Journal of Advances in Drug Research

ISSN: 2230-7761
www.jadr.co.in

Volume 17, Issue 05 | Received 31.10.2026 | Accepted 5.11.2026 | Online 10.11.2026

CLINICAL AND IMMUNOLOGICAL CHARACTERISTICS OF ORAL DISEASES IN CHILDREN WITH SECONDARY IMMUNE DYSFUNCTION: AN INDIVIDUALIZED MINIMALLY INVASIVE DENTAL CARE FRAMEWORK

N. Yu. Karimova, PhD

Acting Associate Professor, Department of Dentistry,

Asia International University, Bukhara, Uzbekistan

https://orcid.org/0009-0006-2149-4582 Corresponding author:
niginakarimova2108@gmail.com

ABSTRACT

Children with acquired or treatment-related immune impairment are vulnerable to a heterogeneous spectrum of oral complications, including mucosal infection, chemotherapy-associated mucositis, gingival inflammation and dental caries. However, secondary immune dysfunction is an etiologically diverse clinical descriptor rather than a uniform diagnosis, and its direct contribution to dental disease must be separated from medication-related salivary changes, dietary exposures and access to care. This narrative evidence synthesis aimed to characterize clinically relevant oral–immune relationships and to develop an individualized, minimally invasive dental-care framework for paediatric practice. Professional guidance and peer-reviewed clinical studies and reviews published through 14 November 2026 were critically examined, with priority given to paediatric immunosuppression, oral supportive care, caries prevention and periodontal assessment. The synthesis identified the importance of medical-treatment phase, immune and haematological status, oral lesion activity, salivary symptoms and family-related risk factors when selecting dental interventions. A 2024 systematic review of long-term childhood cancer survivors summarized 17 observational studies including 983 survivors and 1,266 controls, while a 2026 cross-sectional investigation assessed 441 children receiving chemotherapy; these sources describe clinical burden but cannot validate the proposed care pathway. Four evidence-to-practice tables and a five-stage triage and monitoring framework are proposed. A prevention-first strategy combining coordinated medical clearance, conservative lesion management and continuous reassessment appears clinically plausible. Its safety, feasibility and effectiveness require prospective validation in clearly defined secondary-immunodeficiency subgroups.

Keywords: secondary immune dysfunction; children; oral manifestations; oral mucositis; dental caries; candidiasis; periodontal inflammation; minimally invasive dentistry; personalized care; interdisciplinary management.

Journal of Advances in Drug Research

ISSN: 2230-7761
www.jadr.co.in

Volume 17, Issue 05 | Received 31.10.2026 | Accepted 5.11.2026 | Online 10.11.2026

INTRODUCTION

Oral health in childhood is determined by the interaction of biofilm-related exposures, host defence, nutrition, salivary protection, developmental factors and access to dental services. In children whose immune responses are modified by acquired disease or immunosuppressive treatment, this interplay becomes especially complex: inflammatory or opportunistic oral lesions may reflect altered antimicrobial defence, whereas caries and gingival inflammation frequently remain multifactorial conditions influenced by plaque, carbohydrate intake, xerostomia and oral hygiene. Secondary immune dysfunction should therefore not be treated as a single disease category. It may be associated with antineoplastic treatment, transplantation, acquired infection, systemic inflammatory disease and medicines that alter immune function. Neither a history of illness nor an isolated laboratory abnormality proves that an observed oral lesion is immunologically caused [1,5,7].

Contemporary paediatric-dental recommendations emphasize the importance of assessing and stabilizing oral sources of infection before major immunosuppressive interventions and of maintaining individualized preventive care throughout treatment [1]. The 2026 paediatric-periodontal consensus further highlights the diversity of congenital and acquired systemic conditions capable of modifying periodontal status and the need for multidisciplinary assessment when disease presentation is unusual or disproportionately severe [7]. Nevertheless, a clinically useful care pathway must distinguish local treatment from systemic medical risk. Routine restorative decisions do not require extensive immunological profiling in every patient, while invasive procedures in medically unstable children may demand updated haematological information and direct consultation with the treating team [1,2].

This article seeks to integrate evidence concerning the clinical and immunological characteristics of oral disorders in children with secondary immune dysfunction and to formulate a practical, risk-adapted system of minimally invasive dental care. The specific objectives are to identify plausible biological and clinical links, define the limits of immunological biomarkers in dental practice, map the evidence supporting preventive and tooth-preserving options, and propose a structured approach to referral, treatment selection and outcome monitoring. The framework is intended as a researchable clinical hypothesis rather than a validated decision rule.

LITERATURE REVIEW

The most directly applicable evidence concerns children undergoing chemotherapy, radiotherapy or hematopoietic stem-cell transplantation. The American Academy of Pediatric Dentistry (AAPD) recommends oral examination before immunosuppressive or head-and-neck radiation therapy, management of potentially infectious dental foci and postponement of elective procedures in vulnerable treatment phases where appropriate [1]. A 2025 MASCC/ISOO practice statement similarly addresses dental evaluation before hematological cancer therapies and emphasizes prevention of local infection and systemic complications [11]. These recommendations are grounded in a context where oral

Journal of Advances in Drug Research
ISSN: 2230-7761
www.jadr.co.in
Volume 17, Issue 05 Received 31.10.2026 Accepted 5.11.2026 Online 10.11.2026

mucositis, microbial infection, reduced intake, altered saliva and delayed healing can affect treatment tolerance and quality of life. Their detailed procedural implications should not be generalized without adjustment to all causes of acquired immune dysfunction [8,11].

Recent systematic reviews document the breadth of oral consequences in paediatric oncology. Braguês and colleagues evaluated therapeutic approaches to mucositis and concluded that promising interventions remain unevenly supported by paediatric evidence [9]. Nurhidayah and co-authors examined eight studies of oral-care interventions, seven randomized and one quasi-experimental, and reported variation in agents, intervention frequency and follow-up duration [10]. Torrecillas-Quiles and colleagues summarized 13 studies of paediatric oncological sequelae, including dental, salivary and craniofacial outcomes [12]. In long-term survivors, Seremidi and colleagues identified 17 observational studies comprising 983 survivors and 1,266 controls; this literature concerns survivors after treatment rather than children in an acute immunosuppressed state [13]. Importantly, these distinct populations cannot be pooled as though they share a single risk level or mechanism.

The 2026 cross-sectional study by Al-Sayed and colleagues assessed 441 children aged 1–14 years during chemotherapy using an Oral Assessment Guide and WHO mucositis grading; their observations reinforce the clinical burden of oral complications and the importance of caregiver education [14]. By contrast, evidence from paediatric HIV care describes oral candidiasis, salivary changes and other opportunistic mucosal manifestations within an infectious-immunological context that is distinct from oncology [16,17]. For both populations, candidiasis requires an appropriate clinical diagnosis and consideration of microbiological assessment when disease is persistent or atypical, but the appearance of oral candidiasis alone should not be used as a numerical proxy for immune competence.

Preventive dentistry provides a second, complementary evidence base. AAPD policy supports minimally invasive dentistry as risk-based disease management using fluoride, sealants, silver diamine fluoride, interim therapeutic restorations and appropriate restorative alternatives while maintaining active monitoring [4]. Its caries-risk guidance integrates clinical findings with medical, behavioural and protective factors [3]. Paediatric periodontal guidance and the recent European consensus endorse careful diagnosis, plaque control and coordinated medical assessment when systemic disease influences presentation [5,7]. These principles justify combining oral and medical information, but they do not show that a specifically proposed immunologically stratified dental algorithm improves outcomes; that question requires prospective study.

MATERIALS AND METHODS

The manuscript was developed as an original narrative evidence synthesis and methodological framework proposal, not as a prospective intervention study, retrospective patient cohort or systematic review. Targeted source identification covered the AAPD 2026–2027 Reference Manual, MASCC/ISOO guidance, relevant clinical reports and systematic reviews available through 14 November 2026. Search themes included acquired or secondary immune dysfunction, paediatric immunosuppression, oral infection, mucositis, oral candidiasis, caries risk, periodontal conditions, nonrestorative treatment, dental

Journal of Advances in Drug Research

ISSN: 2230-7761
www.jadr.co.in

Volume 17, Issue 05 | Received 31.10.2026 | Accepted 5.11.2026 | Online 10.11.2026

clearance and childhood cancer survivorship. Publications were selected for direct relevance to paediatric oral manifestations, procedural safety or minimally invasive care; 18 identifiable sources were retained for the article bibliography [1–18]. There was no registered systematic search protocol, independent dual screening, formal quality grading or meta-analysis.

Information was abstracted into four interpretive domains: medical context and treatment phase; oral lesion phenotype and activity; clinical or laboratory indicators that might alter procedural safety; and preventive or restorative options supported by paediatric guidance. Where available, review-level study counts, sample sizes and reported descriptive dental indices were recorded exactly as published. Results from different diagnoses, time periods and designs were not pooled or treated as estimates for all children with secondary immune dysfunction. The proposed model was constructed by mapping these evidence domains onto successive decisions concerning medical clearance, infection urgency, individual caries and periodontal risk, lesion-preserving interventions and follow-up. It was specifically designed to avoid assuming a universal clinical cut-off for salivary IgA, cytokines or other exploratory immunological markers.

No children were recruited, no oral samples or blood specimens were obtained, and no patient records were accessed for this work. Accordingly, the manuscript makes no claim of locally measured immunological values, treatment outcomes, statistical significance or reduced disease incidence attributable to its proposed pathway. Institutional ethics approval was not required for preparing a literature-only synthesis. A future clinical validation project would require ethical approval, guardian consent and prespecified safety, feasibility and outcome criteria.

RESULTS

The evidence synthesis identified four recurrent, partly overlapping oral-problem domains: opportunistic or other mucosal infections; treatment-related mucositis and ulceration; biofilm-associated gingival and periodontal disease; and dental caries or developmental defects. Their relative importance differs by underlying disorder, immune suppression severity, treatment exposure and time since therapy. In the proposed assessment, the medical history is first used to identify the relevant risk mechanism, not to label all children with chronic disease as uniformly immunodeficient. Oral findings are then documented as diagnoses or clinically described lesions, and possible biological explanations remain hypotheses until supported by appropriate evidence. Table 1 describes the relationship between selected acquired immune contexts, typical clinical concerns and interpretation safeguards.

Table 1. Acquired immune contexts, relevant oral findings and limits of causal interpretation

Clinical context	Oral findings of concern	Relevant clinical/immune information	Interpretation safeguard

Journal of Advances in Drug Research
ISSN: 2230-7761
www.jadr.co.in
Volume 17, Issue 05 Received 31.10.2026 Accepted 5.11.2026 Online 10.11.2026

Clinical context	Oral findings of concern	Relevant clinical/immune information	Interpretation safeguard
Antineoplastic therapy / post-HSCT	Mucositis, candidiasis, infection foci, salivary changes	Treatment phase, recent blood counts, mucosal integrity	Some lesions arise from treatment toxicity, not immune deficiency alone [1,8,12].
HIV-associated immune dysfunction	Candidiasis, opportunistic lesions, salivary symptoms	Medical diagnosis, treatment status and relevant specialist immune tests	Do not transfer HIV-specific estimates to unrelated immune disorders [16,17].
Drug-induced immune suppression	Recurrent infection, delayed healing, gingival inflammation	Drug history, dose, comedications, physician assessment	Plaque, xerostomia and local factors may be more influential than immune status [1,5].
Systemic acquired disease / nutritional compromise	Caries, gingivitis, oral soreness, possible infection	Growth/nutrition, underlying diagnosis and documented immune alteration	Broad medical categories are not interchangeable and require individualized assessment [5,7].

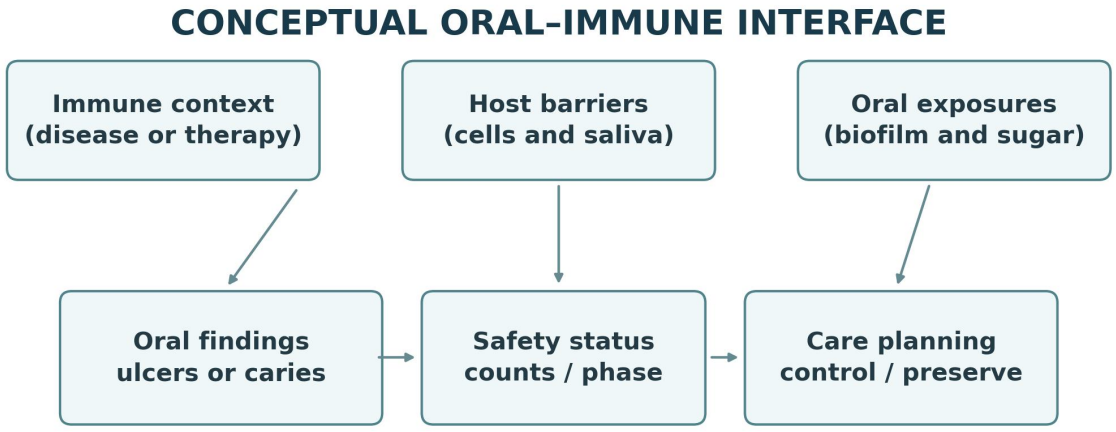


Figure 1. Conceptual interaction of acquired immune alteration, oral exposures and clinical findings. This original diagram does not assert direct causality for an individual patient.

Clinical immunology can inform dental safety, but testing should answer a defined clinical question. A complete blood count and differential may be relevant when a child is receiving bone marrow-suppressive treatment; other values such as lymphocyte subsets or

Journal of Advances in Drug Research
ISSN: 2230-7761
www.jadr.co.in
Volume 17, Issue 05 Received 31.10.2026 Accepted 5.11.2026 Online 10.11.2026

immunoglobulin concentrations belong to the underlying medical diagnostic pathway and require age-adjusted specialist interpretation. Salivary flow and symptoms of dryness can directly inform oral-care planning, whereas salivary secretory IgA, cytokine panels and microbiome sequencing are mainly research measures and are not validated stand-alone tools for prescribing invasive dental treatment. Table 2 separates routine dental observations from information obtained through the medical team and from exploratory biomarkers [1,2,5,7].

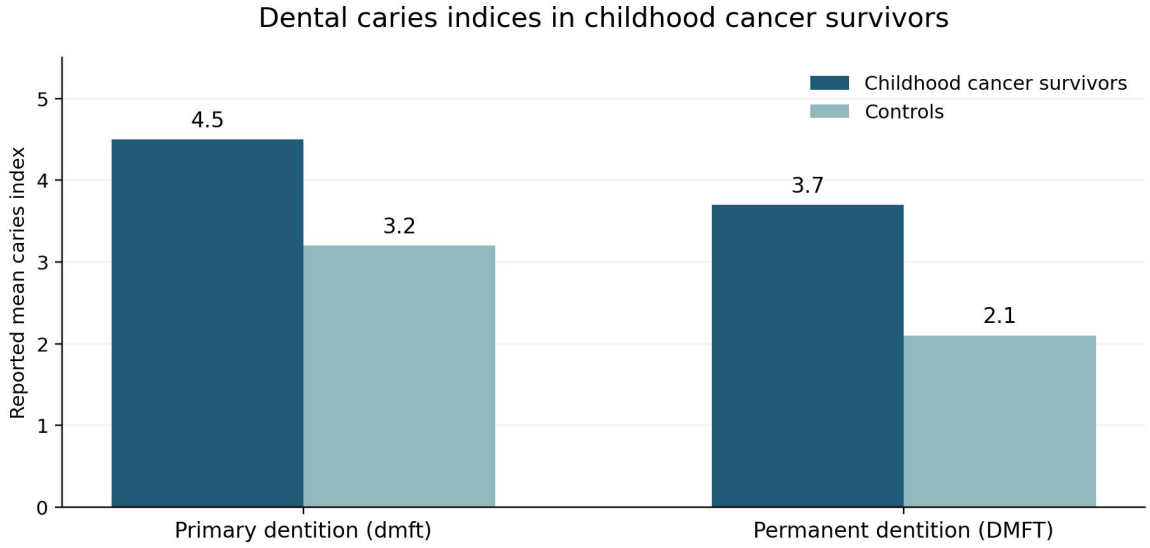
Table 2. Clinical and immunological assessment matrix for individualized dental planning

Assessment domain	Proposed data item	Practical decision supported	Status / limitation
Oral disease and symptoms	Caries activity, plaque, gingival bleeding when safe, ulcers, pain, feeding	Prioritize lesion control and urgent evaluation	Core dental assessment; age-appropriate methods [3,5].
Salivary context	Dry mouth, fluid intake, medication history; flow if indicated	Strengthen hygiene, protective and dietary measures	Symptoms are multifactorial; no immune diagnosis from dryness [1,3].
Medical safety	Current treatment phase, medical clearance, recent CBC/ANC/platelets when indicated	Time or adapt invasive procedures; plan setting and referral	Counts interpreted by treating physician; avoid universal dental cutoffs [1,2].
Underlying immune diagnosis	Physician-documented immune condition, therapy, selected immunoglobulin/CD4 data	Clarify susceptibility and coordinating specialty	Not a routine laboratory panel for every dental patient [16,17].
Research markers	Salivary sIgA, inflammatory cytokines, microbial profiles	Evaluate biological hypotheses in prospective studies	Exploratory; non-validated for individual treatment selection.

Published paediatric evidence provides descriptive anchors rather than a common effectiveness estimate for immunologically stratified dentistry. The 2024 long-term survivor review reported higher mean caries indices among childhood cancer survivors than controls: dmft 4.5 versus 3.2 in primary dentition and DMFT 3.7 versus 2.1 in permanent dentition. The comparison aggregates heterogeneous observational studies and should not be interpreted as a causal effect of a specific drug or immunological mechanism [13]. The 2025 review of oncological sequelae retained 13 studies, the 2024 mucositis oral-care review eight studies, and the 2024 long-term survivor review 17 studies. These counts

Journal of Advances in Drug Research
ISSN: 2230-7761
www.jadr.co.in
Volume 17, Issue 05 Received 31.10.2026 Accepted 5.11.2026 Online 10.11.2026

represent different research questions and populations, not comparable pooled disease frequencies or measures of treatment success [10,12,13].



Source: Seremidi et al. (2024) [13]. Descriptive review averages; not an adjusted causal effect.

Figure 2. Descriptive mean caries indices in childhood cancer survivors and controls as summarized by Seremidi et al. (2024) [13]; observational review values are not adjusted effect estimates.

The practical synthesis favors a tiered system, beginning with source control and non-invasive stabilization where the child is medically vulnerable and proceeding to lesion-specific care only when the medical and dental risk assessment permits. Fluoride varnish, sealants, silver diamine fluoride and interim conservative restoration have distinct indications; none should be applied merely because a patient has immune dysfunction. When advanced disease threatens infection, avoiding all treatment may itself be unsafe, so expedited consultation and treatment in an appropriately equipped setting may be preferable to deferral. Table 3 presents a decision matrix for stable and unstable medical situations without specifying unvalidated numerical immune-risk thresholds [1–4,6,18].

Table 3. Proposed minimally invasive interventions according to oral need and medical context

Dental situation	Preferred initial approach	Necessary safety consideration	Evidence / status
Noncavitated, active caries	Hygiene and diet intervention; age-appropriate fluoride; sealants if indicated	Home-care ability, lesion activity and follow-up access	AAPD risk-based guidance [3,4,6].

Journal of Advances in Drug Research
ISSN: 2230-7761
www.jadr.co.in
Volume 17, Issue 05 Received 31.10.2026 Accepted 5.11.2026 Online 10.11.2026

Dental situation	Preferred initial approach	Necessary safety consideration	Evidence / status
Accessible cavitated caries without acute infection	Consider SDF or interim tooth-sparing care when appropriate	SDF staining consent; need for definitive care and surveillance	Recognized minimally invasive options, not a cure for all lesions [4,18].
Pain, abscess, rapidly progressing ulcer or fever	Prompt diagnostic assessment and urgent medical–dental coordination	Systemic illness, haematological status, setting and infection risk	Do not defer urgent evaluation simply to maintain a non-operative plan [1,2].
Active mucositis / treatment-related oral pain	Supportive oral hygiene and symptom management within oncology plan	Avoid traumatic interventions; coordinate evidence-based supportive care	Treatment-phase specific evidence; heterogeneous paediatric trials [8–10].
Gingival inflammation without urgent systemic concerns	Gentle plaque control, individualized preventive review	Assess bleeding risk before instrumentation if indicated	Medical collaboration when severity is disproportionate [5,7].

The operational framework contains five decisions: documentation of the acquired medical condition and treatment phase; structured oral phenotyping with recognition of infection emergencies; physician-supported procedural safety assessment; conservative treatment matching lesion severity and patient needs; and repeated assessment of oral and medical outcomes. A stable medical condition does not automatically imply low dental risk, just as profound immunosuppression does not make every non-invasive preventive procedure inappropriate. The decision architecture shown in Figure 3 seeks to preserve treatment proportionality while explicitly permitting escalation when uncontrolled dental disease could generate systemic infection. For research purposes, its safety and feasibility should be evaluated using predefined outcomes rather than retrospective impressions of clinician satisfaction.

Journal of Advances in Drug Research
ISSN: 2230-7761
www.jadr.co.in
Volume 17, Issue 05 Received 31.10.2026 Accepted 5.11.2026 Online 10.11.2026

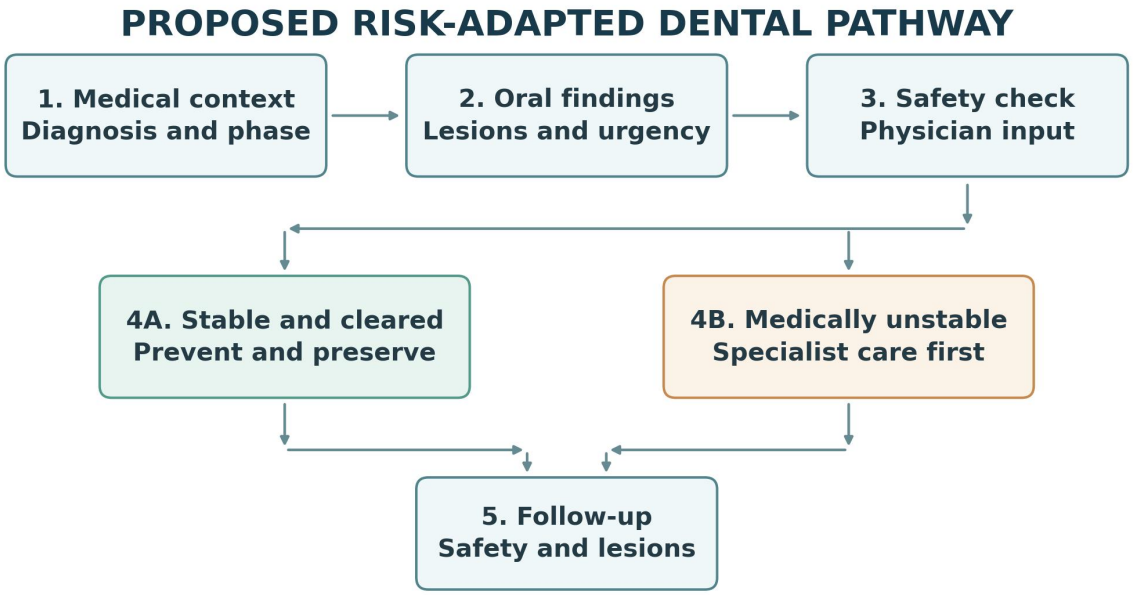


Figure 3. Original proposed pathway for individualized minimally invasive dental care in children with acquired immune impairment. The pathway is conceptual and must be adapted to local protocols and specialist advice.

Table 4. Proposed prospective evaluation measures for testing the clinical framework

Domain	Candidate outcome	Recommended reporting approach	Important limitation
Clinical safety	Urgent dental infection, bleeding, treatment interruption, referrals	Record event counts, timing and medical context	Do not attribute events to a care pathway without comparison.
Caries and periodontal health	ICDAS/lesion activity, dmft/DMFT, gingival indices	Prespecify age, dentition, examiner training and follow-up	Baseline dental risk differs across immune contexts.
Mucosal disease	WHO mucositis grade when relevant, candidiasis episode, pain	Separate chemotherapy and non-oncology cohorts	Clinical criteria and treatment phases may differ.
Patient-centered care	Eating difficulty, caregiver burden, oral-health QOL, adherence	Collect validated age-appropriate reports	Small changes can reflect underlying disease course.

Journal of Advances in Drug Research
ISSN: 2230-7761
www.jadr.co.in
Volume 17, Issue 05 Received 31.10.2026 Accepted 5.11.2026 Online 10.11.2026

Domain	Candidate outcome	Recommended reporting approach	Important limitation
Immune correlates (optional)	Physician-selected ANC, immunoglobulins; saliva research markers	Measure longitudinally when justified; adjust for age and treatment	No standalone biomarker is a validated dental treatment gate.

DISCUSSION

The present synthesis proposes that an effective system of dental care for children with secondary immune dysfunction must be both immune-aware and lesion-specific. Its novelty lies in formally joining two previously parallel decision processes: medically informed procedural safety and minimally invasive caries–periodontal management. The framework avoids two contrasting errors. The first is treating every oral symptom as an immunological manifestation; this overlooks readily modifiable local factors, such as plaque, snacking frequency, altered saliva and poor oral-health access. The second is treating medically vulnerable children according to ordinary restorative schedules without considering immune suppression, cytopenia, current therapy or potential systemic consequences of an odontogenic infection. A coordinated approach is consistent with current AAPD best practices and periodontal consensus guidance [1–7].

Immunological measurements are frequently attractive as potential indicators of risk, particularly saliva-based biomarkers that might allow a less invasive view of mucosal defence. Yet plausibility must not be confused with clinical validation. Salivary secretory IgA is affected by age, flow, stress and inflammatory exposures, and its direct application as a universal decision threshold for treatment planning in acquired paediatric immune dysfunction is unsupported by the reviewed sources. Likewise, circulating immune measures reflect the underlying disease and its treatment; they may inform procedural precautions but do not replace diagnosis of caries, gingivitis or oral candidiasis. Prospective protocols should therefore prespecify whether each biomarker is intended for disease phenotyping, prediction, monitoring or mechanistic research, and should assess incremental value over simpler clinical findings [1,5,7].

The evidence is strongest for coordinated dental care before and during paediatric oncological treatment, where infection clearance and oral mucosal protection have direct clinical significance [1,8,11]. Mucositis studies provide examples of supportive care, but the interventions and populations are heterogeneous, and many study results cannot be extrapolated to children taking other immunosuppressive drugs [9,10]. The 2026 cross-sectional study of 441 oncology patients contributes a contemporary description of oral findings and caregiver needs, rather than proof that a specific minimally invasive dental programme improves outcomes [14]. The late dental sequelae studies, meanwhile, remind clinicians that risk does not always end with immunological recovery; enamel and tooth-development abnormalities can require prolonged age-appropriate surveillance [12,13,15].

Journal of Advances in Drug Research
ISSN: 2230-7761
www.jadr.co.in
Volume 17, Issue 05 Received 31.10.2026 Accepted 5.11.2026 Online 10.11.2026

A central clinical trade-off concerns invasiveness versus timely elimination of infection. Preserving dental hard tissue is desirable and aligns with modern paediatric caries guidance, but there are situations in which a definitive intervention is necessary to address pain, infection or structural instability. The optimal choice depends on lesion characteristics and the medical treatment phase, not on a categorical rule that immunocompromised patients should only receive non-operative treatment. Similarly, prophylactic antibiotics should not be prescribed routinely solely on the basis of an unspecified immune dysfunction; current AAPD recommendations emphasize selected indications and consultation with the child's physician, considering adverse events and antimicrobial resistance [2].

The principal limitations are methodological. This is not a registered systematic review, its evidence base is selected rather than exhaustive, and no original clinical cohort or laboratory dataset was available. The phrase secondary immune dysfunction covers dissimilar acquired conditions whose dental risks may be driven by the disease, treatment, social determinants, nutritional changes or interactions among these factors. The proposed clinical pathway is not calibrated, validated or shown to improve safety, lesion arrest, cost or quality of life. Future multicentre research should therefore recruit diagnostically explicit subgroups, obtain appropriate ethics approval and guardian consent, report treatment phase and baseline oral health, and prospectively compare structured care against clearly defined usual practice. Outcomes should include safety events, disease progression, conservative-treatment completion, mucosal health, family experience and resource use. Interdisciplinary feasibility in Bukhara or other regional settings should be evaluated rather than assumed.

CONCLUSION

Oral diseases in children with secondary immune dysfunction require an assessment that distinguishes direct mucosal vulnerability and treatment toxicity from common biofilm-related and behavioral causes of dental disease. Contemporary evidence supports coordinated medical–dental care, rigorous recognition of oral infection, prevention-first caries management, periodontal surveillance and the use of minimally invasive interventions when clinically appropriate. The proposed individualized framework integrates medical status, oral phenotype, treatment urgency, procedural safety and follow-up without assigning unsupported meaning to isolated immunological biomarkers. Its originality is methodological; it has not been tested as a clinical intervention. Prospective, diagnosis-stratified studies are needed to establish whether this approach improves oral outcomes and reduces avoidable complications among medically vulnerable children.

REFERENCES

1. American Academy of Pediatric Dentistry. Dental management of pediatric patients receiving immunosuppressive therapy and/or head and neck radiation. The Reference Manual of Pediatric Dentistry. 2026–2027:600–610. https://www.aapd.org/research/oral-health-policies--recommendations/dental-

Journal of Advances in Drug Research

ISSN: 2230-7761
www.jadr.co.in

Volume 17, Issue 05 | Received 31.10.2026 | Accepted 5.11.2026 | Online 10.11.2026

management-of-pediatric-patients-receiving-Immunosuppressive-therapy-andor-radiation-therapy/

2. American Academy of Pediatric Dentistry. Antibiotic prophylaxis for dental patients at risk for infection. The Reference Manual of Pediatric Dentistry. Revised 2026. https://www.aapd.org/research/oral-health-policies--recommendations/antibiotic-prophylaxis-for-dental-patients-at-risk-for-infection/
3. American Academy of Pediatric Dentistry. Caries-risk assessment and management for infants, children, and adolescents. The Reference Manual of Pediatric Dentistry. Revised 2022. https://www.aapd.org/research/oral-health-policies--recommendations/caries-risk-assessment-and-management-for-infants-children-and-adolescents/
4. American Academy of Pediatric Dentistry. Policy on minimally invasive dentistry. The Reference Manual of Pediatric Dentistry. Adopted 2023. https://www.aapd.org/research/oral-health-policies--recommendations/policy-on-minimally-invasive-dentistry/
5. American Academy of Pediatric Dentistry. Periodontal conditions in pediatric dental patients. The Reference Manual of Pediatric Dentistry. Revised 2024. https://www.aapd.org/research/oral-health-policies--recommendations/risk-assessment-and-management-of-periodontal-diseases-and-pathologies-in-pediatric-dental-patients/
6. American Academy of Pediatric Dentistry. Fluoride therapy. The Reference Manual of Pediatric Dentistry. Revised 2023. https://www.aapd.org/research/oral-health-policies--recommendations/fluoride-therapy/
7. Gingival and periodontal diseases and conditions in children and adolescents: consensus report. Eur Arch Paediatr Dent. 2026;27:637–670. doi:10.1007/s40368-025-01154-y.
8. Elad S, Cheng K-KF, Lalla RV, et al. MASCC/ISOO clinical practice guidelines for the management of mucositis secondary to cancer therapy. Cancer. 2020;126:4423–4431. doi:10.1002/cncr.33100.
9. Braguês R, Marvão MF, Correia P, Silva RM. Oral mucositis management in children under cancer treatment: a systematic review. Cancers. 2024;16:1548. doi:10.3390/cancers16081548.
10. Nurhidayah I, Nurhaeni N, Allenidekania, Gayatri D, Mediani HS. The effect of oral care intervention in mucositis management among pediatric cancer patients: an updated systematic review. J Multidiscip Healthc. 2024;17:3497–3515. doi:10.2147/JMDH.S467455.
11. MASCC/ISOO Oral Care Study Group. Dental evaluation and management prior to treatment for hematologic malignancies and CAR T-cell therapy: a clinical practice statement. Support Care Cancer. 2025;33:853. doi:10.1007/s00520-025-09845-4.
12. Torrecillas-Quiles L, Gómez-Ríos I, Jiménez-García I, et al. Oral and dental sequelae after oncological treatment in children: a systematic review. J Clin Med. 2025;14:5479. doi:10.3390/jcm14155479.

Journal of Advances in Drug Research

ISSN: 2230-7761
www.jadr.co.in

Volume 17, Issue 05 | Received 31.10.2026 | Accepted 5.11.2026 | Online 10.11.2026

13. Seremidi K, Gizani S, Dahllöf G, et al. Dental management of long-term childhood cancer survivors: a systematic review. Eur Arch Paediatr Dent. 2024;25:611–636. doi:10.1007/s40368-024-00896-5.

14. Al-Sayed AM, El-Tawil SB, Madney Y, Yousry YM. Oral manifestations of pediatric cancer patients receiving chemotherapy and dental awareness among their parents: a cross-sectional study. BMC Oral Health. 2026;26:633. doi:10.1186/s12903-026-07983-7.

15. Dental abnormalities in pediatric patients receiving chemotherapy. J Clin Med. 2024;13:2877. doi:10.3390/jcm13102877.

16. Panel on Opportunistic Infections in Children with and Exposed to HIV. Candida infections: pediatric opportunistic infections. Updated December 22, 2025. ClinicalInfo HIV.gov. https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-pediatric-opportunistic-infections/candida-infections (accessed 14 November 2026).

17. American Dental Association. Human Immunodeficiency Virus (HIV): oral manifestations and pediatric considerations. ADA Oral Health Topics. https://www.ada.org/resources/ada-library/oral-health-topics/hiv/ (accessed 14 November 2026).

18. Slayton RL, Urquhart O, Araujo MWB, et al. Evidence-based clinical practice guideline on nonrestorative treatments for carious lesions. J Am Dent Assoc. 2018;149:837–849.e19. doi:10.1016/j.adaj.2018.07.002.