SUPPORTIVE PERIODONTAL THERAPY

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Definition

- Supportive periodontal treatment (SPT) is an extension of periodontal therapy and is performed at selected intervals to assist the periodontal patient in maintaining oral health (AAP).

- Therapeutic measures to support the patient's own efforts to control and to avoid re-infection.(Jan Lindhe)

Supportive periodontal treatment has gone by many names

Synonyms of SPT

- Periodontal maintenance
- Preventive maintenance
- Recall visits or maintenance
- Maintenance phase

The American Academy of Periodontology 1989 renamed periodontal maintenance as, SUPPORTIVE PERIODONTAL THERAPY, which included

- An update of the medical and dental histories,
- Examination of extra and intraoral soft tissues,
- Dental examination,
- Radiographic review,
- Evaluation of the patient's oral hygiene performance,
- Periodontal evaluation and risk assessment,
- Supra and subgingival removal of bacterial plaque and calculus,
- Retreatment of disease when indicated.

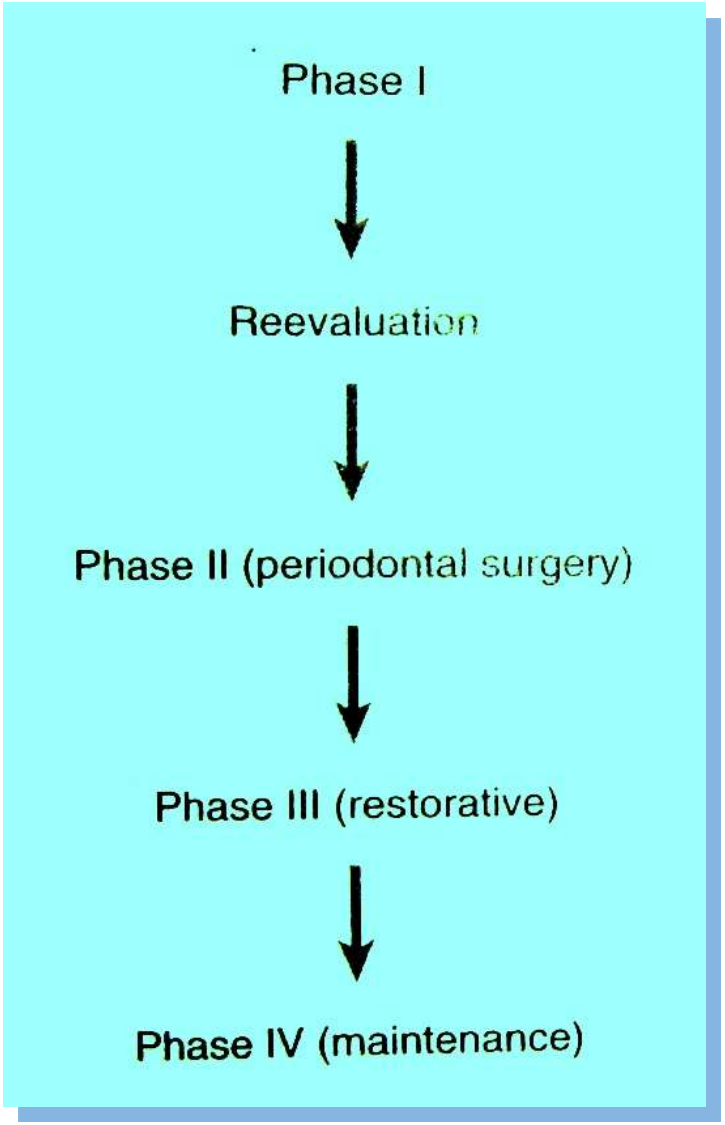
Introduction

- The goal of periodontal treatment is to maintain the natural dentition in functional health and comfort throughout the lifetime.
- SPT is a definitive step in total patient care that requires time and effort on the part of dentist and the staff
- SPT is performed by a dentist, although components of supportive periodontal treatment can be performed by a dental hygienist under the supervision of the dentist.
- SPT is used following the completion of active periodontal therapy, but it can be used in other phases of treatment.

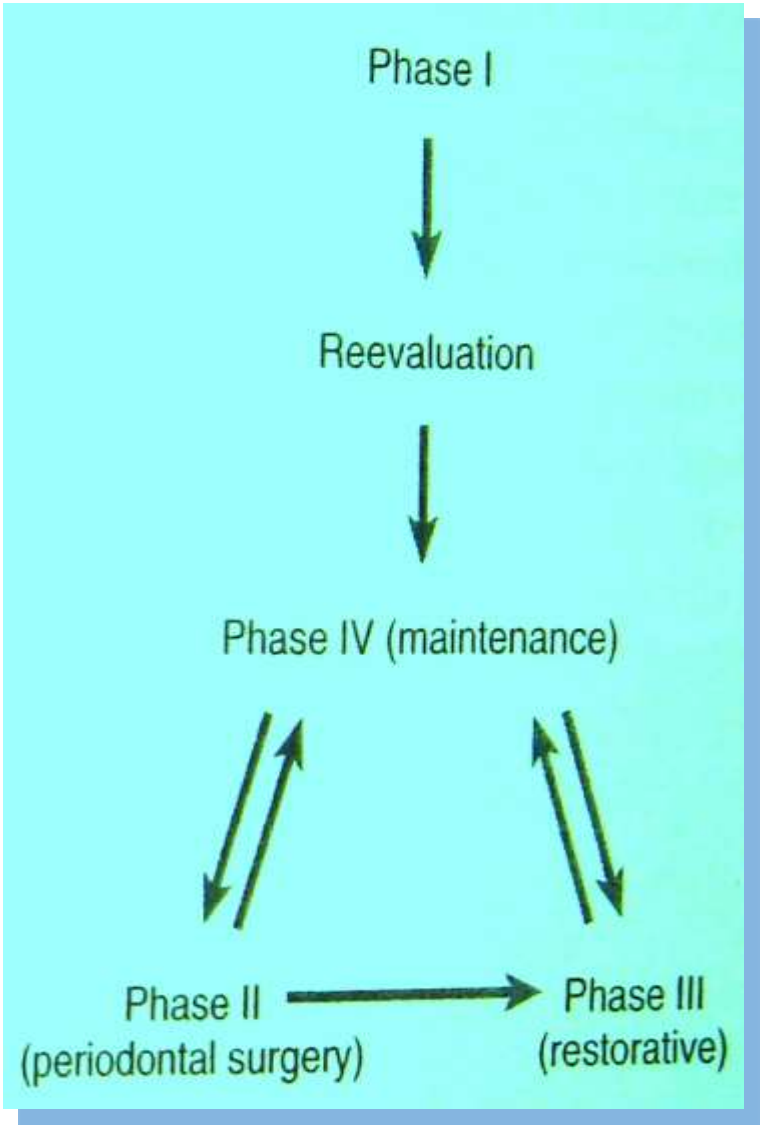
Patients must understand the purpose of SPT, and the dentist must emphasize that preservation of teeth depends on maintenance therapy.

According to studies patients who do not return for regular recall are 5.6 times at greater risk for tooth loss than compliant patients. (Checchi et al 2002)

Another study showed that patients with inadequate SPT after successful regenerative therapy have a 50 fold increase in risk of probing attachment loss than compliant patients. (Cortellini et al 1994)



Incorrect sequence



Correct sequence

Rationales

- Limitation of mechanical subgingival debridment
- Recolonization of pocket (tissue invasion of bacteria)
- Long junctional epithelium (weak attachment)
- Subgingival scaling alters the microflora of periodontal pocket
- Bacteria associated with periodontitis can be transmitted between spouses and other family members.

Goals of SPT

- 3main goals according to the AAP position paper(1998)

- To **prevent or minimize the recurrence** and progression of periodontal disease in patients who have been previously treated for gingivitis, periodontitis and for peri-implantitis.

- To **prevent or reduce incidence of tooth loss** by monitoring the dentition.

- To **locate and treat other diseases or conditions** found in the oral cavity in a timely manner.

TYPES OF SPT (Schallhorn and Snider1981)

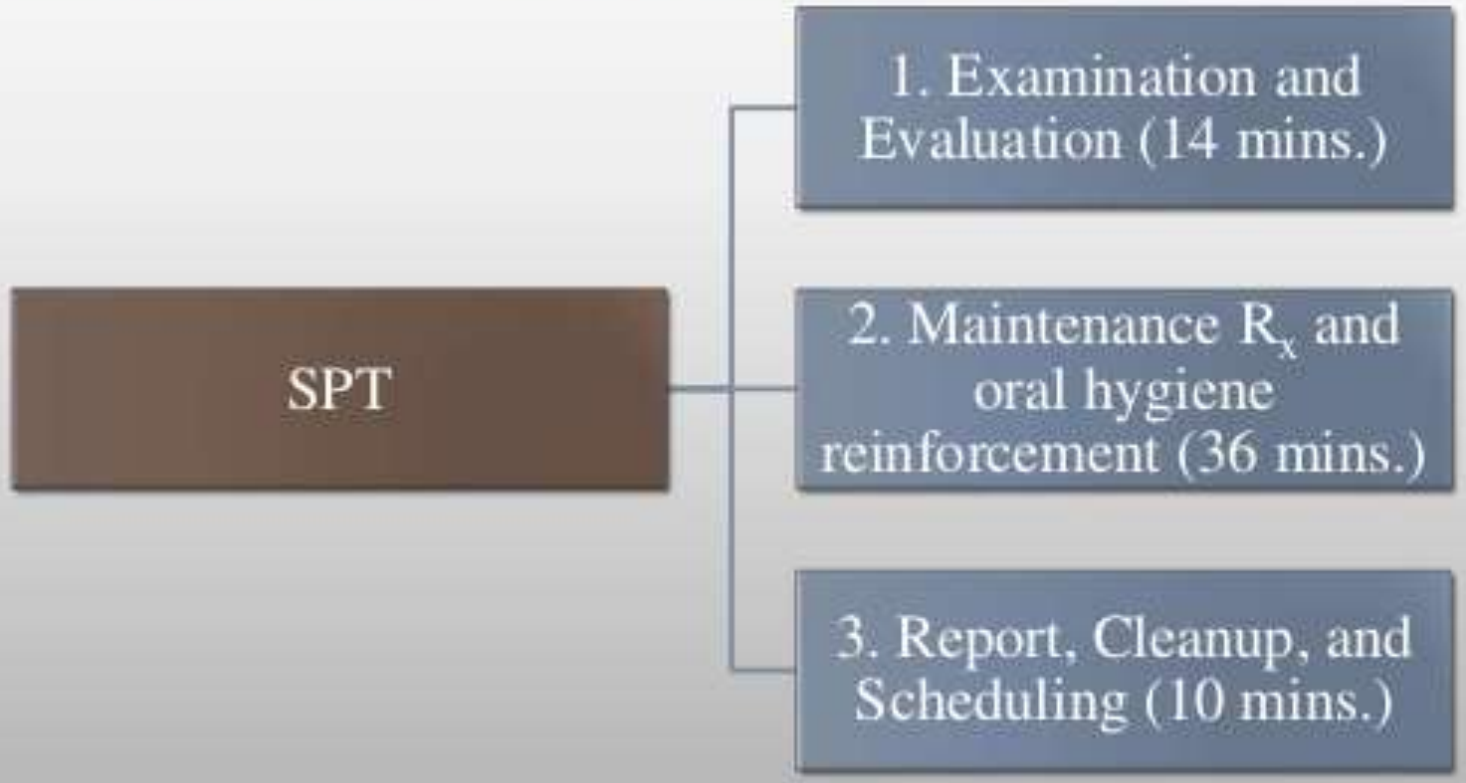
- *Preventive SPT*, designed to prevent the inception of disease in individuals without periodontal pathosis.

- *Trial SPT*, designed to maintain border line periodontal conditions over a period to further assess the need for corrective therapy for problems such as inadequate gingiva, gingival architectural defects, or furcation defects, while maintaining periodontal health throughout the balance of the mouth.

- *Compromise SPT*, designed to slow the progression of disease in patients for whom periodontal corrective therapy is indicated, but cannot be implemented for reasons of health, economics, inadequate oral hygiene, or other considerations, or when recalcitrant defects persist after corrective treatment.

- Post treatment SPT, designed to prevent the recurrence of disease and maintain the periodontal health achieved during therapy.

Maintenance Program (Carranza)



Part- 1: Examination and Evaluation

- Patient greeting
- Medical history changes
- Oral hygiene status
- Gingival changes
- Pocket depth changes
- Mobility changes
- Occlusal changes
- Dental caries
- Oral pathologic examination
- Restorative, prosthetic, and implant status

Examination of prosthesis/abutment components;

Evaluation of implant stability;

Occlusal examination;

Other signs and symptoms of disease activity.

Part-2: Maintenance treatment and Oral hygiene reinforcement

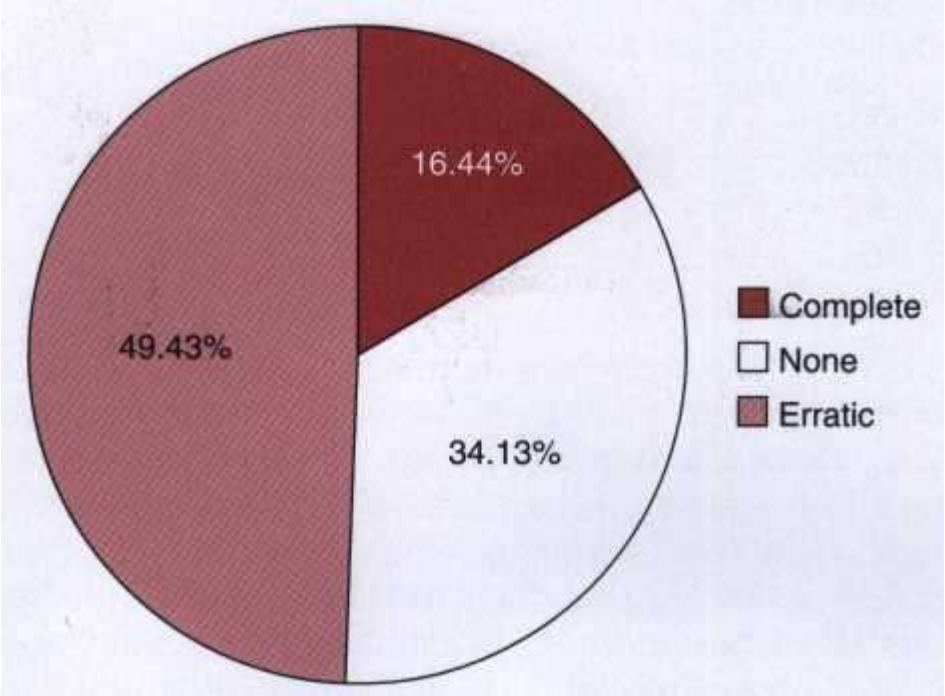
- Oral hygiene reinforcement
- Scaling
- Polishing
- Chemical irrigation or site-specific antimicrobial placement

Part-3: Report, Cleanup, and Scheduling

- Write report in chart.
- Discuss report with patient.
- Clean and disinfect operatory.
- Schedule next recall visit.
- Schedule further periodontal treatment.
- Schedule or refer for restorative or prosthetic treatment.

COMPLIANCE

Defined is “the extent to which a person’s behavior coincides with medical or health advice”.



Compliance with maintenance therapy in 961 patients studied for 1 to 8 years. (Adapted from Wilson TG Jr, Glover ME, Schoen J, et al: Compliance with maintenance therapy in a private periodontal practice.] Periodontol 1984; 55:468.

Why do patients fail to comply?

Several hypotheses have put forth: reasons include-

- Self-destructive behaviors
- Fear of dental treatment
- Economic factors
- Stressful events in their lives

- The studies by Demetriou et al. and Demirel et al. suggested that females are more compliant than men.

- Study by Novaes & Ojima showed that older patients are more compliant than younger patients, whereas the study by Demetriou et al. suggested the opposite .

RECURRENCE OF PERIODONTAL DISEASE

- This is often due to inadequate plaque control on the part of the patient or failure to comply with recommended SPT schedules.

- However, it is the dentist's responsibility to teach, motivate, and control the patient's oral hygiene technique, and the patient's failure is the dentist's failure.

- Surgery should not be undertaken unless the patient has shown proficiency and willingness to cooperate by adequately performing his or her part of therapy.

A failing case can be recognized by the following:

- Recurring inflammation revealed by gingival changes and bleeding of the sulcus on probing.
- Increasing depth of sulci, leading to the recurrence of pocket formation.
- Gradual increase in bone loss as determined by radiographs.
- Gradual increase in tooth mobility as ascertained by clinical examination

CLASSIFICATION OF POSTTREATMENT PATIENTS.

- The first year after periodontal therapy is important in terms of indoctrinating the patient in a recall pattern and reinforcing oral hygiene techniques.

- *The recall interval for first-year patients should not be longer than 3 months.*

- *The long term preservation of the dentation is closely associated with the frequency and quality of recall maintenance.*

Merin Classification	Characteristics	Recall Interval
First year	First-year patient—routing therapy and uneventful healing or First-year patient—difficult case with complicated prosthesis, furcation involvement, poor crown-to-root ratios, or questionable patient cooperation	3 months 1 to 2 months
Class A	Excellent results well maintained for 1 year or more Patient displays good oral hygiene, minimal calculus, no occlusal problems, no complicated prostheses, no remaining pockets, and no teeth with less than 50% of alveolar bone remaining	6 months to 1 year
Class B	Generally good results maintained reasonably well for 1 year or more, but patient displays some of the following factors: 1. Inconsistent or poor oral hygiene 2. Heavy calculus formation 3. Systemic disease that predisposes to periodontal breakdown 4. Some remaining pockets 5. Occlusal problems 6. Complicated prostheses 7. Ongoing orthodontic therapy 8. Recurrent dental caries 9. Some teeth with less than 50% of alveolar bone support 10. Smoking 11. Positive genetic test	3 to 4 months (decide on recall interval on the basis of the number and severity of negative factors)

Class C	Generally poor results following periodontal therapy and/or several negative factors from the following list: 1. Inconsistent or poor oral hygiene 2. Heavy calculus formation 3. Systemic disease that predisposes to periodontal breakdown 4. Remaining pockets 5. Occlusal problems 6. Complicated prostheses 7. Recurrent dental caries 8. Periodontal surgery indicated but not performed for medical, psychologic, or financial reasons 9. Many teeth with less than 50% of alveolar bone support 10. Condition too far advanced to be improved by periodontal surgery 11. Smoking 12. Positive genetic test 13. More than 20% of pockets bleed on probing	1 to 3 months (decide on recall interval on the basis of the number and severity of negative factors; consider retreating some areas or extracting the severely involved teeth)

REFERRAL OF PATIENTS TO THE PERIODONTIST

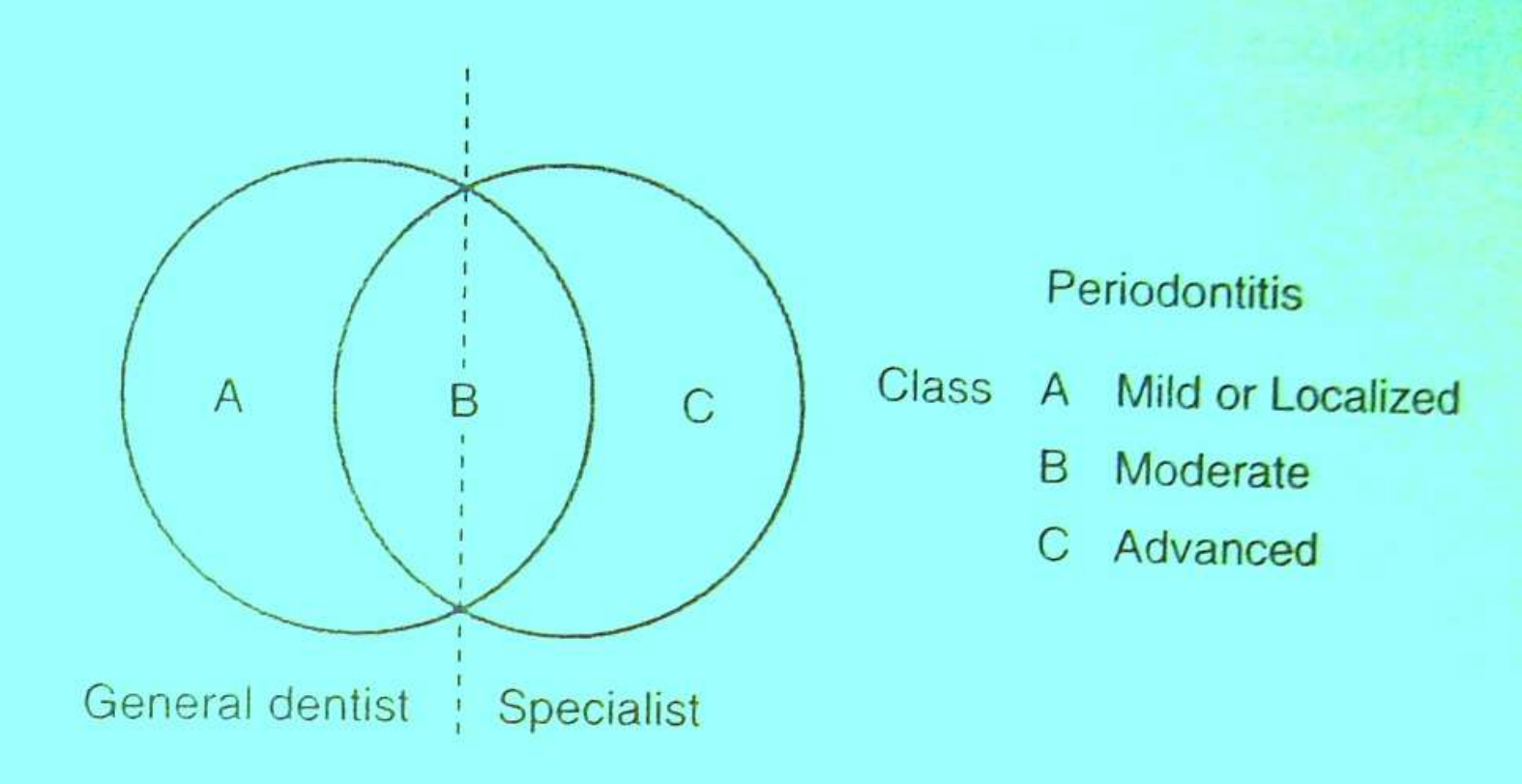
- *The majority of periodontal care belongs in the hands of the general dentist.*
- *The question remains where to draw the line between the cases to be treated in the general dental office and those to be referred to a specialist varies for different practitioners and patients.*
- *The diagnosis indicates the type of periodontal treatment required.*

REFERRAL OF PATIENTS TO THE PERIODONTIST

- ***If periodontal destruction necessitates surgery on the distal surfaces of second molars, extensive osseous surgery, or complex regenerative procedures, the patient is usually best treated by a specialist.***

- ***On the other hand, patients who require localized gingivectomy or flap curettage usually can be treated by the general dentist.***

Should the maintenance phase of therapy be performed by the general practitioner or the specialist?

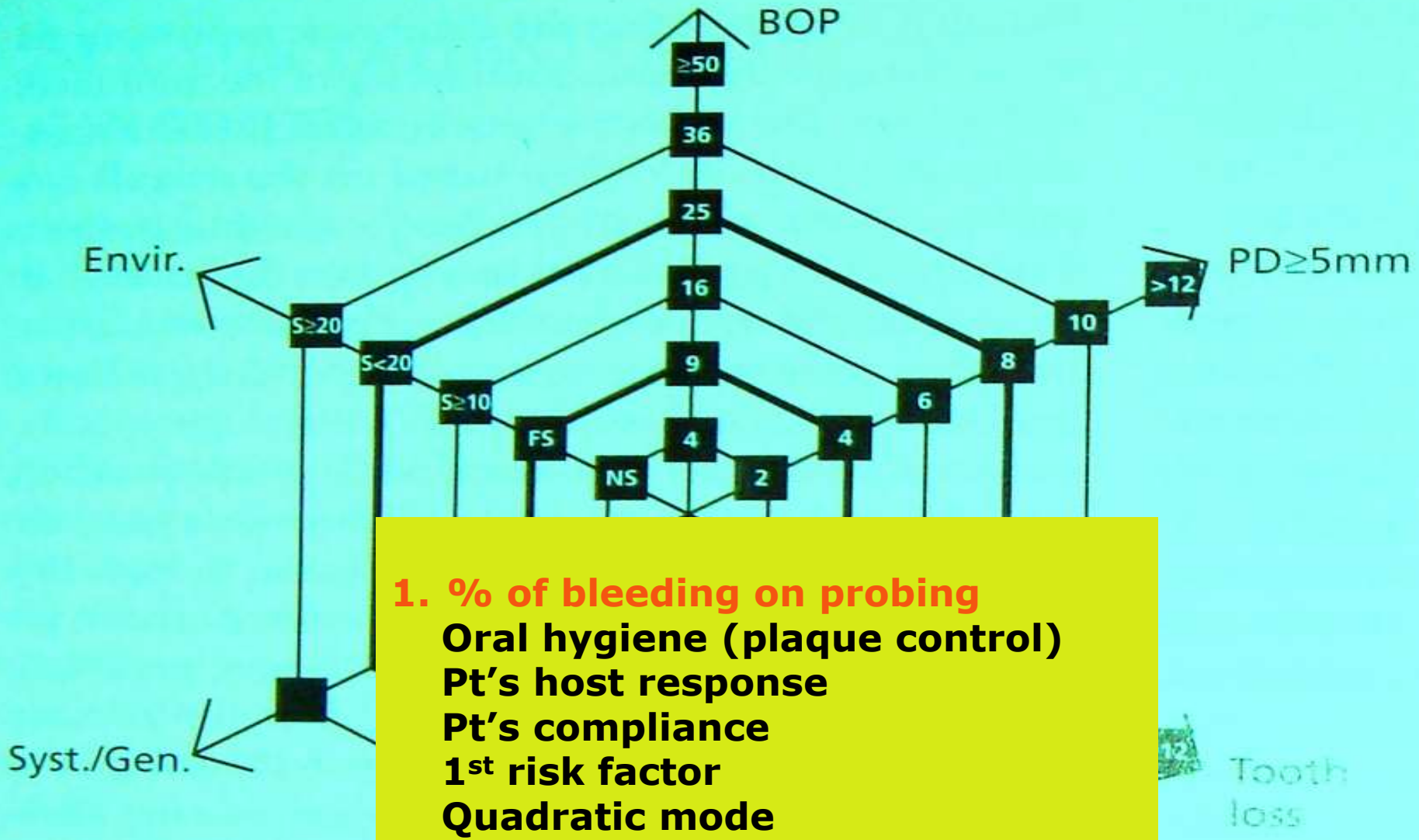


The suggested rule is that the *patient's disease should dictate whether the general practitioner or the specialist should perform the maintenance therapy.*

MULTIFACTORIAL RISK DIAGRAM

(Lang & Tonetti 2003)

- Percentage of bleeding on probing
- Prevalence of residual pocket greater than 4mm
- Loss of teeth from a total 28 teeth
- Loss of periodontal support in relation to the patient's age
- Systemic factors and genetic conditions
- Environmental factors such as cigarette smoking

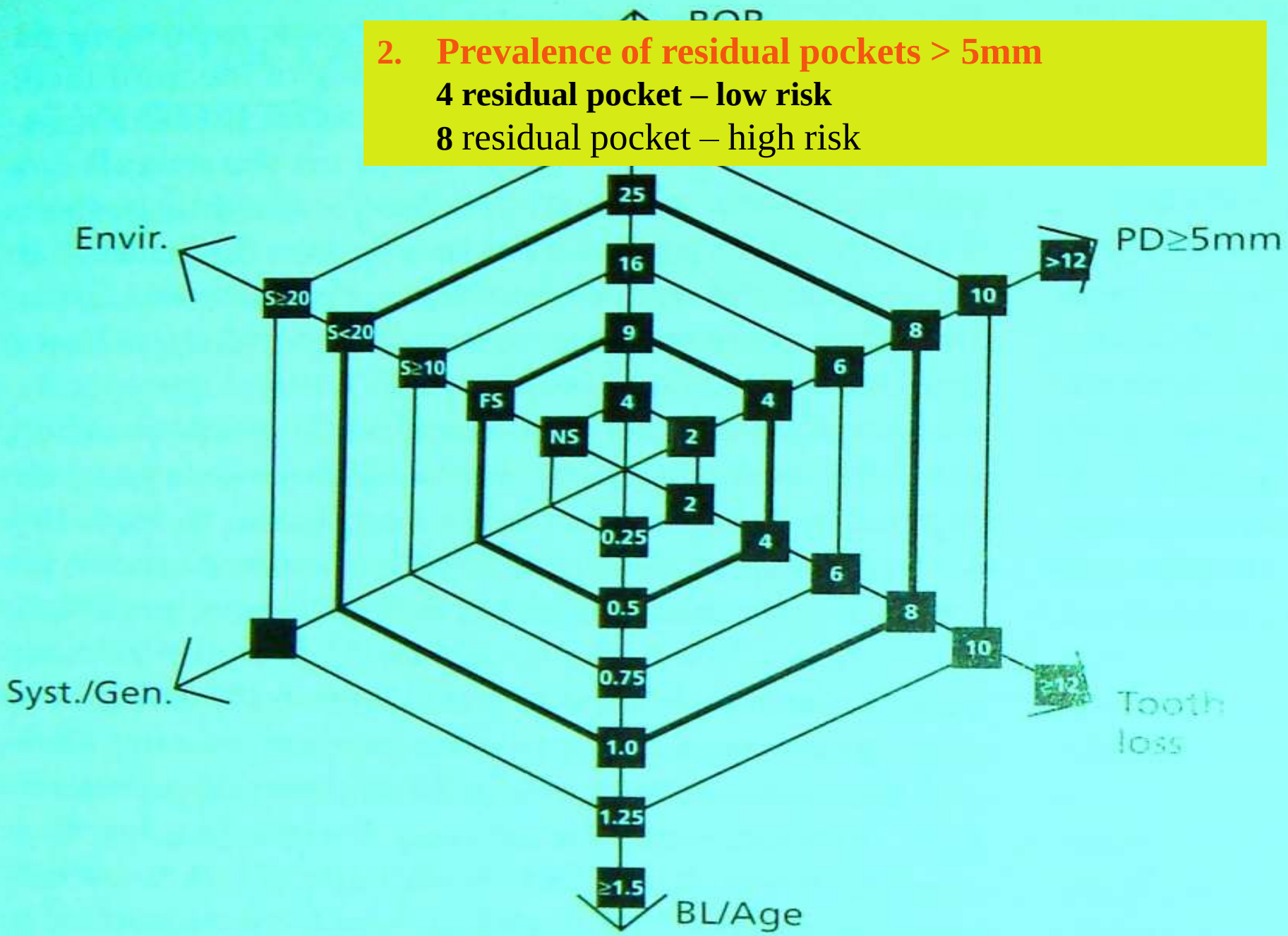


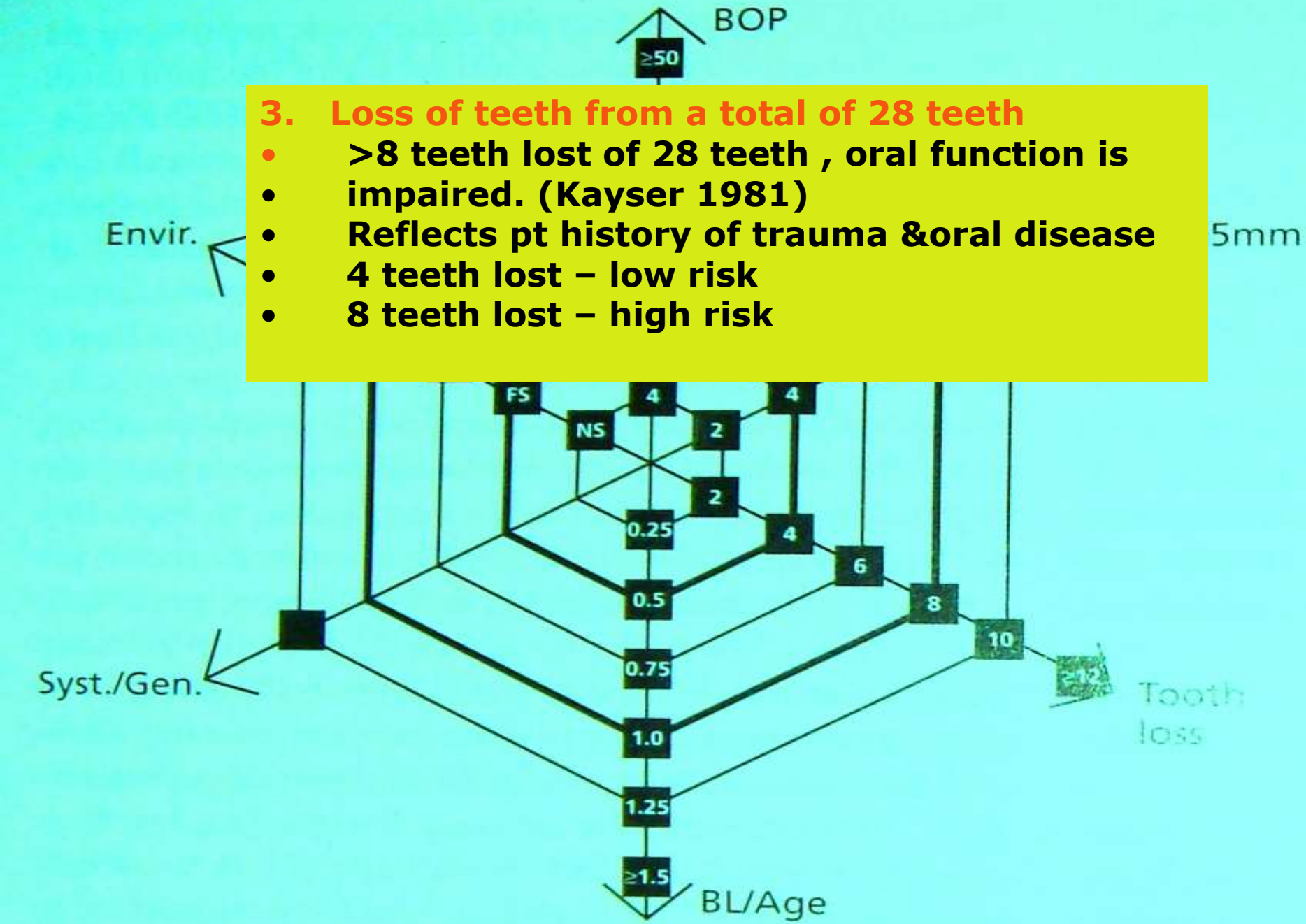
1. **% of bleeding on probing**
   - **Oral hygiene (plaque control)**
   - **Pt's host response**
   - **Pt's compliance**
   - **1st risk factor**
   - **Quadratic mode**
   - **Low risk <10%**
   - **High risk > 25%**

2. **Prevalence of residual pockets > 5mm**

4 residual pocket – low risk

8 residual pocket – high risk





3. **Loss of teeth from a total of 28 teeth**

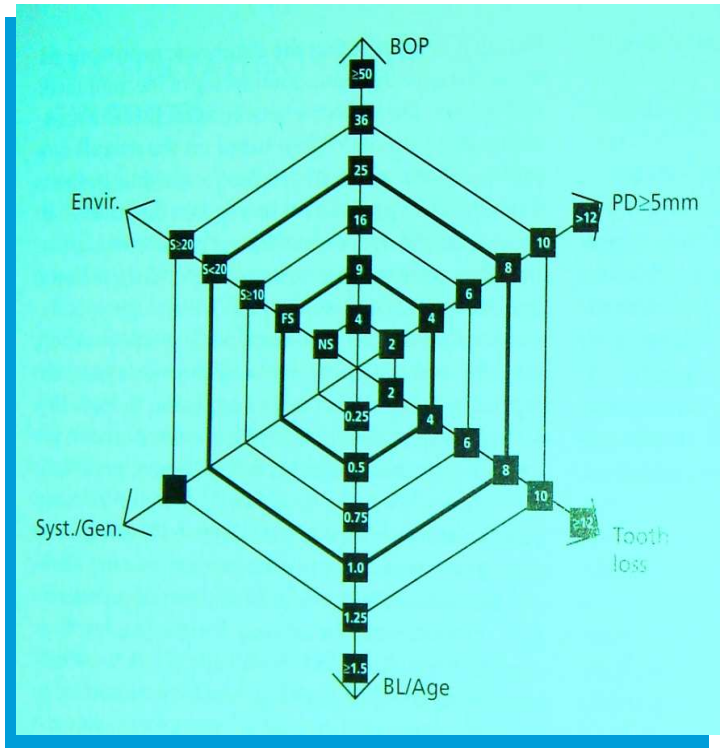
- **>8 teeth lost of 28 teeth , oral function is**
- **impaired. (Kayser 1981)**
- **Reflects pt history of trauma &oral disease**
- **4 teeth lost – low risk**
- **8 teeth lost – high risk**

One mm is equated with 10% bone loss. The percentage is then divided by the patient's age

As an example, a 40-year-old patient with 20% of bone loss at the worst posterior site affected would be scored BL/Age = 0.5.

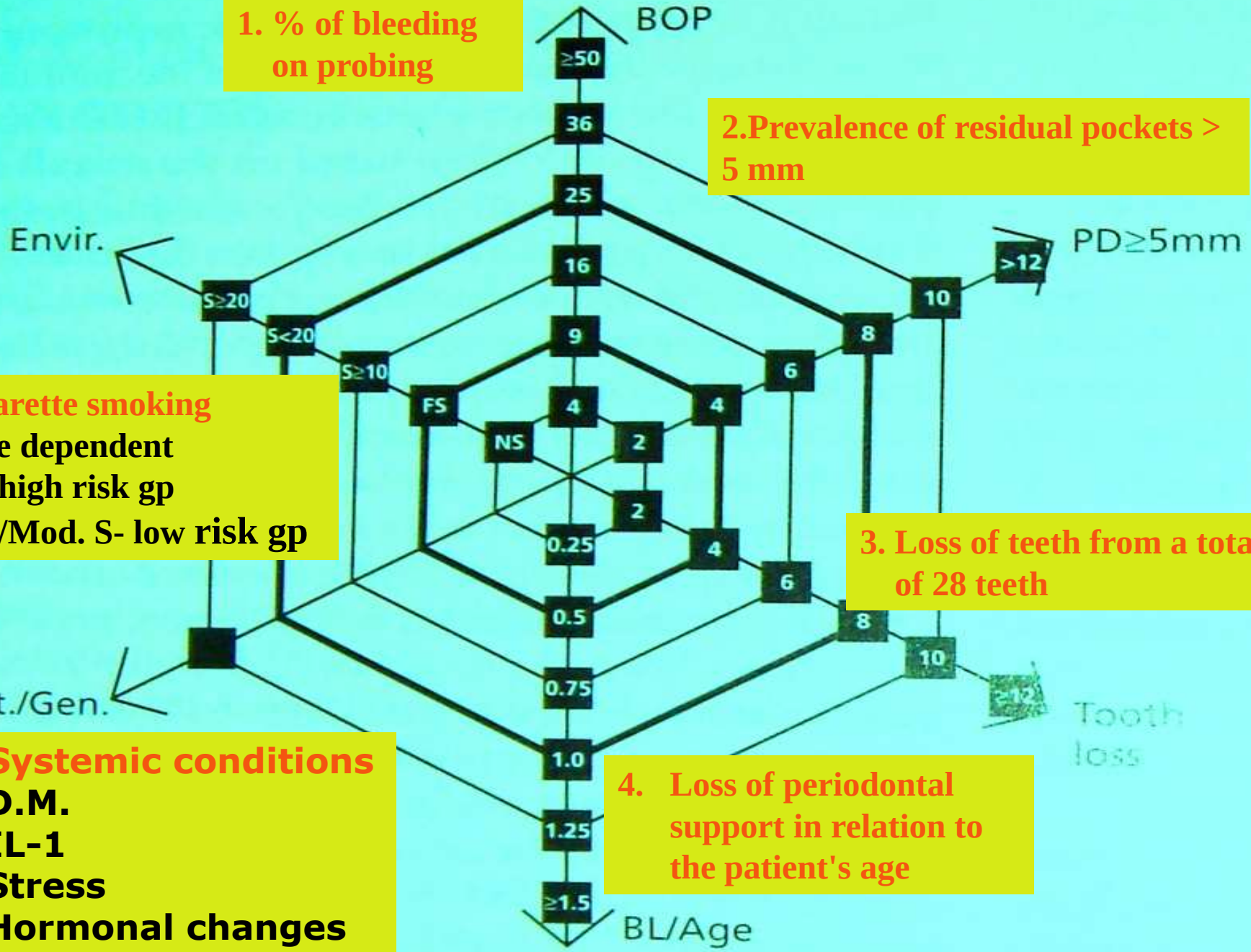
0.5- b/w low to moderate risk

1.0-b/w moderate to high risk



4.Loss of periodontal support in relation to the patient's age

1. % of bleeding on probing



2.Prevalence of residual pockets > 5 mm

3. Loss of teeth from a total of 28 teeth

4. Loss of periodontal support in relation to the patient's age

5. Systemic conditions
- D.M.
- IL-1
- Stress
- Hormonal changes

6.Cigarette smoking
- Dose dependent
- HS-high risk gp
- Occ/Mod. S- low risk gp

Calculating the patient's individual periodontal risk assessment (PRA)

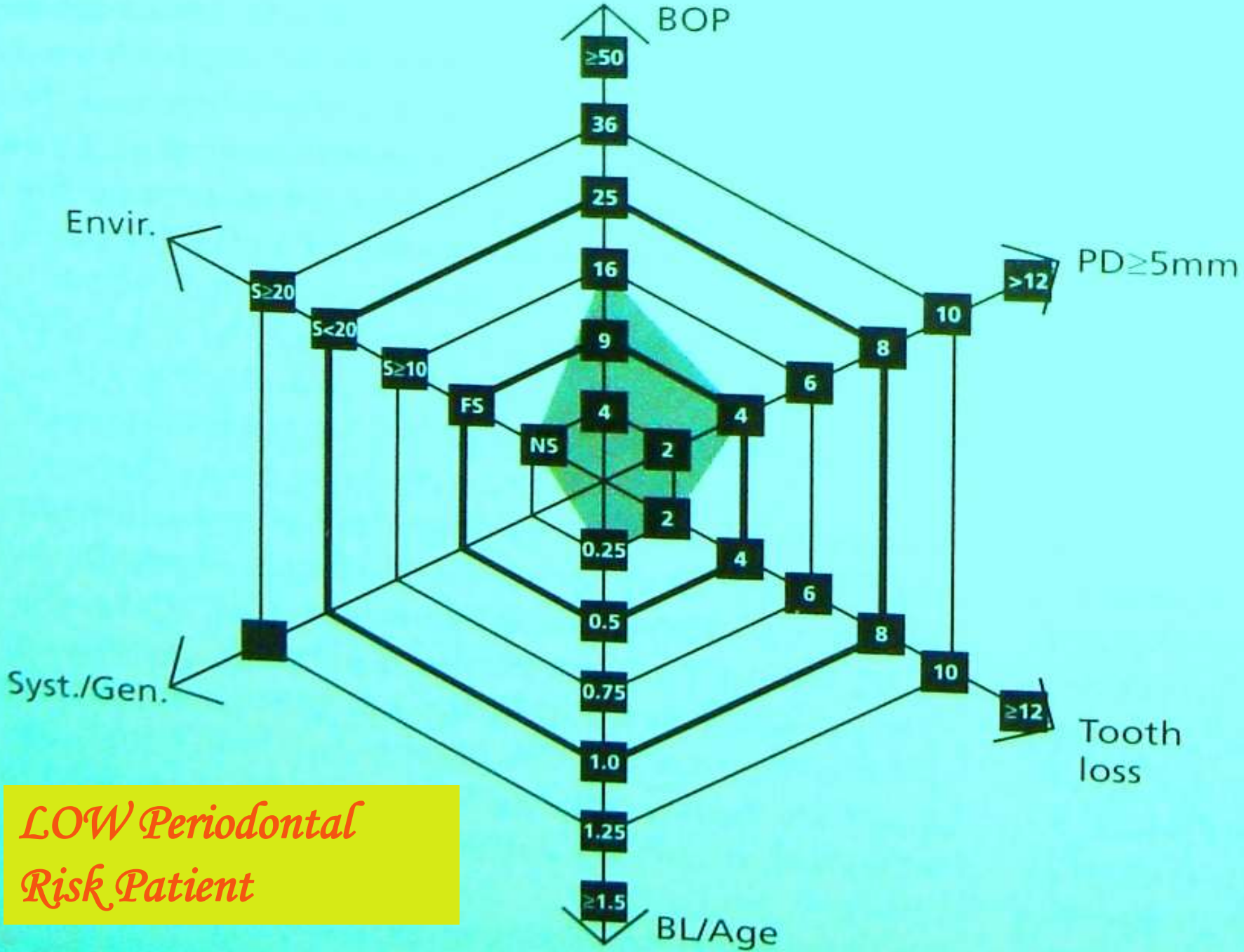
- A low PR patient has all parameters thin the low risk categories or at the most one parameter in the moderate risk category.

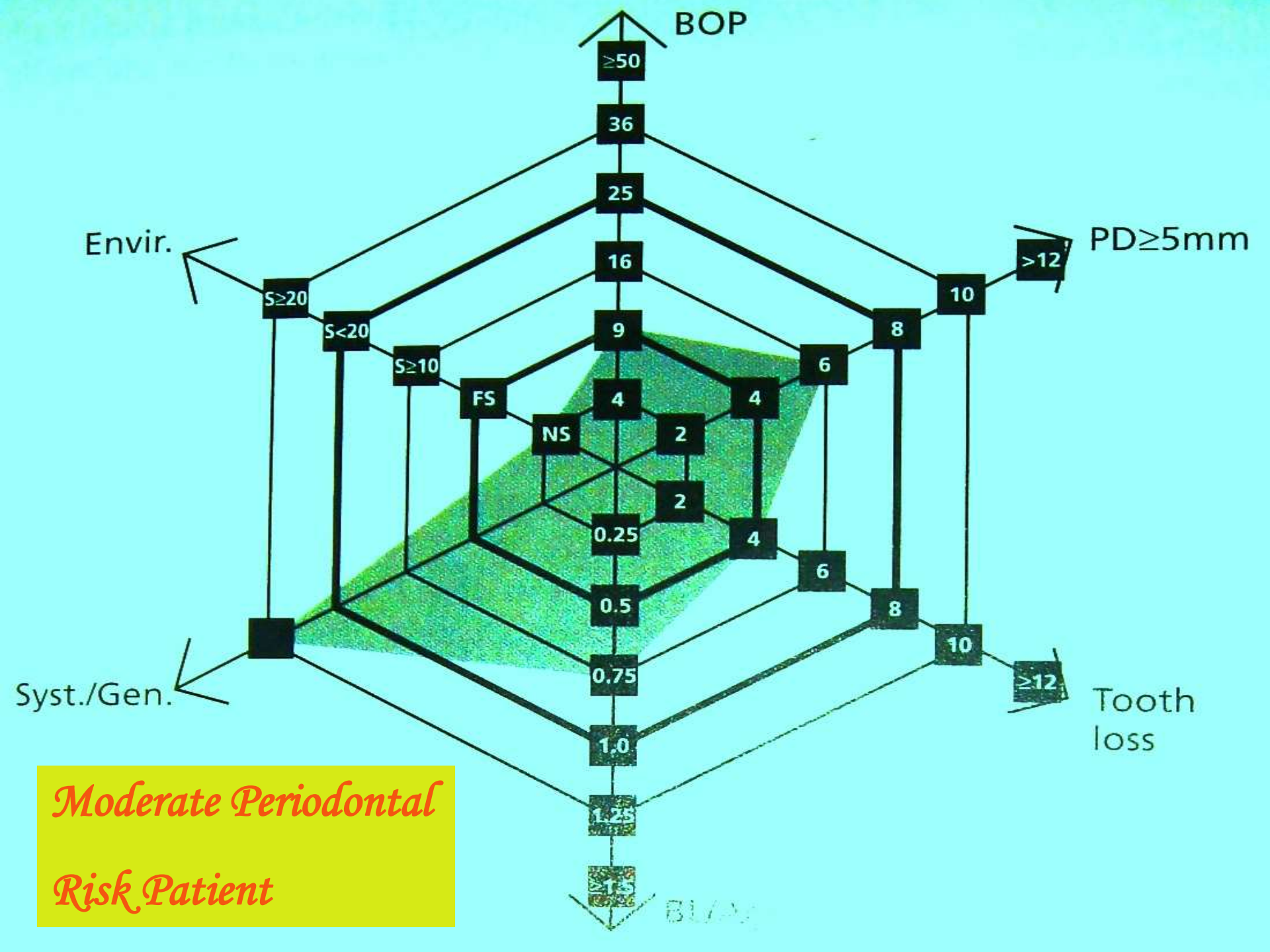
- A moderate PR patient has at least two parameters in the moderate category, but at most one parameter in the high risk category.

- A high PR patient has at least two parameters in the high risk category

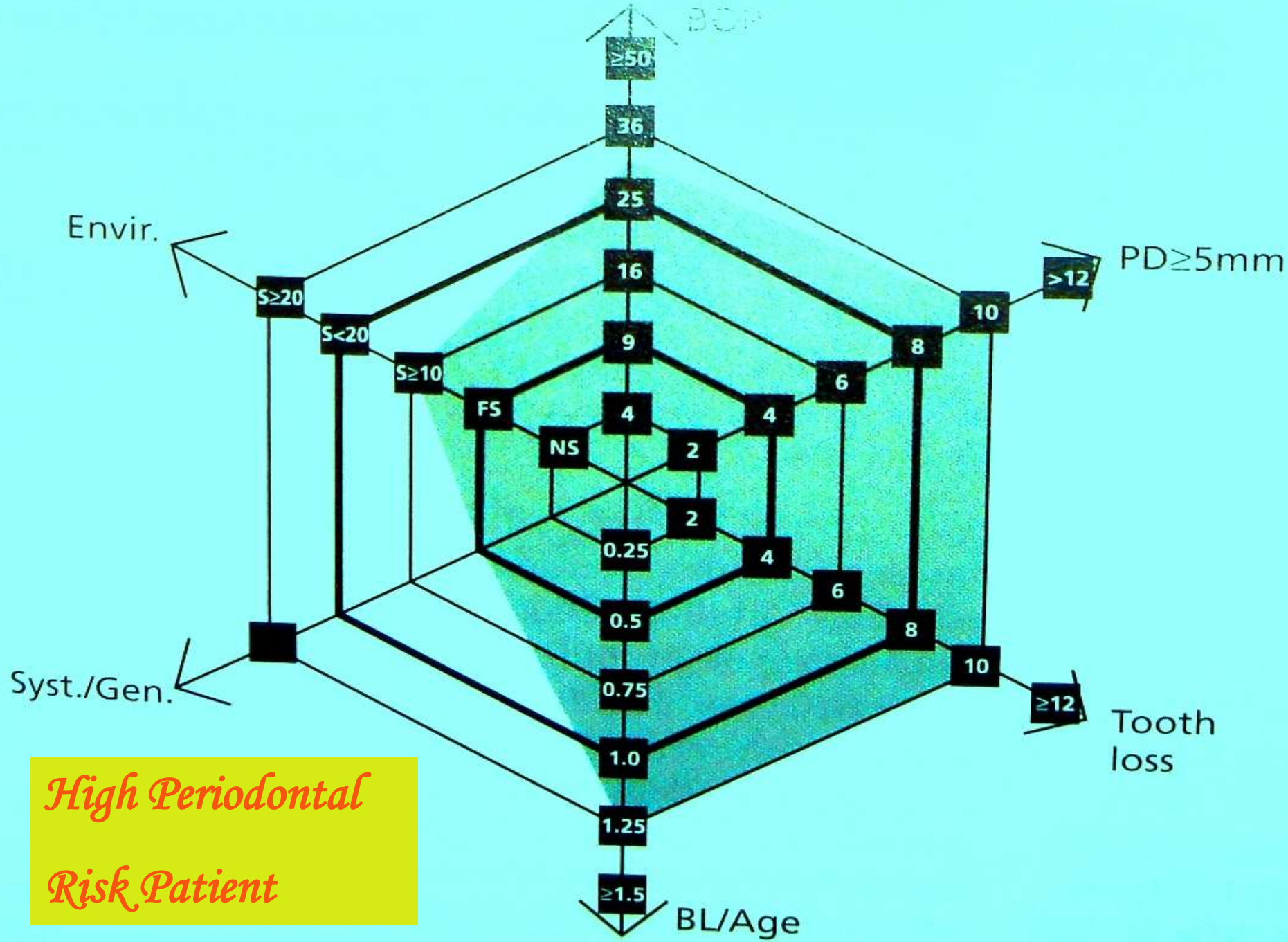
the vectors have been constructed on the basis of the scientific evidence available.

It is obvious that ongoing validation may result in slight modifications


BOP
≥50
36
25
16
9
4
2
0.25
0.5
0.75
1.0
1.25
≥1.5
BL/Age
Envir.
S≥20
S<20
S≥10
FS
NS
Syst./Gen.
PD≥5mm
>12
10
8
6
4
2
Tooth loss
≥12
10
8
6
4
2
LOW Periodontal Risk Patient



Moderate Periodontal Risk Patient



High Periodontal Risk Patient

MAINTENANCE CARE OF PATIENTS WITH DENTAL IMPLANTS

In general, procedures for maintenance of patients with implants are similar to those with natural teeth, with three differences:

1. **Special instrumentation that will not scratch the implants are used for calculus removal**
2. **Acidic fluoride prophylactic agents are avoided.**
3. **Nonabrasive prophypastes are used.**

During the phase after uncovering the implants, patients must use ultrasoft brushes, chemotherapeutic rinses, tartar control pastes, irrigation devices, and yarn-like materials to keep the implants clean.

Patients often are afraid to touch the implants but must be encouraged to keep the areas clean.

Metal hand instruments and ultrasonic and sonic tips should be avoided because they can alter the titanium surface.

Only plastic instruments or specially designed gold-plated curettes should be used for calculus removal because the implant surfaces can be easily scratched.

The rubber cup with flour of pumice, tin oxide, or special implant polishing pastes should be used on abutment surfaces with light, intermittent pressure.

Although daily use of topically applied antimicrobials is advised, acidic fluoride agents should not be used because they cause surface damage to titanium abutments.

SUMMARY AND CONCLUSION

- The rationale for therapy is establish an environment conductive to maintenance by the patient and the dental team. Hence, maintenance therapy becomes the "steady state" for the patient, with all treatment endeavors channeled into achieving a healthy periodontal status that can be effectively maintained.

- In this light, maintenance therapy becomes the most critical aspect of dental treatment. Recognition of its place in the therapeutic spectrum is long overdue, and adequate time should be included for this phase of treatment in the dental school curriculum.

THANKYOU...