostic Rules

There are 70 diagnostic rules used by the computer based dental program to diagnose trauma and non-trauma related dental emergencies. Listed below are the 35 dental diagnoses for trauma and non-trauma related dental emergencies. Under each diagnosis is/are the rule(s) that the program uses to arrive at the particular diagnosis.

1. Localized alveolar osteitis (dry socket)

RULE: A AND (B OR NOT C OR D)

A. EXTRACTION PERFORMED 3 TO 5 DAYS AGO.

B. A STEADY PAIN IN THE EXTRACTION SITE AREA. PT. MAY HAVE AN EARACHE ON THE SAME SIDE.

C. DEGREE OF DISCOMFORT IS MILD.

D. DENTAL EXTRACTION SITE ASSOCIATED WITH A LOWER POSTERIOR TOOTH.

Diagnosis: Possible localized alveolar osteitis (dry socket)

RULE: A AND B AND C AND NOT D

A. EXTRACTION PERFORMED 3 TO 5 DAYS AGO.

B. A STEADY PAIN IN THE EXTRACTION SITE AREA. PT. MAY HAVE AN EARACHE ON THE SAME SIDE.

C. DENTAL EXTRACTION SITE ASSOCIATED WITH A LOWER POSTERIOR TOOTH.

D. DEGREE OF DISCOMFORT IS MILD.

Diagnosis: Probable localized alveolar osteitis (dry socket)

2. **Osseous sequestrum**

RULE: A AND (NOT B OR NOT C)

A. PROBLEM ASSOCIATED WITH EXTRACTION SITE IS A SMALL, WELL-DEMARCATED AREA THAT IS TENDER TO TOUCH AND WHICH FEELS LIKE THERE IS SOMETHING SHARP OR JAGGED UNDER THE TISSUE.

B. EXTRACTION PERFORMED 3 TO 5 DAYS AGO.

C. DEGREE OF DISCOMFORT IS SEVERE (INTERFERES WITH SLEEP OR WORK).

Diagnosis: Possible osseous sequestrum

RULE: NOT A AND B AND NOT C AND NOT D

A. EXTRACTION PERFORMED 3 TO 5 DAYS AGO.

B. PROBLEM ASSOCIATED WITH EXTRACTION SITE IS A SMALL, WELL-DEMARCATED AREA THAT IS TENDER TO TOUCH AND WHICH FEELS LIKE THERE IS SOMETHING SHARP OR JAGGED UNDER THE TISSUE.

C. TIME SINCE EXTRACTION WAS PERFORMED "NONE OF THE ABOVE".

D. DEGREE OF DISCOMFORT IS SEVERE (INTERFERES WITH SLEEP OR WORK).

Diagnosis: Probable osseous sequestrum

3. Abscess/infection/cellulitis

RULE: A AND (B OR C)

A. THE SWELLING IS LOCATED ON THE FACE.

B. PATIENT HAS AN ELEVATED TEMP, PALPABLE LYMPH NODES OF THE HEAD AND NECK REGION, OR MALAISE.

C. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

Diagnosis: Possible abscess/infection/cellulitis

RULE: A AND (NOT B OR NOT C)

A. PROBLEM ASSOCIATED WITH EXTRACTION SITE IS A LOCALIZED DIFFUSE SWELLING WHICH MAY BE FLUCTUANT OR HAVE PURULENCE EVIDENT.

B. IMMEDIATE PROBLEM IS A LONG STANDING ONE.

C. EXTRACTION WAS PERFORMED 4 TO 8 WEEKS AGO.

Diagnosis: Possible abscess/infection/cellulitis

RULE: A AND B AND (C OR D) AND E AND F

A. PROBLEM CONCERNS TISSUE SWELLING, NON-TRAUMA RELATED.

B. IMMEDIATE PROBLEM HAS LASTED ONLY A FEW DAYS.

C. DEGREE OF DISCOMFORT IS MODERATE.

D. DEGREE OF DISCOMFORT IS SEVERE (INTERFERES WITH SLEEP OR WORK).

E. PATIENT HAS AN ELEVATED TEMP, PALPABLE LYMPH NODES OF THE HEAD AND NECK REGION, OR MALAISE.

F. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

Diagnosis: Probable abscess/infection/cellulitis

RULE: A AND B AND NOT C

A. PROBLEM ASSOCIATED WITH EXTRACTION SITE IS A LOCALIZED DIFFUSE SWELLING WHICH MAY BE FLUCTUANT OR HAVE PURULENCE EVIDENT.

B. IMMEDIATE PROBLEM HAS LASTED ONLY A FEW DAYS.

C. EXTRACTION WAS PERFORMED 4 TO 8 WEEKS AGO.

Diagnosis: Probable abscess/infection/cellulitis

4. **Periodontal abscess**

RULE: (A AND NOT B) OR ((C AND NOT B AND (D OR E OR F))

A. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

B. DISCOMFORT LINGERS AFTER EXPOSURE TO HOT OR COLD.

C. THERE IS A FISTULA, FLUCTUANT SWELLING OR LOCALIZED DIFFUSE INFLAMMATORY SWELLING PRESENT NEAR THE APEX OF THE TOOTH.

D. PROBING DEPTH IN AREA OF CONCERN IS GREATER THAN 4MM.

E. THERE IS HX OF PRIOR DX OF PERIODONTAL DISEASE.

F. THERE IS HX OF PERIODONTAL ABSCESSES.

Diagnosis: Possible periodontal abscess

RULE: ((A AND B) OR C)) AND (D OR E) AND NOT F AND (NOT G OR NOT H) AND NOT I AND J

A. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

B. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

C. THERE IS A FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE INFLAMMATORY SWELLING PRESENT NEAR THE APEX OF THE TOOTH.

D. PROBING DEPTH IN AREA OF CONCERN IS GREATER THAN 4MM.

E. THERE IS HX OF PERIODONTAL ABSCESSES.

F. DISCOMFORT LINGERS AFTER EXPOSURE TO HOT OR COLD.

G. RESTORATION APPEARS DEFECTIVE IN THE AREA OF CONCERN.

H. CARIES APPEAR ASSOCIATED WITH THE TOOTH.

I. TOOTH HAS HAD PRIOR ENDODONTIC TX.

J. TOOTH IS SENSITIVE TO PERCUSSION.

Diagnosis: Probable periodontal abscess

5. **Reversible pulpitis**

RULE: A AND B AND C AND (D OR E)

A. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

B. DISCOMFORT DOES NOT LINGER AFTER EXPOSURE TO HOT OR COLD.

C. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

D. PAIN IS NOT SPONTANEOUS.

E. NEW RESTORATION OR DENTAL CROWN/BRIDGEWORK ON OR OPPOSING SORE TOOTH.

Diagnosis: Possible reversible pulpitis

RULE: (A AND B AND C AND D AND NOT E) OR (F AND A AND G AND D)

A. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

B. DISCOMFORT DOES NOT LINGER AFTER EXPOSURE TO HOT OR COLD.

C. PAIN IS NOT SPONTANEOUS.

D. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

E. PAIN HAS LASTED AN HOUR OR LONGER.

F. NEW RESTORATION OR DENTAL CROWN/BRIDGEWORK ON OR OPPOSING SORE TOOTH.

G. TOOTH IS SENSITIVE TO PERCUSSION.

Diagnosis: Probable reversible pulpitis

6. Irreversible pulpitis

RULE: ((A AND B) OR (C AND D)) AND NOT E AND (NOT F OR NOT G)

A. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

B. DISCOMFORT LINGERS AFTER EXPOSURE TO HOT OR COLD.

C. PAIN IS SPONTANEOUS.

D. DEGREE OF DISCOMFORT IS SEVERE.

E. DEGREE OF DISCOMFORT IS MILD.

F. DISCOMFORT INCREASES WHEN PT. BENDS OVER.

G. PT. HAS HAD A RECENT COLD OR SINUS PROBLEM.

Diagnosis: Possible irreversible pulpitis

RULE: A AND NOT B AND NOT C AND D AND E AND NOT F

A. PAIN OR DISCOMFORT IS CONTINUOUS.

B. PAIN HAS LASTED LESS THAN 1 HOUR.

C. DEGREE OF DISCOMFORT IS MILD.

D. TOOTH/TEETH NOT SENSITIVE TO PERCUSSION.

E. NO DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

F. TOOTH HAS HAD PRIOR ENDODONTIC TX.

Diagnosis: Possible irreversible pulpitis

RULE: A AND NOT B AND C AND D AND E AND F

A. PAIN OR DISCOMFORT IS CONTINUOUS.

B. DEGREE OF DISCOMFORT IS MILD.

C. TOOTH/TEETH NOT SENSITIVE TO PERCUSSION.

D. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

E. TOOTH HAS NOT HAD PRIOR ENDODONTIC TX.

F. NO DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

Diagnosis: Possible irreversible pulpitis

7. **Acute apical abscess**

RULE: A AND (B OR C OR NOT D OR NOT E OR NOT F)

A. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

B. TOOTH IS SENSITIVE TO PERCUSSION.

C. DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

D. PROBING DEPTH IN AREA OF CONCERN IS GREATER THAN 4MM.

E. THERE IS HX OF PRIOR DX OF PERIODONTAL DISEASE.

F. THERE IS HX OF PERIODONTAL ABSCESSES.

Diagnosis: Possible acute apical abscess

RULE: A AND B AND (C OR D OR E OR F OR G OR H) AND NOT I AND J OR K

A. TOOTH IS SENSITIVE TO PERCUSSION.

B. THERE IS A FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE INFLAMMATORY SWELLING PRESENT NEAR THE APEX OF THE TOOTH.

C. TOOTH HAS HAD PRIOR ENDODONTIC TX.

D. DISCOMFORT LINGERS AFTER EXPOSURE TO HOT OR COLD.

E. CARIES APPEAR ASSOCIATED WITH THE TOOTH.

F. RESTORATION APPEARS DEFECTIVE IN THE AREA OF CONCERN.

G. DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

H. TOOTH HAS INCREASED MOBILITY.

I. PROBING DEPTH IN AREA OF CONCERN IS GREATER THAN 4MM.

J. NO HX OF PRIOR TX FOR PERIODONTAL DISEASE.

K. NO HX OF PERIODONTAL DISEASE.

Diagnosis: Probable acute apical abscess

8: Acute apical periodontitis

RULE: (NOT A) AND (B OR C) AND (NOT D OR NOT E) AND NOT F AND NOT G AND H

A. TEETH, GENERALIZED OR MULTIPLE ADJACENT, NON-TRAUMA RELATED.

B. TOOTH IS SENSITIVE TO PERCUSSION.

C. DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

D. DISCOMFORT INCREASES WHEN PT. BENDS OVER.

E. PT. HAS HAD A RECENT COLD OR SINUS PROBLEM.

F. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

G. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

H. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

Diagnosis: Possible acute apical periodontitis

RULE: IF A AND (B OR C) AND (NOT D OR NOT E) AND NOT F AND NOT G AND H

A. TEETH, GENERALIZED OR MULTIPLE ADJACENT, NON-TRAUMA RELATED.

B. TOOTH IS SENSITIVE TO PERCUSSION.

C. DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

D. DISCOMFORT INCREASES WHEN PT. BENDS OVER.

E. PT. HAS HAD A RECENT COLD OR SINUS PROBLEM.

F. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

G. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

H. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

Diagnosis: Possible acute apical periodontitis

RULE: IF (NOT A) AND B AND C AND NOT D AND NOT E AND F AND NOT G AND NOT H AND (NOT I OR NOT J)

A. TEETH, GENERALIZED OR MULTIPLE ADJACENT, NON-TRAUMA RELATED.

B. TOOTH IS SENSITIVE TO PERCUSSION.

C. DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

D. THERE IS CLINICAL EVIDENCE OF A FRACTURE LINE OR CRACK IN THE TOOTH.

E. DISCOMFORT INCREASES WHEN PT. BENDS OVER.

F. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

G. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

H. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

I. PAIN IS SPONTANEOUS.

J. PT. HAS HAD A RECENT COLD OR SINUS PROBLEM.

Diagnosis: Probable acute apical periodontitis

9. **Carious lesion (decay)**

RULE: A OR B

A. EATING SWEETS OR SUGAR ELICITS PAIN.

B. CARIES APPEAR ASSOCIATED WITH THE TOOTH.

Diagnosis: Possible carious lesion (decay)

RULE: A

A. CARIES APPEAR ASSOCIATED WITH THE TOOTH.

Diagnosis: Probable carious lesion (decay)

10. Dentin hypersensitivity

RULE: IF ((A AND B AND C) OR D AND E) OR (F AND (D OR C) AND E)

A. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

B. DISCOMFORT DOES NOT LINGER AFTER EXPOSURE TO HOT OR COLD.

C. EXPOSED DENTIN IS PRESENT OR THE DISCOMFORT IS PRIMARILY TO COLD OR TOUCH AND LOCATED NEAR THE GINGIVAL MARGIN.

D. EATING SWEETS OR SUGAR ELICITS PAIN.

E. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

F. TEETH, GENERALIZED OR MULTIPLE ADJACENT, NON-TRAUMA RELATED.

Diagnosis: Possible dentin hypersensitivity

RULE: A AND B AND C AND (D OR E) AND F AND G AND H AND I

A. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

B. DISCOMFORT DOES NOT LINGER AFTER EXPOSURE TO HOT OR COLD.

C. PAIN IS NOT SPONTANEOUS.

D. EXPOSED DENTIN IS PRESENT OR THE DISCOMFORT IS PRIMARILY TO COLD OR TOUCH AND LOCATED NEAR THE GINGIVAL MARGIN.

E. EATING SWEETS OR SUGAR ELICITS PAIN.

F. TOOTH/TEETH NOT SENSITIVE TO PERCUSSION.

G. NO DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

H. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

I. PAIN HAS LASTED LESS THAN 1 HOUR.

Diagnosis: Probable dentin hypersensitivity

11. Maxillary sinusitis

RULE: IF (A OR B) AND C AND D AND NOT E

A. PT. HAS HAD A RECENT COLD OR SINUS PROBLEM.

B. DISCOMFORT INCREASES WHEN PT. BENDS OVER.

C. PROBLEM IS LOCATED IN MAXILLARY POSTERIOR TEETH.

D. FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE SWELLING NOT PRESENT NEAR APEX OF TOOTH.

E. DISCOMFORT LINGERS AFTER EXPOSURE TO HOT OR COLD.

Diagnosis: Possible maxillary sinusitis

RULE: A AND B AND C AND NOT D AND (E OR F OR G) AND NOT H

A. PROBLEM IS LOCATED IN MAXILLARY POSTERIOR TEETH.

B. DISCOMFORT INCREASES WHEN PT. BENDS OVER.

C. PT. HAS HAD A RECENT COLD OR SINUS PROBLEM.

D. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

E. TOOTH IS SENSITIVE TO PERCUSSION.

F. DISCOMFORT WHEN THE AREA NEAR THE APEX/APICES OF THE TOOTH/TEETH ARE PALPATED.

G. NEW RESTORATION OR DENTAL CROWN/BRIDGEWORK ON OR OPPOSING SORE TOOTH.

H. THERE IS A FISTULA, FLUCTUANT SWELLING OR LOCALIZED DIFFUSE INFLAMMATORY SWELLING PRESENT NEAR THE APEX OF THE TOOTH.

Diagnosis: Probable maxillary sinusitis

12. **Endodontic/periodontic combined problem**

RULE: (A OR (B OR C)) AND (D OR E OR F) AND (G OR (H OR I))

A. THERE IS A FISTULA, FLUCTUANT SWELLING OR LOCALIZED DIFFUSE INFLAMMATORY SWELLING PRESENT NEAR THE APEX OF THE TOOTH.

B. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

C. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

D. DISCOMFORT LINGERS AFTER EXPOSURE TO HOT OR COLD.

E. PAIN IS SPONTANEOUS.

F. TOOTH HAS HAD PRIOR ENDODONTIC TX.

G. PROBING DEPTH IN AREA OF CONCERN IS GREATER THAN 4MM.

H. THERE IS HX OF PERIODONTAL ABSCESSES.

I. THERE IS HX OF PRIOR DX OF PERIODONTAL DISEASE.

Diagnosis: Possible endodontic/periodontic combined problem

RULE: (A OR (B AND C)) AND D AND E AND (F AND (G OR H))

A. THERE IS A FISTULA, FLUCTUANT SWELLING OR LOCALIZED DIFFUSE INFLAMMATORY SWELLING PRESENT NEAR THE APEX OF THE TOOTH.

B. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

C. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

D. DISCOMFORT LINGERS AFTER EXPOSURE TO HOT OR COLD.

E. TOOTH IS SENSITIVE TO PERCUSSION.

F. PROBING DEPTH IN AREA OF CONCERN IS GREATER THAN 4MM.

G. THERE IS HX OF PERIODONTAL ABSCESSES.

H. THERE IS HX OF PRIOR DX OF PERIODONTAL DISEASE.

Diagnosis: Probable endodontic/periodontic combined problem

13. Defective restoration

RULE: A

A. RESTORATION APPEARS DEFECTIVE IN THE AREA OF CONCERN.

Diagnosis: Possible defective restoration

RULE: A AND (B OR C)

A. RESTORATION APPEARS DEFECTIVE IN THE AREA OF CONCERN.

B. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

C. EXPOSED DENTIN IS PRESENT OR THE DISCOMFORT IS PRIMARILY TO COLD OR TOUCH AND LOCATED NEAR THE GINGIVAL MARGIN.

Diagnosis: Probable defective restoration

14. Acute herpetic gingivostomatitis

RULE: (A OR NOT B OR C) AND NOT D AND E

A. IMMEDIATE PROBLEM HAS LASTED ONLY A FEW DAYS.

B. DEGREE OF DISCOMFORT IS MILD.

C. PATIENT HAS AN ELEVATED TEMP, PALPABLE LYMPH NODES OF THE HEAD AND NECK REGION, OR MALAISE.

D. AREA OF CONCERN APPEARS TO BE A FLAP OF INFLAMED TISSUE (NOT ALWAYS GROSSLY INFLAMED) PARTIALLY COVERING OR SURROUNDING AN ERUPTING TOOTH.

E. PATIENT HAS SHALLOW, RAGGED PAINFUL ULCERS COVERED BY A GRAY/WHITE MEMBRANE AND SURROUNDED BY A REDDISH HALO.

Diagnosis: Possible acute herpetic gingivostomatitis

RULE: A AND NOT B AND NOT C AND NOT D AND E AND NOT F AND G

A. IMMEDIATE PROBLEM HAS LASTED ONLY A FEW DAYS.

B. DEGREE OF DISCOMFORT IS MILD.

C. AREA OF CONCERN APPEARS TO BE A FLAP OF INFLAMED TISSUE (NOT ALWAYS GROSSLY INFLAMED) PARTIALLY COVERING OR SURROUNDING AN ERUPTING TOOTH.

D. COLOR OF GINGIVAL TISSUES ARE RED OR PINK WITH RED GINGIVAL MARGINS, BUT WITH AREAS HAVING A GRAY-WHITE MEMBRANOUS COATING THAT CAN BE REMOVED.

E. PATIENT HAS AN ELEVATED TEMP, PALPABLE LYMPH NODES OF THE HEAD AND NECK REGION, OR MALAISE.

F. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

G. PATIENT HAS SHALLOW, RAGGED PAINFUL ULCERS COVERED BY A GRAY/WHITE MEMBRANE AND SURROUNDED BY A REDDISH HALO.

Diagnosis: Probable acute herpetic gingivostomatitis

15. Periocoronitis/erupting tooth

RULE: A AND NOT B

A. AREA OF CONCERN APPEARS TO BE A FLAP OF INFLAMED TISSUE (NOT ALWAYS GROSSLY INFLAMED) PARTIALLY COVERING OR SURROUNDING AN ERUPTING TOOTH.

B. IMMEDIATE PROBLEM IS A LONG STANDING ONE.

Diagnosis: Possible periocoronitis/erupting tooth

RULE: A AND NOT B AND C AND D

A. AREA OF CONCERN APPEARS TO BE A FLAP OF INFLAMED TISSUE (NOT ALWAYS GROSSLY INFLAMED) PARTIALLY COVERING OR SURROUNDING AN ERUPTING TOOTH.

B. COLOR OF GINGIVAL TISSUES ARE RED OR PINK WITH RED GINGIVAL MARGINS, BUT WITH AREAS HAVING A GRAY-WHITE MEMERANOUS COATING THAT CAN BE REMOVED.

C. IMMEDIATE PROBLEM HAS LASTED ONLY A FEW DAYS.

D. TOOTH IS NOT A THIRD MOLAR (WISDOM TOOTH).

Diagnosis: Probable periocoronitis/erupting tooth

16. Necrotizing ulcerative gingivitis

RULE: NOT A AND (B OR C OR D) AND E AND NOT F AND NOT G

A. IMMEDIATE PROBLEM IS A LONG STANDING ONE.

B. COLOR OF GINGIVAL TISSUES ARE RED OR PINK WITH RED GINGIVAL MARGINS, BUT WITH AREAS HAVING A GRAY-WHITE MEMBRANOUS COATING THAT CAN BE REMOVED.

C. GINGIVAL PAPILLAE APPEAR ULCERATED OR BLUNTED.

D. EXTREMELY FOUL ODOR IS PRESENT.

E. GINGIVAL TISSUES BLEED WHEN PROBED OR PATIENT REPORTS BLEEDING WHEN BRUSHING.

F. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

G. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

Diagnosis: Possible necrotizing ulcerative gingivitis

RULE: A AND B AND C AND D AND (E OR F OR G) AND NOT H AND NOT I AND NOT J

A. IMMEDIATE PROBLEM HAS LASTED ONLY A FEW DAYS.

B. COLOR OF GINGIVAL TISSUES ARE RED OR PINK WITH RED GINGIVAL MARGINS, BUT WITH AREAS HAVING A GRAY-WHITE MEMBRANOUS COATING THAT CAN BE REMOVED.

C. GINGIVAL TISSUES BLEED WHEN PROBED OR PATIENT REPORTS BLEEDING WHEN BRUSHING.

D. EXTREMELY FOUL ODOR IS PRESENT.

E. PATIENT HAS AN ELEVATED TEMP, PALPABLE LYMPH NODES OF THE HEAD AND NECK REGION, OR MALAISE.

F. GINGIVAL PAPILLAE APPEAR ULCERATED OR BLUNTED.

G. DEGREE OF DISCOMFORT IS SEVERE (INTERFERES WITH SLEEP OR WORK).

H. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

I. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

J. PATIENT HAS SHALLOW, RAGGED PAINFUL ULCERS COVERED BY A GRAY/WHITE MEMBRANE AND SURROUNDED BY A REDDISH HALO.

Diagnosis: Probable necrotizing ulcerative gingivitis

17. Acute ginigivitis

RULE: NOT A AND B AND C AND NOT D AND (NOT E OR NOT F) AND C AND NOT G AND NOT H

A. IMMEDIATE PROBLEM IS A LONG STANDING ONE.

B. GINGIVAL TISSUES BLEED WHEN PROBED OR PATIENT REPORTS BLEEDING WHEN BRUSHING.

C. PATIENT DOES NOT HAVE SHALLOW, RAGGED PAINFUL ULCERS COVERED BY A GRAY/WHITE MEMBRANE AND SURROUNDED BY A REDDISH HALO.

D. COLOR OF GINGIVAL TISSUES ARE RED OR PINK WITH RED GINGIVAL MARGINS, BUT WITH AREAS HAVING A GRAY-WHITE MEMBRANOUS COATING THAT CAN BE REMOVED.

E. GINGIVAL TISSUES APPEAR PINK.

F. GINGIVAL PAPILLAE APPEAR ULCERATED OR BLUNTED.

G. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

H. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

Diagnosis: Possible acute gingivitis

RULE: NOT A AND (B OR C) AND (D OR E) AND F AND G AND H AND I AND NOT J AND NOT K

A. IMMEDIATE PROBLEM IS A LONG STANDING ONE.

B. DEGREE OF DISCOMFORT IS MODERATE.

C. DEGREE OF DISCOMFORT IS SEVERE (INTERFERES WITH SLEEP OR WORK).

D. GINGIVAL TISSUES APPEAR RED.

E. GINGIVAL TISSUES APPEAR PINK WITH RED GINGIVAL MARGINS.

F. GINGIVAL TISSUES BLEED WHEN PROBED OR PATIENT REPORTS BLEEDING WHEN BRUSHING.

G. GINGIVAL PAPILLAE APPEAR SWOLLEN OR ENLARGED.

H. PATIENT DOES NOT HAVE AN ELEVATED TEMP, PALPABLE LYMPH NODES OF THE HEAD AND NECK REGION, OR MALAISE.

I. PATIENT DOES NOT HAVE SHALLOW, RAGGED PAINFUL ULCERS COVERED BY A GRAY/WHITE MEMBRANE AND SURROUNDED BY A REDDISH HALO.

J. PROMINENT, LOCALIZED, SWELLING OF THE GINGIVAL OR MUCOSAL TISSUES PRESENT.

K. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE, OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

Diagnosis: Probable acute gingivitis

18. **Food impaction**

RULE: A AND (B OR C OR D) AND NOT E AND NOT F

A. PROBLEM IS RELATED TO GINGIVA, SPECIFIC AREA (NON-TRAUMA RELATED).

B. TEETH FEEL TIGHT OR LIKE SOMETHING IS CAUGHT BETWEEN THEM.

C. PATIENT RELATES A HISTORY OF FOOD BEING TRAPPED OR CAUGHT BETWEEN THE TEETH.

D. PATIENT COMPLAINS OF BAD TASTE OR ODOR IN HIS MOUTH.

E. COLOR OF GINGIVAL TISSUES ARE RED OR PINK WITH RED GINGIVAL MARGINS, BUT WITH AREAS HAVING A GRAY-WHITE MEMBRANOUS COATING THAT CAN BE REMOVED.

F. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

Diagnosis: Possible food impaction

RULE: ((A AND B) OR (A AND C) OR (B AND C)) AND D AND NOT E AND NOT F AND NOT G

A. TEETH FEEL TIGHT OR LIKE SOMETHING IS CAUGHT BETWEEN THEM.

B. PATIENT RELATES A HISTORY OF FOOD BEING TRAPPED OR CAUGHT BETWEEN THE TEETH.

C. PATIENT COMPLAINS OF BAD TASTE OR ODOR IN HIS MOUTH.

D. PROBLEM IS RELATED TO GINGIVA, SPECIFIC AREA (NON-TRAUMA RELATED).

E. COLOR OF GINGIVAL TISSUES ARE RED OR PINK WITH RED GINGIVAL MARGINS, BUT WITH AREAS HAVING A GRAY-WHITE MEMBRANOUS COATING THAT CAN BE REMOVED.

F. PATIENT HAS AN ELEVATED TEMP, PALPABLE LYMPH NODES OF THE HEAD AND NECK REGION, OR MALAISE.

G. SWELLING HAS DIFFUSE INFLAMMATORY APPEARANCE OR IT APPEARS FLUCTUANT, OR THERE IS EVIDENCE OF A PURULENT EXUDATE.

Diagnosis: Probable food impaction

19. Myofascial pain/muscle spasms

RULE: A OR B OR C AND (D OR E)

A. MUSCLES OF MASTICATION TENDER TO PALPATION.

B. PATIENT'S ABILITY TO OPEN HIS MOUTH IS COMPROMISED OR LIMITED.

C. PATIENT'S MANDIBLE DEVIATES LATERALLY ON OPENING.

D. PATIENT HAS A HX OF PREVIOUS TMJ PROBLEMS.

E. PATIENT HAS RECENTLY BEEN UNDER INCREASED STRESS.

Diagnosis: Possible myofascial pain/muscle spasms

RULE: A AND B AND (C OR D OR E)

A. MUSCLES OF MASTICATION TENDER TO PALPATION.

B. PATIENT'S ABILITY TO OPEN HIS MOUTH IS COMPROMISED OR LIMITED.

C. PATIENT'S MANDIBLE DEVIATES LATERALLY ON OPENING.

D. PATIENT HAS A HX OF PREVIOUS TMJ PROBLEMS.

E. PATIENT HAS RECENTLY BEEN UNDER INCREASED STRESS.

Diagnosis: Probable myofascial pain/muscle spasms

20. **Internal derangement of the temporomandibular joint**

RULE: A OR B

A. PT. HAS CLICKING OR POPPING OF TEMPOROMANDIBULAR JOINT.

B. TEMPOROMANDIBULAR JOINT IS TENDER TO PALPATION EITHER FACIALLY OR THROUGH THE EXTERNAL AUDITORY CANAL.

Diagnosis: Possible internal derangement of the temporomandibular joint

RULE: A AND B

A. PT. HAS CLICKING OR POPPING OF TEMPOROMANDIBULAR JOINT.

B. TEMPOROMANDIBULAR JOINT IS TENDER TO PALPATION EITHER FACIALLY OR THROUGH THE EXTERNAL AUDITORY CANAL.

Diagnosis: Probable internal derangement of the temporomandibular joint

21. Occlusal trauma

RULE: (A AND B) OR (C AND B) OR (B AND D) OR (C AND E) OR (E AND D) OR (C AND F AND D) OR (B AND E)

A. TOOTH IS SENSITIVE TO PERCUSSION.

B. NEW RESTORATION OR DENTAL CROWN/BRIDGEWORK ON OR OPPOSING SORE TOOTH.

C. TOOTH HAS INCREASED MOBILITY.

D. TEETH ARE SORE.

E. EVIDENCE OF SIGNIFICANT WEAR ON THE OCCLUSAL SURFACES.

F. PATIENT EITHER GRINDS OR CLENCHS TEETH OR CHEWS GUM REGULARLY.

Diagnosis: Possible occlusal trauma

RULE: ((A AND B) OR (C AND D) OR (E AND D) OR (C AND F AND E) OR (B AND D AND A)) AND NOT G AND NOT H AND NOT I

A. TOOTH IS SENSITIVE TO PERCUSSION.

B. NEW RESTORATION OR DENTAL CROWN/BRIDGEWORK ON OR OPPOSING SORE TOOTH.

C. TOOTH HAS INCREASED MOBILITY.

D. EVIDENCE OF SIGNIFICANT WEAR ON THE OCCLUSAL SURFACES.

E. TEETH ARE SORE.

F. PATIENT EITHER GRINDS OR CLENCHS TEETH OR CHEWS GUM REGULARLY.

G. THERE IS A FISTULA, FLUCTUANT SWELLING, OR LOCALIZED DIFFUSE INFLAMMATORY SWELLING PRESENT NEAR THE APEX OF THE TOOTH.

H. DISCOMFORT INCREASES WHEN PT. BENDS OVER.

I. DISCOMFORT LINGERS AFTER EXPOSURE TO HOT OR COLD.

Diagnosis: Probable occlusal trauma

22. **Fractured crown small pulp exposure**

RULE: ((A OR B OR C) AND (D OR E) AND F AND G AND NOT H) OR (I AND J AND F AND G AND NOT H)

A. TRAUMATICALLY INVOLVED TOOTH INTRUDES INTO THE SOCKET.

B. TRAUMATICALLY INVOLVED TOOTH IS PARTIALLY EXTRUDED FROM SOCKET.

C. TRAUMATICALLY INVOLVED TOOTH IS NOT DISPLACED.

D. DEFINITELY A FRACTURE LINE OR PART OF THE TOOTH MISSING.

E. POSSIBLE FRACTURE LINE OR CRACK IN THE TOOTH.

F. POSSIBLE FRACTURE LINE OR CRACK INVOLVES THE CROWN OF THE TOOTH.

G. PULP HAS BEEN EXPOSED AND IS SMALLER THAN 1 MM IN DIAMETER.

H. INJURED TOOTH HAS HAD ENDODONTIC TX.

I. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

J. THERE IS CLINICAL EVIDENCE OF A FRACTURE LINE OR CRACK IN THE TOOTH.

Diagnosis: Probable factured crown small pulp exposure

23. **Fractured crown large pulp exposure**

RULE: ((A OR B OR C) AND (D OR E) AND F AND G AND NOT H) OR (I AND J AND F AND G AND NOT H)

A. TRAUMATICALLY INVOLVED TOOTH INTRUDES INTO THE SOCKET.

B. TRAUMATICALLY INVOLVED TOOTH IS PARTIALLY EXTRUDED FROM SOCKET.

C. TRAUMATICALLY INVOLVED TOOTH IS NOT DISPLACED.

D. DEFINITELY A FRACTURE LINE OR PART OF THE TOOTH MISSING.

E. POSSIBLE FRACTURE LINE OR CRACK IN THE TOOTH.

F. POSSIBLE FRACTURE LINE OR CRACK INVOLVES THE CROWN OF THE TOOTH.

G. THE PULP HAS BEEN EXPOSED AND IS LARGER THAN 1 mm IN DIAMETER.

H. INJURED TOOTH HAS HAD ENDODONTIC TX.

I. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

J. THERE IS CLINICAL EVIDENCE OF A FRACTURE LINE OR CRACK IN THE TOOTH.

Diagnosis: Probable fractured crown large pulp exposure

24. Total avulsion of tooth, good candidate for replantation

RULE: A AND B AND C AND D AND E

A. TRAUMATICALLY INVOLVED TOOTH IS DISPLACED LINGUALLY OR FACIALLY.

B. LESS THAN 3 HOURS HAVE ELAPSED FROM TIME OF INJURY.

C. THE TOOTH IS GENERALLY INTACT.

D. SOCKET OF THE AVULSED TOOTH APPEARS INTACT.

E. BASED ON PT. INFO. AND RECORDS, THE TOOTH WAS NOT OTHERWISE HEALTHY.

Diagnosis: **Probable total avulsion of tooth, good candidate for replantation**

25. Total avulsion of tooth, poor candidate for replantation

RULE: A AND (B OR C OR D OR E)

A. TRAUMATICALLY INVOLVED TOOTH IS TOTALLY AVULSED.

B. MORE THAN THREE HOURS HAVE ELAPSED SINCE INJURY.

C. TOOTH IS NOT GENERALLY INTACT.

D. SOCKET OF TOOTH DOES NOT APPEAR INTACT.

E. BASED ON PT. INFO. AND RECORDS, THE TOOTH WAS NOT OTHERWISE HEALTHY.

Diagnosis: Probable total avulsion of tooth, poor candidate for replantation

26. Displacement/mobility of tooth favorable prognosis

RULE: (A OR B OR C) AND (NOT D) AND (NOT E) AND F AND NOT G

A. TRAUMATICALLY INVOLVED TOOTH IS DISPLACED LINGUALLY OR FACIALLY.

B. TRAUMATICALLY INVOLVED TOOTH INTRUDES INTO THE SOCKET.

C. TRAUMATICALLY INVOLVED TOOTH IS PARTIALLY EXTRUDED FROM SOCKET.

D. TOOTH HAS NO INCREASED MOBILITY.

E. POSSIBLE FRACTURE LINE OR CRACK EXTENDS BELOW GUM TISSUE.

F. BASED ON PT. INFO. AND RECORDS, THE TOOTH WAS OTHERWISE HEALTHY.

G. ADJACENT TEETH MOVE WHEN INJURED TOOTH IS MOVED.

Diagnosis: **Probable displacement/mobility of tooth favorable prognosis**

27. Displacement/mobility of tooth guarded prognosis

RULE: (A OR B OR C) AND (D OR E OR F OR G)

A. TRAUMATICALLY INVOLVED TOOTH IS DISPLACED LINGUALLY OR FACIALLY.

B. TRAUMATICALLY INVOLVED TOOTH INTRUDES INTO THE SOCKET.

C. TRAUMATICALLY INVOLVED TOOTH IS PARTIALLY EXTRUDED FROM SOCKET.

D. BASED ON PT. INFO. AND RECORDS, THE TOOTH WAS NOT OTHERWISE HEALTHY.

E. POSSIBLE FRACTURE LINE OR CRACK EXTENDS BELOW GUM TISSUE.

F. TOOTH IS EXTREMELY MOBILE.

G. ADJACENT TEETH MOVE WHEN INJURED TOOTH IS MOVED.

Diagnosis: **Probable Displacement/mobility of tooth guarded prognosis**

28. **Fractured crown pulp not exposed**

RULE: ((A OR B OR C) AND (D OR E) AND F AND G AND H) OR (I AND J AND G AND H)

A. TRAUMATICALLY INVOLVED TOOTH IS DISPLACED LINGUALLY OR FACIALLY.

B. TRAUMATICALLY INVOLVED TOOTH IS PARTIALLY EXTRUDED FROM SOCKET.

C. TRAUMATICALLY INVOLVED TOOTH IS NOT DISPLACED.

D. DEFINITELY A FRACTURE LINE OR PART OF THE TOOTH MISSING.

E. POSSIBLE FRACTURE LINE OR CRACK IN THE TOOTH.

F. POSSIBLE FRACTURE LINE OR CRACK INVOLVES THE CROWN OF THE TOOTH.

G. PULP HAS NOT BEEN EXPOSED.

H. DENTIN IS EXPOSED.

I. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD

J. THERE IS CLINICAL EVIDENCE OF A FRACTURE LINE OR CRACK IN THE TOOTH.

Diagnosis: Probable fractured crown pulp not exposed

29. **Enamel fracture**

RULE: (A AND B AND C) OR (D AND E AND C AND A)

A. DENTIN IS NOT EXPOSED.

B. POSSIBLE FRACTURE LINE OR CRACK INVOLVES THE CROWN OF THE TOOTH.

C. PULP HAS NOT BEEN EXPOSED.

D. SIGNIFICANT DISCOMFORT WHEN THE AREA IS EXPOSED TO HOT/COLD.

E. THE IS CLINICAL EVIDENCE OF A FRACTURE LINE OR CRACK IN THE TOOTH.

Diagnosis: Probable enamel fracture

RULE: NOT A AND B AND NOT C AND D AND E AND NOT F

A. TRAUMATICALLY INVOLVED TOOTH IS TOTALLY AVULSED.

B. TOOTH IS NOT GENERALLY INTACT.

C. NO EVIDENCE OF A FRACTURE LINE OR CRACK IN THE TOOTH.

D. POSSIBLE FRACTURE LINE OR CRACK INVOLVES THE CROWN OF THE TOOTH.

E. POSSIBLE FRACTURE LINE OR CRACK DOES NOT EXTEND BELOW GUM TISSUE.

F. PULP HAS NOT BEEN EXPOSED.

Diagnosis: Probable enamel fracture

30. **Root fracture**

RULE: (A OR B OR C OR D) AND (E OR F) AND G

A. TRAUMATICALLY INVOLVED TOOTH IS DISPLACED LINGUALLY OR FACIALLY.

B. TRAUMATICALLY INVOLVED TOOTH INTRUDES INTO THE SOCKET.

C. TRAUMATICALLY INVOLVED TOOTH IS PARTIALLY EXTRUDED FROM SOCKET.

D. TRAUMATICALLY INVOLVED TOOTH IS NOT DISPLACED.

E. TOOTH IS EXTREMELY MOBILE.

F. TOOTH IS SLIGHTLY MOBILE.

G. POSSIBLE FRACTURE LINE OR CRACK EXTENDS BELOW GUM TISSUE.

Diagnosis: Possible root fracture

RULE: (A OR B OR C) AND (D OR E) AND F AND (G OR H)

A. TRAUMATICALLY INVOLVED TOOTH IS DISPLACED LINGUALLY OR FACIALLY.

B. TRAUMATICALLY INVOLVED TOOTH INTRUDES INTO THE SOCKET.

C. TRAUMATICALLY INVOLVED TOOTH IS PARTIALLY EXTRUDED FROM SOCKET.

D. INJURED TOOTH HAS HAD ENDODONTIC TX.

E. POSSIBLE FRACTURE LINE OR CRACK EXTENDS BELOW GUM TISSUE.

F. DEFINITELY A FRACTURE LINE OR PART OF THE TOOTH MISSING.

G. TOOTH IS EXTREMELY MOBILE.

H. TOOTH IS SLIGHTLY MOBILE.

Diagnosis: Probable root fracture

31. Fractured alveolar bone

RULE: A AND NOT B

A. ADJACENT TEETH MOVE WHEN INJURED TOOTH IS MOVED.

B. TRAUMA RELATED EMERGENCY TO OTHER ORAL OR FACIAL TISSUES OR STRUCTURES.

Diagnosis: Possible fractured alveolar bone

RULE: (A OR B) AND C

A. DIAGNOSIS OF PROBABLE FRACTURED MANDIBLE.

B. DIAGNOSIS OF PROBABLE FARACTURED MAXILLA.

C. DIAGNOSIS OF PROBABLE FRACTURED ALVEOLAR BONE.

Diagnosis: Possible fractured alveolar bone

RULE: NOT A AND B AND (C OR D) AND NOT E AND (NOT F AND NOT G)

A. NO EVIDENCE OF BLEEDING.

B. ADJACENT TEETH MOVE WHEN INJURED TOOTH IS MOVED.

C. THE OCCLUSION IS UNCHANGED WHILE PT. OPEN AND CLOSES MOUTH.

D. THE OCCLUSION IS CHANGED SLIGHTLY WHILE PT. OPEN AND CLOSES MOUTH.

E. TRAUMA RELATED EMERGENCY TO OTHER ORAL OR FACIAL TISSUES OR STRUCTURES.

F. BY EXAMINATION, BONY SEGMENTS OF THE MANDIBLE CAN BE EASILY MOVED OR DISPLACED.

G. BY EXAMINATION, BONY SEGMENTS OF MAXILLA CAN BE EASILY MOVED OR DISPLACED.

Diagnosis: Probable fractured alveolar bone

32. **Fractured mandible**

RULE: A OR B OR ((C OR D) AND (E OR F))

A. PARESTHESIA OR ANESTHESIA IS PRIMARILY ASSOCIATED WITH LOWER TEETH AND/OR LOWER LIP AND CHIN.

B. BY EXAMINATION, BONY SEGMENTS OF THE MANDIBLE CAN BE EASILY MOVED OR DISPLACED.

C. THE OCCLUSION IS CHANGED SLIGHTLY WHILE PT. OPEN AND CLOSES MOUTH.

D. THE OCCLUSION IS CHANGED APPRECIABLY WHILE PT. OPEN AND CLOSES MOUTH.

E. MANDIBLE DEVIATES TO SIDE WHEN OPENING.

F. IT IS PAINFUL TO OPEN AND CLOSE.

Diagnosis: Possible fractured mandible

RULE: (A OR B OR C OR D OR E OR F OR G) AND (H OR I OR J)

A. MANDIBLE DEVIATES TO SIDE WHEN OPENING.

B. IT IS PAINFUL TO OPEN AND CLOSE.

C. CURRENT RADIOGRAPH SUGGESTS FRACTURED BONE(S).

D. EVIDENCE OF BLEEDING INTO TISSUE SPACES.

E. EVIDENCE OF BLEEDING FROM ABRASIONS/LACERATIONS AND INTO TISSUE SPACES.

F. EVIDENCE OF BLEEDING INTO TISSUE SPACES AND FROM GUM MARGIN(S).

G. EVIDENCE OF BLEEING FROM ABRASIONS/LACERATIONS, INTO TISSUE SPACES AND FROM GUM MARGIN(S).

H. PARESTHESIA OR ANESTHESIA IS PRIMARILY ASSOCIATED WITH LOWER TEETH AND/OR LOWER LIP AND CHIN.

I. BY EXAMINATION, BONY SEGMENTS OF THE MANDIBLE CAN BE EASILY MOVED OR DISPLACED.

J. THE OCCLUSION IS CHANGED APPRECIABLY WHILE PT. OPEN AND CLOSES MOUTH.

Diagnosis: Probable fractured mandible

33. **Fractured maxilla**

RULE: A OR B

A. PARESTHESIA OR ANESTHESIA IS PRIMARILY ASSOCIATED WITH UPPER TEETH AND/OR UPPER LIP.

B. BY EXAMINATION, BONY SEGMENTS OF MAXILLA CAN BE EASILY MOVED OR DISPLACED.

Diagnosis: Possible fractured maxilla

RULE: ((A OR B) AND (C OR D) AND ((E OR F OR G OR H) OR I)) OR (D AND C)

A. THE OCCLUSION IS CHANGED SLIGHTLY WHILE PT. OPEN AND CLOSES MOUTH.

B. THE OCCLUSION IS CHANGED APPRECIABLY WHILE PT. OPEN AND CLOSES MOUTH.

C. BY EXAMINATION, BONY SEGMENTS OF MAXILLA CAN BE EASILY MOVED OR DISPLACED.

D. PARESTHESIA OR ANESTHESIA IS PRIMARILY ASSOCIATED WITH UPPER TEETH AND/OR UPPER LIP.

E. EVIDENCE OF BLEEDING INTO TISSUE SPACES.

F. EVIDENCE OF BLEEDING FROM ABRASIONS/LACERATIONS AND INTO TISSUE SPACES.

G. EVIDENCE OF BLEEDING INTO TISSUE SPACES AND FROM GUM MARGIN(S).

H. EVIDENCE OF BLEEING FROM ABRASIONS/LACERATIONS, INTO TISSUE SPACES AND FROM GUM MARGIN(S).

I. CURRENT RADIOGRAPH SUGGESTS FRACTURED BONE(S).

Diagnosis: Probable fractured maxilla

34. Fracured facial bones

RULE: A OR B OR (NOT C AND NOT D) OR E

A. PARESTHESIA OR ANESTHESIA IS PRIMARILY ASSOCIATED WITH UPPER TEETH AND/OR UPPER LIP.

B. PARESTHESIA OR ANESTHESIA IS PRIMARILY ASSOCIATED WITH LOWER EYELID AND/OR LATERAL AREAS OF NOSE AND/OR CHEEK.

C. NO EVIDENCE OF ENOPTHALMIA, EXOPTHALMIA, VISUAL DISTURBANCES, SUBCONJUNCTIVAL HEMORRHAGE, INCREASED INTERCANTHAL DISTANCE, VISUAL ASYMMETRY OF CHEEK, PAIN OR CREPITUS UPON PALPATING HIGH INTO BUCCAL VESTIBULE. AT LEAST ONE OF ABOVE OR NONE OF ABOVE.

D. NO EVIDENCE OF ENOPTHALMIA, EXOPTHALMIA, VISUAL DISTURBANCES, SUBCONJUNCTIVAL HEMORRHAGE, INCREASED INTERCANTHAL DISTANCE, VISUAL ASYMMETRY OF CHEEK, PAIN OR CREPITUS UPON PALPATING HIGH INTO BUCCAL VESTIBULE. AT LEAST ONE OF ABOVE.

E. FROM PALPATING FACIAL BONES, THERE IS EVIDENCE OF A STEPPING, DISPLACEMENT OR DEPRESSION OF FACIAL BONES.

Diagnosis: Possible fractured facial bones

RULE: (A AND NOT B AND NOT C) OR (A AND D) OR E OR (((NOT B AND NOT C) OR D) AND F)

A. FROM PALPATING FACIAL BONES, THERE IS EVIDENCE OF A STEPPING, DISPLACEMENT OR DEPRESSION OF FACIAL BONES.

B. NO EVIDENCE OF ENOPTHALMIA, EXOPTHALMIA, VISUAL DISTURBANCES, SUBCONJUNCTIVAL HEMORRHAGE, INCREASED INTERCANTHAL DISTANCE, VISUAL ASYMMETRY OF CHEEK, PAIN OR CREPITUS UPON PALPATING HIGH INTO BUCCAL VESTIBULE. AT LEAST ONE OF ABOVE.

C. NO EVIDENCE OF ENOPTHALMIA, EXOPTHALMIA, VISUAL DISTURBANCES, SUBCONJUNCTIVAL HEMORRHAGE, INCREASED INTERCANTHAL DISTANCE, VISUAL ASYMMETRY OF CHEEK, PAIN OR CREPITUS UPON PALPATING HIGH INTO BUCCAL VESTIBULE. AT LEAST ONE OF ABOVE OR NONE OF ABOVE.

D. PARESTHESIA OR ANESTHESIA IS PRIMARILY ASSOCIATED WITH LOWER EYELID AND/OR LATERAL AREAS OF NOSE AND/OR CHEEK.

E. EVIDENCE OF MORE THAN ONE OF BELOW - ENOPTHALMIA OR EXOPTHALMIA, VISUAL DISTURBANCES SUBCONJUNCTIVAL HEMORRHAGE, INCREASE INTERCANTHAL DISTANCE, VISUAL ASSYMETRY OF CHEEK, PAIN OR CREPITUS WHEN PALPATING HIGH INTO THE BUCCAL VESTIBULE.

F. CURRENT RADIOGRAPH SUGGESTS FRACTURED BONE(S).

Diagnosis: Probable fractured facial bones

35. Neurologic injury

RULE: A

A. PT. HAS HEAD INJURY OR LOST CONSCIOUSNESS, VOMITED OR HAS HX OF AMNESIA ASSOCIATED WITH TRAUMA.

Diagnosis: Possible neurologic injury

Soft Tissue Lesions

The computer based dental program provides a list of differential diagnoses for each of 49 soft tissue lesions. Listed below are the 49 soft tissue lesions considered by the diagnostic program along with the rule employed by the program to arrive at each diagnosis. For each condition, the program provides a list of differential diagnoses (see Appendix C(2) - C(14).

1. Desquamative lesions of gingiva

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE NATURE OF THE GINGIVAL PROBLEM INVOLVES DESQUAMATION.

2. Atrophy or ulceration of gingiva

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE NATURE OF THE GINGIVAL PROBLEM INVOLVES ATROPHY OR ULCERATION.

3. Localized hyperplastic hemorrhagic lesions of gingiva

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE NATURE OF THE GINGIVAL PROBLEM INVOLVES LOCALIZED HYPERPLASTIC, HEMORRHAGIC LESIONS.

4. Generalized hyperplastic hemorrhagic lesions of gingiva

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE NATURE OF THE GINGIVAL PROBLEM INVOLVES GENERALIZED HYPERPLASTIC, HEMORRHAGIC LESIONS.

5. **Localized hyperplastic, non-hemorrhagic lesions of gingiva**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE NATURE OF THE GINGIVAL PROBLEM INVOLVES LOCALIZED HYPERPLASTIC, NON-HEMORRHAGIC LESIONS.

6. **Generalized hyperplastic, non-hemorrhagic lesions of the gingiva**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE NATURE OF THE GINGIVAL PROBLEM INVOLVES GENERALIZED HYPERPLASTIC, NON-HEMORRHAGIC LESIONS.

7. **Cystic lesions of gingiva**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE NATURE OF THE GINGIVAL PROBLEM INVOLVES CYSTIC LESIONS.

8. **Keratotic non-sloughing, non-ulcerated, non-eroded, non-papillary lesions**

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS WHITE.

C. THE NATURE OF THE WHITE LESION(S) IS KERATOTIC, NON-SLOUGHING, NON-ULCERATED, NON-ERODED, NON-PAPILLARY.

9. **Keratotic non-sloughing, non-ulcerated, non-eroded, papillary lesions**

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS WHITE.

C. THE NATURE OF THE WHITE LESION(S) IS KERATOTIC, NON-SLOUGHING, NON-ULCERATED, NON-ERODED, PAPILLARY.

10. **Keratotic non-sloughing, ulcerated, eroded, non-papillary lesions**

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS WHITE.

C. THE NATURE OF THE WHITE LESION(S) IS KERATOTIC, NON-SLOUGHING, ULCERATED, ERODED, NON-PAPILLARY.

11. **Keratotic non-sloughing, ulcerated, eroded, papillary lesions**

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS WHITE.

C. THE NATURE OF THE WHITE LESION(S) IS KERATOTIC, NON-SLOUGHING, ULCERATED, ERODED, PAPILLARY.

12. **Sloughing, non-keratotic lesions**

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS WHITE.

C. THE NATURE OF THE WHITE LESION(S) IS NON-KERATOTIC, SLOUGHING.

13. Single exophytic red lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS RED.

C. THE NATURE OF THE RED LESION(S) IS A SINGLE EXOPHYTIC LESION.

14. Single non-exophytic red lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS RED.

C. THE NATURE OF THE RED LESION(S) IS A SINGLE NON-EXOPHYTIC LESION.

15. Generalized or multiple exophytic red lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS RED.

C. THE NATURE OF THE RED LESION(S) IS GENERALIZED OR MULTIPLE EXOPHYTIC LESIONS.

16. Generalized or multiple non-exophytic red lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES GINGIVAL CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS RED.

C. THE NATURE OF THE RED LESION(S) IS GENERALIZED OR MULTIPLE NON-EXOPHYTIC LESIONS.

17. Single exophytic brown and/or black lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS BROWN AND/OR BLACK.

C. THE NATURE OF THE BROWN AND/OR BLACK LESION(S) IS A SINGLE, EXOPHYTIC LESION.

18. Single non-exophytic brown and/or black lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS BROWN AND/OR BLACK.

C. THE NATURE OF THE BROWN AND/OR BLACK LESION(S) IS A SINGLE, NON-EXOPHYTIC LESION.

19. Generalized or multiple exophytic brown and/or black lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS BROWN AND/OR BLACK.

C. THE NATURE OF THE BROWN AND/OR BLACK LESION(S) IS GENERALIZED OR MULTIPLE EXOPHYTIC LESIONS.

20. Generalized or multiple non-exophytic brown and/or black lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS BROWN AND/OR BLACK.

C. THE NATURE OF THE BROWN AND/OR BLACK LESION(S) IS GENERALIZED OR MULTIPLE NON-EXOPHYTIC LESIONS.

21. Single blue and/or purple lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LES ON INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS BLUE AND/OR PURPLE.

C. THE NATURE OF THE BLUE AND/OR PURPLE LESION(S) IS A SINGLE LESION.

22. Generalized or multiple blue and/or purple lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS BLUE AND/OR PURPLE.

C. THE NATURE OF THE BLUE AND/OR PURPLE LESION(S) IS GENERALIZED OR MULTIPLE LESIONS.

23. Single yellow lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS YELLOW.

C. THE NATURE OF THE YELLOW LESION(S) IS A SINGLE LESION.

24. Generalized or multiple yellow lesions

RULE: A AND B AND C

A. THE TYPE OF SOFT TISSUE LESION INVOLVES TISSUE COLOR CHANGES.

B. THE COLOR OF THE TISSUE LESION(S) IS YELLOW.

C. THE NATURE OF THE YELLOW LESION(S) IS GENERALIZED OR MULTIPLE LESIONS.

25. **Acute vesicular lesions**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES VESICLES, BULLAE, OR ULCERS.

B. THE CONDITION INVOLVES ACUTE VESICLES.

26. **Chronic vesicular lesions**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES VESICLES, BULLAE, OR ULCERS.

B. THE CONDITION INVOLVES CHRONIC VESICLES.

27. **Acute bullous lesions**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES VESICLES, BULLAE, OR ULCERS.

B. THE CONDITION INVOLVES ACUTE BULLAE.

28. **Chronic bullous lesions**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES VESICLES, BULLAE, OR ULCERS.

B. THE CONDITION INVOLVES CHRONIC BULLAE.

29. **Acute ulcers**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES VESICLES, BULLAE, OR ULCERS.

B. THE CONDITION INVOLVES ACUTE ULCERS.

30. **Chronic ulcers**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES VESICLES, BULLAE, OR ULCERS.

B. THE CONDITION INVOLVES CHRONIC ULCERS.

31. **Small firm non-hemorrhagic lobulated lesions**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES ORAL NODULES OR ENLARGEMENTS.

B. THE ORAL NODULE OR ENLARGEMENT IS SMALL FIRM NON-HEMORRHAGIC.

32. **Extensive firm non-hemorrhagic lobulated lesions**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES ORAL NODULES OR ENLARGEMENTS.

B. THE ORAL NODULE OR ENLARGEMENT IS EXTENSIVE FIRM NON-HEMORRHAGIC.

33. **Single firm non-hemorrhagic nodules**

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES ORAL NODULES OR ENLARGEMENTS.

B. THE ORAL NODULE OR ENLARGEMENT IS SINGLE FIRM NON-HEMORRHAGIC.

34. Multiple firm non-hemorrhagic nodules

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES ORAL NODULES OR ENLARGEMENTS.

B. THE ORAL NODULE OR ENLARGEMENT IS MULTIPLE FIRM NON-HEMORRHAGIC.

35. Single bony lumps or nodules

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES ORAL NODULES OR ENLARGEMENTS.

B. THE ORAL NODULE OR ENLARGEMENT IS A SINGLE BONY LUMP OR NODULE.

36. Multiple or extensive bony enlargements or nodules

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES ORAL NODULES OR ENLARGEMENTS.

B. THE ORAL NODULE OR ENLARGEMENT INVOLVES MULTIPLE OR EXTENSIVE BONY ENLARGEMENTS OR NODULES.

37. Macroglossia

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES THE TONGUE.

B. MACROGLOSSIA (ENLARGED TONGUE).

38. Microglossia

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES THE TONGUE.

B. MICROGLOSSIA (SMALL TONGUE).

39. Clefts

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES THE TONGUE.

B. CLEFT IN TONGUE.

40. Fissured tongue

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES THE TONGUE.

B. FISSURED TONGUE.

41. Supernumerary tongue

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES THE TONGUE.

B. SUPERNUMERARY TONGUE.

42. Smooth tongue

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES THE TONGUE.

B. SMOOTH TONGUE.

43. Glossodynia (pain in tongue)

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES THE TONGUE.

B. GLOSSODYNIA (PAIN IN TONGUE).

44. Acute parotid-area swellings

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES NECK/FACE/CHEEK MASSES.

B. CONCERNING THE MASS(ES), THERE IS ACUTE PAROTID SWELLING.

45. Chronic parotid-area swellings

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES NECK/FACE/CHEEK MASSES.

B. CONCERNING THE MASS(ES), THERE IS CHRONIC PAROTID SWELLING.

46. Acute discrete nodules, non-parotid area

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES NECK/FACE/CHEEK MASSES.

B. CONCERNING THE MASS(ES), THERE IS ACUTE DISCRETE NODULES, NON-PAROTID AREA.

47. Chronic discrete nodules, non-parotid area

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES NECK/FACE/CHEEK MASSES.

B. CONCERNING THE MASS(ES), THERE IS CHRONIC DISCRETE NODULES, NON-PAROTID AREA.

48. Acute extensive diffuse swellings, non-parotid area

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES NECK/FACE/CHEEK MASSES.

B. CONCERNING THE MASS(ES), THERE IS ACUTE EXTENSIVE DIFFUSE SWELLING, NON-PAROTID AREA.

49. Cronic extensive diffuse swellings, non-parotid area

RULE: A AND B

A. THE TYPE OF SOFT TISSUE LESION INVOLVES NECK/FACE/CHEEK MASSES.

B. CONCERNING THE MASS(ES), THERE IS CHRONIC EXTENSIVE DIFFUSE SWELLING, NON-PAROTID AREA.

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19 ABSTRACT (Continue on reverse if necessary and identify by block number)

A computer based dental program has been developed by the Great Lakes Dental Research Institute, Great Lakes, Illinois, and the Naval Submarine Medical Research Laboratory, NAVSUBASE NLON, Groton, CT. It is a rule-based diagnostic system for use with trauma and non-trauma related dental emergencies and for the differential diagnosis of soft tissue lesions. The purpose of this report is to provide documentation for the program. Included in the documentation is a copy of the dental questionnaires, a list of the symptoms and diagnoses considered by the program, identification of responses used in branching to subsequent questions, identification of responses used by the diagnostic rules, and the rules to arrive at a diagnosis.

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