UDC 616.314-007-74
DOI https://doi.org/10.32782/2786-7684/2026-2-7

Klitynska Oksana Vasylivna,
Doctor of Medical Sciences, Professor,
Professor at the Department of Postgraduate Dental Education,
Uzhhorod National University
ORCID ID: 0000-0001-9969-2833
SCOPUS ID: 57193120681
Uzhhorod, Ukraine

Rozuk Igor Anatoliyovych,
Postgraduate Student at the Department of Postgraduate Dental Education,
Uzhhorod National University
ORCID ID: 0009-0008-7254-3131
Uzhhorod, Ukraine

Gurando Vyacheslav Radomyrovych,
Candidate of Medical Sciences, Associate Professor,
Associate Professor at the Department of Medical and Biological Disciplines,
Uzhhorod National University
ORCID ID: 0000-0001-6303-3799
SCOPUS ID: 57193122263
Uzhhorod, Ukraine

ANALYTICAL COMPARISON OF OUTCOMES OF DIRECT AND INDIRECT RESTORATIONS OF ANTERIOR TEETH: A LITERATURE REVIEW

Introduction. The aim of this study was to compare the clinical outcomes of direct and indirect restorations in anterior teeth across three parameters: survival, color stability, and patient satisfaction.

Methods. The study was based on a comparative analysis of the scientific literature. The evidence base was formed through a systematic search of electronic databases, including PubMed, Scopus, and Web of Science, covering the period from 2021 to 2026. Publications were included if they met predefined inclusion criteria, specifically reporting quantitative clinical outcomes related to anterior tooth restorations and using one of the following study designs: randomized clinical trials, prospective or retrospective cohort studies, systematic reviews, or meta-analyses. **Results.** Indirect ceramic restorations demonstrate superior long-term survival compared with direct restorations; however, this advantage is clinically relevant primarily in cases with extensive hard-tissue loss and reduced enamel availability. In cases of minor defects, differences between the two approaches are negligible. The quality of the adhesive substrate, rather than the type of restorative technique, appears to be the key determinant of survival. The superiority of indirect ceramic restorations in terms of color stability represents the most consistently supported finding, as ceramics maintain their optical and surface properties over extended periods. In contrast, direct composite restorations are more prone to discoloration and surface degradation due to intrinsic material properties and polymerization conditions within the oral environment. Patient satisfaction tends to be higher with ceramic restorations; however, the evidence supporting this outcome remains methodologically limited. Notably, a discrepancy is frequently observed between clinician-based objective assessments and patient-reported subjective perceptions of treatment outcomes.

Conclusions. The choice between direct and indirect anterior restorations should be based on a combination of clinical factors, including defect size, residual enamel volume, occlusal conditions, and patient aesthetic expectations.

Key words: aesthetic dentistry, composite restorations, ceramic restorations, adhesive substrate, color stability, clinical survival, patient satisfaction.

Клітинська Оксана Василівна, доктор медичних наук, професор, професор кафедри стоматології післядипломної освіти, ДВНЗ «Ужгородський національний університет»; ORCID ID: 0000-0001-9969-2833, SCOPUS ID: 57193120681, м. Ужгород, Україна

Розюк Ігор Анатолійович, аспірант кафедри стоматології післядипломної освіти, ДВНЗ «Ужгородський національний університет»; ORCID ID: 0009-0008-7254-3131, м. Ужгород, Україна

Гурандо Вячеслав Радомирович, кандидат медичних наук, доцент, доцент кафедри медико-біологічних дисциплін, ДВНЗ «Ужгородський національний університет»; ORCID ID: 0000-0001-6303-3799, SCOPUS ID: 57193122263, м. Ужгород, Україна

АНАЛІТИЧНЕ ПОРІВНЯЛЬНЕ ЗІСТАВЛЕННЯ РЕЗУЛЬТАТІВ ПРЯМИХ ТА НЕПРЯМИХ РЕСТАВРАЦІЙ ФРОНТАЛЬНОЇ ГРУПИ ЗУБІВ. (ОГЛЯД ЛІТЕРАТУРИ)

Вступ. Мета дослідження – порівняти клінічні результати прямих і непрямих реставрацій фронтальної групи зубів за трьома параметрами: виживаністю, стабільністю кольору та задоволеністю пацієнтів.

Методи. Методологічну основу роботи становить порівняльний аналіз наукової літератури. Формування джерельної бази здійснювалося шляхом систематичного пошуку статей в електронних базах даних PubMed, Scopus і Web of Science у хронологічних межах 2021–2026 рр. До аналізу залучено публікації, що відповідали визначеним критеріям включення, а саме наявність кількісних показників клінічного результату стосовно реставрацій фронтальної групи зубів і відповідність дизайну одному з таких форматів: рандомізоване клінічне дослідження, проспективне або ретроспективне когортне дослідження, систематичний огляд чи мета-аналіз.

Результати. Непрямі керамічні реставрації перевершують прямі за довгостроковою виживаністю, однак ця перевага є клінічно значущою насамперед при великих дефектах і дефіциті емалі; при малих дефектах відмінності між методиками нівелюються. Визначальним предиктором виживаності виявляється якість адгезивного субстрату, а не тип реставрації. Перевага непрямих керамічних реставрацій за стабільністю кольору є найбільш документально підтвердженою, адже кераміка зберігає хроматичні та поверхневі характеристики протягом тривалого терміну експлуатації, тоді як для прямих композитних реставрацій зміна кольору та погіршення якості поверхні є прогнозованим процесом, зумовленим як властивостями матеріалу, так і умовами полімеризації у ротовому середовищі. Рівень задоволеності пацієнтів вищий при керамічних реставраціях, проте доказова база цього параметра є методологічно найслабшою. Зафіксовано суттєве розходження між оцінкою лікаря клінічно та суб'єктивною оцінкою пацієнта.

Висновки. Вибір між прямою та непрямою реставрацією фронтальної групи зубів має визначатися сукупністю клінічних чинників: обсягом дефекту, залишковим об'ємом емалі, оклюзійними умовами й естетичними очікуваннями пацієнта.

Ключові слова: естетична стоматологія, композитні реставрації, керамічні вініри, адгезивний субстрат, стабільність кольору, клінічна виживаність, задоволеність пацієнтів.

Introduction. Damage to the hard tissues of anterior teeth caused by caries, trauma, wear, or developmental defects represents a common clinical problem that requires restorative intervention addressing both aesthetic and functional demands. In each clinical case, the practicing dentist must choose between direct composite restoration and indirect ceramic restoration, and this decision directly influences longevity, color stability, and patient satisfaction. However, the evidence base supporting this choice remains fragmented, as randomized studies specifically comparing these techniques in anterior teeth under controlled clinical conditions are lacking [1].

The most extensively investigated aspect of this topic is the comparison of the long-term survival of direct and indirect anterior restorations based on clinical data. A key contribution in this field is the practice-based study by Mazzetti T. et al., which reports a ten-year follow-up period in private clinical practice. In their analysis of 1459 veneers, the authors demonstrated that composite (direct) restorations were associated with significantly higher annual failure rates compared with ceramic (indirect) restorations–up to 10% versus 2.8% after 10 years. Regression analysis further indicated that composite veneers had a significantly higher risk of failure, both in survival (HR = 4.00) and clinical success (HR = 5.16), suggesting a statistically significant long-term advantage of ceramic veneers [1]. However, this conclusion should be interpreted with caution, as the study included restorations with varying degrees of tooth preparation and heterogeneous clinical indications, which limits the validity of direct comparisons.

Another important area of research involves randomized comparisons of direct and indirect veneers for specific clinical indications, particularly for diastema closure. For instance, Elkaffas A. A. et al. conducted a randomized clinical trial comparing direct composite and indirect ceramic laminate veneers in the maxillary anterior region in 28 patients. Over a two-year follow-up period, all recorded failures (detachment and fracture) occurred exclusively in the indirect ceramic veneer group, while no statistically significant difference in survival rates was observed between the groups (93.4% for composite versus 95% for ceramic veneers; $p > 0.05$). These findings suggest a degree of clinical equivalence between the techniques, at least in the short term and for limited defects [2].

Studies evaluating indirect ceramic veneers while considering the vitality status of anterior teeth represent an important area of research. For example, Zarow M. et al. conducted a retrospective analysis of 154 veneers in 55 patients, stratifying the outcomes into vital (93 teeth) and devitalized (61 teeth) groups. The authors demonstrated that ceramic veneers are a more predictable treatment option than direct composite restorations. At the same time, they emphasized the lack of studies specifically comparing clinical outcomes of veneers in vital versus non-vital teeth. This highlights a significant gap in the literature and suggests limited systematization of research in this area [3].

Minimally invasive approaches to indirect restorations, particularly indirect composite laminate veneers, have emerged as a distinct research direction. In a seven-year prospective study, Kam Hepdeniz O. and Temel U.B. evaluated the survival of 80 non-preparation indirect composite veneers placed on maxillary anterior teeth. The authors reported that non-prep composite veneers demonstrate acceptable survival rates and restoration quality, and can be considered a predictable and effective approach that maximizes tooth structure preservation [4].

In contrast, the evidence base for partial ceramic veneers remains limited. A review by Durán Ojeda G. et al. reported that no randomized controlled clinical trials have been conducted in this subgroup to date. Although available laboratory data on mechanical and optical properties are promising, they remain insufficient to support robust clinical conclusions [5].

Systematic reviews encompassing a wide range of restoration types without a specific anatomical focus provide a general overview of the evidence base; however, their applicability to anterior teeth is limited. The study by Kimmel M. and Faggion C.M. Jr. analyzed 20 systematic reviews, totaling 513 original studies and a median of 623 patients per review. Notably, only two of the included reviews simultaneously evaluated restorations in both anterior and posterior single vital teeth. The remaining reviews focused primarily on posterior single vital or endodontically treated teeth and on specific clinical conditions (e.g., attrition, extensive defects).

This indicates that a substantial proportion of the available evidence is derived from clinical scenarios that differ significantly from the anterior region in terms of biomechanical conditions, aesthetic demands, and indications for treatment selection [6]. Therefore, while these reviews provide valuable insights, their conclusions regarding the choice of restoration type should not be directly extrapolated to anterior teeth without consideration of the specific biomechanical, adhesive, and aesthetic characteristics of incisors and canines.

Against this background, several key gaps in the current evidence base can be identified. First, there are no randomized clinical trials providing a direct, controlled comparison of direct and indirect restorations exclusively in anterior teeth under standardized conditions, including comparable defect size, homogeneous occlusal loading, and a follow-up period exceeding five years. Second, the long-term comparative dynamics of color stability between these two restoration types remain insufficiently investigated. Third, although isolated reports have addressed the impact of parafunctional activity on veneer fracture, comparative data on the performance of direct and indirect anterior restorations in patients with bruxism are largely lacking. This contrasts with the posterior region, where this topic has been studied more extensively. Fourth, the comparative effectiveness of adhesive protocols in direct restorations, particularly in relation to residual enamel volume in anterior teeth, has not been adequately explored. This factor is likely to be a critical determinant of clinical prognosis and warrants further investigation. Finally, patient satisfaction as an independent, measurable outcome in comparative studies of direct and indirect restorations in the anterior region remains insufficiently represented in the peer-reviewed literature.

Aim and objectives. The aim of this study was to perform a comparative clinical analysis of direct and indirect anterior restorations based on survival rates, color stability, and patient satisfaction. The following objectives were defined:1) to compare the clinical survival rates of direct composite and indirect ceramic restorations of anterior teeth; 2) to evaluate the color stability of direct and indirect anterior restorations; 3) to assess patient satisfaction with the aesthetic outcomes of direct and indirect anterior restorations.

Methodology and research methods. The study was based on a systematic approach to the analysis of scientific publications, ensuring a comprehensive and objective evaluation of the clinical outcomes of direct and indirect anterior restorations. The methodology followed the principles of evidence-based medicine, with conclusions derived from the critical appraisal of primary and secondary sources. The study was conducted as a narrative literature review with elements of comparative analysis.

The literature search was performed in the PubMed, Scopus, and Web of Science databases. The search strategy included the following keywords and their combinations: “anterior teeth restoration,” “direct composite veneer,” “indirect ceramic veneer,” “laminate veneer survival,” “color stability of veneers,” and “patient satisfaction with dental restorations.” The search was limited to publications from 2021 to 2026 to ensure the relevance of the data. One study published in 2018 [13] was additionally included due to its conceptual significance for the evidence base. Only articles published in English were considered.

Inclusion criteria for sources:

1) the study addressed restorations of anterior teeth or included anterior teeth as a distinct subgroup for analysis;

2) at least one of the predefined outcomes was reported: survival, color stability, or patient satisfaction;

3) the study design corresponded to one of the following: randomized clinical trial, prospective or retrospective cohort study, systematic review, meta-analysis, or prospective clinical case series with a defined follow-up period.

Exclusion criteria: Studies were excluded if they focused exclusively on posterior teeth, were laboratory-based (*in vitro*) without clinical data, lacked quantitative results, or represented narrative reviews without primary clinical data.

Research methods: The study employed a combination of bibliographic, comparative, and analytical methods. The bibliographic method was used to identify, compile, and systematize relevant scientific sources. Comparative analysis enabled the evaluation of clinical outcomes of direct and indirect restorations based on three key parameters: survival, color stability, and patient satisfaction. Critical appraisal was performed to assess the methodological quality of the included studies, with particular attention to study design, follow-up duration, sample homogeneity, and outcome measurement methods. Data synthesis was applied to derive generalized

conclusions from the aggregated evidence. A quantitative meta-analysis was not performed due to the heterogeneity of the included studies in terms of design, materials, and clinical conditions. The clinical interpretation of the findings was conducted with consideration of the biomechanical, adhesive, and aesthetic characteristics of anterior teeth.

To structure the analysis, three analytical domains were defined: survival, color stability, and patient satisfaction. Within each domain, the data were systematized and subsequently synthesized into generalized conclusions, taking into account the clinical context.

Presentation of the main material. A comparative analysis of empirical data from publications published between 2021 and 2026 demonstrates significant differences in the clinical survival rates of direct and indirect anterior restorations. However, clinical outcomes appear to be influenced by a broader set of factors than is typically emphasized in the literature.

The study by Alqutaibi A.Y. et al. demonstrated that ceramic veneers bonded exclusively to enamel exhibit near-perfect survival rates of approximately 99% (range 98–100%). In contrast, veneers bonded to substrates with minimal dentin exposure or composite resin showed lower survival rates (94–95%), while those with substantial dentin exposure demonstrated a further reduction to approximately 91% [7]. These findings indicate that the survival of indirect restorations is determined less by the restorative technique itself and more by the quality of the bonding substrate. From a clinical perspective, reduced enamel availability is associated with decreased predictability of outcomes.

Patel K. et al. reported comparable but not identical findings in a 12-month comparative study of direct composite veneers, indirect composite veneers, and ceramic laminate veneers in anterior teeth. The fracture rate in the direct restoration group was 36.7% (11/30 cases), compared with three cases in the indirect composite group and one case in the ceramic veneer group, with a statistically significant difference ($p = 0.02$) [8]. These data support the hypothesis of greater mechanical vulnerability of direct restorations; however, the relatively short follow-up period limits the strength of long-term conclusions. Postoperative sensitivity was observed exclusively in the direct restoration group, whereas no such cases were reported in the indirect groups, which may be related to differences in polymerization stress and marginal adaptation.

A retrospective study by Etienne O. et al., including 672 veneers in 189 patients with a follow-up period of 1 to 15 years, further confirmed the critical role of enamel preservation. When restorations were bonded to a fully enamel substrate, the survival rate was approximately 96.7%, whereas it decreased to around 93.9% when dentin involvement exceeded 30%. The corresponding success rate in the enamel group reached approximately 99.3% [9]. This gradient is clinically relevant and has direct implications for treatment planning. In cases involving substantial loss of hard tooth tissue, direct restorations appear to demonstrate lower predictability compared with indirect approaches.

Thus, the findings from studies [7–9] converge on a key conclusion: indirect ceramic restorations demonstrate higher survival rates than direct restorations; however, this advantage is clinically significant primarily in cases involving extensive defects and reduced enamel volume. In cases of minor defects, the difference between the two approaches is minimal.

Color stability represents one of the most clinically perceptible outcomes for patients, and it is in this domain that the difference between direct and indirect anterior restorations is most consistently documented.

In an evaluation of the color stability of 3D-printed and prefabricated indirect veneers, Daghrery A. reported that long-term color stability is a critical determinant of the clinical longevity of aesthetic restorations. Ceramic veneers consistently outperform composite counterparts in this regard during extended follow-up periods. Notably, even within indirect restorations, significant differences were observed, as 3D-printed veneers exhibited greater color change than conventional ceramic veneers after artificial aging under various environmental conditions [10].

Patel K. et al. provided additional insight under clinical conditions. At the end of a 12-month follow-up period, marginal discoloration in the direct veneer group was recorded as 13 cases of slight discoloration, 10 of moderate discoloration, and 5 of severe discoloration. In contrast, only 5 and 3 cases of discoloration were observed in the indirect composite veneer group, respectively, indicating a statistically and clinically significant difference [8]. This finding may be explained by two interrelated mechanisms: greater surface porosity of direct restorations and suboptimal marginal adaptation, both of which facilitate microleakage and pigment penetration.

Alghazzawi T.F. demonstrated that the long-term color stability of ceramic veneers can be maintained for up to 10 years of clinical use, whereas composite restorations are characterized by a gradual loss of surface gloss and changes in optical properties within the first three to five years. The superior color stability of indirect ceramic restorations is attributed not only to intrinsic material properties but also to controlled polymerization outside the oral environment and the higher surface quality achieved under laboratory conditions [11]. These factors suggest that the advantage of the indirect approach is structural rather than incidental.

Patient satisfaction, as an independent measurable outcome, remains the least systematically investigated of the three parameters analyzed. For example, Freitas B.N. et al. evaluated patient satisfaction with direct anterior restorations in comparison with clinician-based assessments using FDI (Fédération Dentaire Internationale) criteria. A total of 106 restorations were assessed by both patients and two clinicians. The results demonstrated that patients were more critical in evaluating aesthetic parameters than clinicians, with statistically significant discrepancies between subjective and objective assessments ($p \leq 0.05$). Patients rated 52.8% of restorations as satisfactory and 47.8% as unsatisfactory, whereas clinicians classified 82.3% as

satisfactory and only 17.6% as unsatisfactory [12]. These findings are important for understanding the concept of clinical success, as restorations that meet objective clinical criteria may not necessarily satisfy patient expectations. Additionally, the study by Alothman Y. and Bamasoud M.S. reported significant differences in patient satisfaction depending on the type of restoration: 93% for ceramic veneers, 82% for indirect composite restorations, and 67% for direct composite restorations [13]. These results are consistent with the general trend toward higher clinical and aesthetic predictability of indirect restorations, particularly ceramic ones, which may contribute to reducing the discrepancy between patient-reported and clinician-reported outcomes.

In the revised FDI criteria for evaluating direct and indirect restorations, Hickel R. et al. noted that patient satisfaction is a subjective parameter that is increasingly recognized as important in practice-oriented studies and is typically recorded using visual analog scales. However, in cases of dissatisfaction, a more detailed recording of complaints related to pain, sensitivity, occlusal comfort, color, and restoration contours is recommended [14].

In most of the clinical studies included in this review, patient satisfaction was either not assessed or was recorded using non-standardized methods. This gap should be regarded not as a methodological limitation of individual studies, but as a systemic issue in the design of clinical trials in aesthetic dentistry.

The summarized findings addressing the three research objectives indicate the following. Indirect restorations of anterior teeth, primarily ceramic ones, demonstrate superior performance compared with direct restorations in terms of survival in large defects, medium- and long-term color stability, and, likely, patient-reported aesthetic perception, although the latter requires further investigation using standardized assessment tools. Direct restorations retain advantages in cases of small defects, limited financial resources, and the need to minimize tooth preparation. This clinical differentiation is justified; therefore, the choice between techniques should be based on a comprehensive assessment of clinical conditions rather than on generalized recommendations.

Conclusions. Based on a critical synthesis of the current literature comparing direct and indirect restorations of anterior teeth, a differentiated advantage of indirect, primarily ceramic, restorations has been identified; however, this advantage is context-dependent rather than absolute.

Indirect ceramic restorations of anterior teeth demonstrate higher long-term survival rates compared with direct composite restorations. This advantage is clinically relevant primarily in cases of extensive hard tissue loss and reduced enamel availability. In cases of limited defects and an adequate enamel substrate, differences between the techniques decrease to clinically marginal levels. The key determinant of restoration survival is not the restorative technique per se, but the quality of the adhesive substrate.

The superiority of indirect ceramic restorations in terms of color stability represents the most consistently supported finding among the analyzed parameters.

A tendency toward higher patient satisfaction with indirect restorations, particularly ceramic ones, has been observed; however, the evidence base for this parameter remains methodologically the weakest. A systemic issue was identified: patient satisfaction is either not assessed in clinical studies or measured with non-standardized instruments, limiting meaningful inter-study comparisons. Furthermore, a relevant phenomenon–the discrepancy between clinician-based and patient-reported evaluations of restorations–has been confirmed, raising questions about the adequacy of purely clinical criteria for defining success in aesthetic dentistry.

Overall, the choice between direct and indirect restoration of anterior teeth cannot be standardized. Clinical decision-making should be guided by a combination of factors, including defect size, residual enamel volume, occlusal conditions, patient requirements regarding long-term color stability, and subjective aesthetic expectations. The available evidence supports the superiority of indirect ceramic restorations for most evaluated parameters (survival, color stability, and patient satisfaction) in the medium- and long-term perspective; however, it does not justify abandoning direct restorative approaches in cases of small defects and a predominantly enamel-based substrate.

A promising direction for future research is the conduct of randomized clinical trials with follow-up periods exceeding 5 years, standardized outcome measures for survival and color stability, and the mandatory use of validated instruments to assess patient satisfaction.

REFERENCES

1. Mazzetti T, Collares K, Rodolfo B, da Rosa Rodolpho PA, van de Sande FH, Cenci MS. 10-year practice-based evaluation of ceramic and direct composite veneers. Dent Mater. 2022;38(5):898-906. doi: https://doi.org/10.1016/j.dental.2022.03.007
2. Elkaffas AA, Alshehri A, Alqahtani AR, Abuelqomsan MA, Deeban YAM, Albaijan RS, et al. Randomized clinical trial on direct composite and indirect ceramic laminate veneers in multiple diastema closure cases: Two-year follow-up. Materials (Basel). 2024;17(14):3514. doi: https://doi.org/10.3390/ma17143514
3. Zarow M, Hardan L, Szczeklik K, Bourgi R, Cuevas-Suárez CE, Jakubowicz N, et al. Porcelain veneers in vital vs. non-vital teeth: A retrospective clinical evaluation. Bioengineering (Basel). 2023;10(2):168. doi: https://doi.org/10.3390/bioengineering10020168
4. Kam Hepdeniz O, Temel UB. Clinical survival of No-prep indirect composite laminate veneers: A 7-year prospective case series study. BMC Oral Health. 2023;23(1):257. doi: https://doi.org/10.1186/s12903-023-02949-5
5. Durán Ojeda G, Bresser RA, Wendler M, Gresnigt MMM. Ceramic partial laminate veneers in anterior teeth: A literature review. J Prosthodont Res. 2024;68(2):246-54. doi: https://doi.org/10.2186/jpr.JPR_D_23_00090
6. Kimmel M, Faggion CM Jr. Systematic reviews comparing direct and indirect restorations: An umbrella review that examines restoration type and confidence in results. Clin Exp Dent Res. 2025;11:e70149. doi: https://doi.org/10.1002/cre2.70149

7. Alqutaibi AY, Saker S, Alghauli MA, Algabri RS, AbdElaziz MH. Clinical survival and complication rate of ceramic veneers bonded to different substrates: A systematic review and meta-analysis. J Prosthet Dent. 2025;134(4):1030-9. doi: https://doi.org/10.1016/j.prosdent.2024.03.019

8. Patel K, Asthana G, Parmar A, Tamuli R, Manglani S, Dhanak N. Clinical assessment of direct composite veneer and indirect veneers using a minimally invasive preparation technique. J Conserv Dent Endod. 2025;28(10):965-71. doi: https://doi.org/10.4103/JCDE.JCDE_279_25

9. Etienne O, Wang CJ, Bourgi R, Watzki D, Roman T. Survival of ceramic veneers: Impact of dentin exposure and tooth vitality after 1 to 15 years of follow-up. J Esthet Restor Dent. 2025;37(12):2519-32. doi: https://doi.org/10.1111/jerd.70016

10. Daghrery A. Color stability, gloss retention, and surface roughness of 3D-printed versus indirect prefabricated veneers. J Funct Biomater. 2023;14(10):492. doi: https://doi.org/10.3390/jfb14100492

11. Alghazzawi TF. Clinical survival rate and laboratory failure of dental veneers: A narrative literature review. J Funct Biomater. 2024;15(5):131. doi: https://doi.org/10.3390/jfb15050131

12. Freitas BN, Silva POD, Pintado-Palomino K, Almeida CVVB, Souza-Gabriel AE, Corona SAM, et al. Patients´ satisfaction concerning direct anterior dental restoration. Braz Dent J. 2023;34(3):82-93. doi: https://doi.org/10.1590/0103-6440202305260

13. Alothman Y, Bamasoud MS. The success of dental veneers according to preparation design and material type. Open Access Maced J Med Sci. 2018;6(12):2402-8. doi: https://doi.org/10.3889/oamjms.2018.353

14. Hickel R, Mesinger S, Opdam N, Loomans B, Frankenberger R, Cadenaro M, et al. Revised FDI criteria for evaluating direct and indirect dental restorations-recommendations for its clinical use, interpretation, and reporting. Clin Oral Investig. 2023;27(6):2573-92. doi: https://doi.org/10.1007/s00784-022-04814-1

Дата першого надходження статті до видання: 14.04.2026
Дата прийняття статті до друку після рецензування: 11.05.2026
Дата публікації (оприлюднення) статті: 30.05.2026