Guideline

DOI: 10.4274/anajog.galenos.2026.30306

Anat J Obstet Gynecol Res 2026;3(2):62-78

National Consensus Statement on Aesthetic Vaginoplasty A Modified Delphi Study by the Pelvic Floor and Cosmetic Gynecology Association (PETKOZ) of Turkey

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ABSTRACT

Purpose: Aesthetic vaginoplasty, defined as surgical vaginal tightening performed for cosmetic, sexual, and/or functional reasons without a primary medical indication, has become increasingly common in gynecological practice. Despite growing demand, no validated clinical guidelines exist to govern patient selection, surgical technique, perioperative management, or outcome assessment for these procedures. The Pelvic Floor and Cosmetic Gynecology (PETKOZ) Association of Turkey initiated this project to develop the first, expert-based consensus statement on aesthetic vaginoplasty.

Methods: A modified Delphi methodology was used across three successive rounds, with a 100% response rate in each round. Twenty-six nationally recognized experts in gynecology, urogynecology, pelvic floor surgery, and related disciplines participated. A steering committee developed an initial statement pool across 14 clinical domains: contraindications; preoperative assessment; indications; surgical principles and goals; technical selection; intraoperative management; revision surgery; complications; perioperative management; postoperative care; outcomes; guidelines and future directions; advanced technical topics; and ethics and psychosexual evaluation. Consensus was defined as ≥70% agreement. All rounds were conducted anonymously via Google Forms.

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Received: 20.05.2026 **Accepted:** 21.06.2026 **Publication Date:** 02.09.2026

Cite this article as: Doğan O, Yassa M, Ellibeş Kaya A, et al. National consensus statement on aesthetic vaginoplasty a modified delphi study by the Pelvic Floor and Cosmetic Gynecology Association (PETKOZ) of Turkey. Anat J Obstet Gynecol Res. 2026;3(2):62-78

ABSTRACT

Results: A total of 211 statements were evaluated across 14 domains. Consensus was reached on 198 statements (93.8%); 13 statements (6.2%) across six domains did not meet the threshold. Agreement rates ranged from 70% to 100%, with majority of statements reaching 88% or above. Strong consensus was obtained on comprehensive preoperative assessment, individualized technique selection, the importance of functional alongside aesthetic outcomes, standardized perioperative protocols, and the need for formal training programs. Statements that did not reach consensus included whether subjective vaginal laxity alone is a sufficient surgical indication, the role of partner expectations in decision-making, the use of local anesthesia, and suitability of same-day discharge.

Conclusion: This consensus statement, developed by PETKOZ through structured expert consultation, provides a practical guidance framework for the safe implementation of aesthetic vaginoplasty in clinical practice. Given the limitations of the current evidence base, this document is intended as a reference for clinicians until data from well-designed prospective studies become available.

Keywords: Vaginoplasty, vaginal tightening surgery, vaginal rejuvenation, perineoplasty, cosmetic gynecology, vaginal laxity, national guideline, pelvic floor, sexual function

INTRODUCTION

Aesthetic vaginoplasty is a surgical procedure aimed at tightening the vaginal canal and reconstructing the perineal body, most commonly performed in women reporting vaginal laxity following vaginal delivery, ageing, or menopause.[1,2] The procedure is decribed under various names in the literature, including vaginoplasty, perineoplasty, colpoperineoplasty, and vaginal recalibration, but all share the common goal of reducing vaginal diameter and restoring introital support.[3,4]

Demand for these procedures has increased considerably in recent years. In 2021, over 3,000 vaginoplasties were reported by plastic and cosmetic surgeons in the United States alone, representing a 374% increase from the previous year, and this figure does not include procedures performed by obstetricians and gynecologists.[5] Women sought vaginal tightening primarily to increase vaginal friction during intercourse, improve genital self-image, and address orgasmic concerns.[6,7] Despite growing patient demand and increasing surgical volume, the evidence base for aesthetic vaginoplasty remains limited, with available studies showing considerable variability in surgical techniques, outcome measures, and follow-up duration that prevents definitive conclusions on efficacy and safety.[8]

Currently, no country has established nationally endorsed clinical guidelines to govern patient selection, surgical indications, preoperative evaluation, intraoperative principles, or postoperative management for aesthetic vaginoplasty. This absence of structured guidance leaves clinicians without a common reference standard in a field where medicolegal, ethical, and functional considerations are substantial.

The objective of this study was to report an expert-based consensus statement developed by Pelvic Floor and Cosmetic Gynecology (PETKOZ) Association to help guide the adoption of aesthetic vaginoplasty into clinical practice with respect to 14 key domains. Until further high-level evidence becomes available, this statement is intended to provide appropriate guidance for the safe and standardized implementation of aesthetic vaginoplasty in Turkey, drawing on the collective experience of nationally recognized experts in this field.

METHODS

Purpose and Scope

This consensus statement was prepared to provide expert-based practical guidance for clinicians involved in the care of women presenting with vaginal laxity. The document covers patient assessment, selection criteria, surgical management, perioperative care, and outcome evaluation for aesthetic vaginoplasty, and was developed by the PETKOZ through a structured modified Delphi process. It is intended for use by gynecologists, urogynecologists, pelvic floor surgeons, cosmetic gynecologists, and other healthcare professionals who participate in the perioperative management of these patients.

The scope of this document is limited to elective aesthetic vaginoplasty performed for cosmetic, sexual, or functional reasons in women without a primary medical indication. Patient selection, preoperative evaluation, technique selection, intraoperative principles, perioperative management, complication prevention, and outcome assessment are all addressed. Procedures carried out for pelvic organ prolapse, stress urinary incontinence, or other urogynecological conditions with existing evidence-based guidelines are not within scope, nor are procedures for congenital anomalies, obstetric or traumatic injury, malignancy, or gender affirmation. Sexual dysfunction reported without demonstrable vaginal laxity does not constitute a standalone surgical indication; when sexual dysfunction accompanies laxity as a contributing complaint, psychosexual evaluation is required before any surgical decision is made.

Population and Setting

The recommendations apply to adult women aged 18 years or older with objectively or subjectively demonstrable vaginal laxity. Four clinical presentations are within scope. The first is postpartum vaginal laxity following obstetric trauma, perineal body injury, or loss of introital support after vaginal delivery. The second is laxity associated with menopausal changes, where estrogen deficiency leads to progressive loss of vaginal wall tone and tissue quality. The third presentation considered was functional laxity without concurrent pelvic organ prolapse, in

which women report reduced vaginal friction, altered sensation, or impaired sexual function that is attributed to laxity rather than a structural support defect. The fourth encompasses situations where aesthetic or psychosocial concerns are the principal reason for seeking surgery, in the absence of a primary gynecological or urogynecological indication. The guidance is relevant to outpatient clinic, ambulatory surgical, and hospital-based settings.

Background

Despite growing procedural volume, the evidence base for aesthetic vaginoplasty remains sparse. The most recent systematic review on the topic identified only 11 eligible studies with a combined 806 patients published between 2006 and 2024, and the available data showed considerable variability in surgical techniques, patient selection criteria, outcome measures, and follow-up duration, making it impossible to draw definitive conclusions on efficacy or safety.[8] Randomized controlled trial data are largely absent, and most published evidence comes from retrospective or prospective uncontrolled case series that are inherently susceptible to selection bias.

Alongside the scarcity of evidence, the field lacks any universally accepted procedural classification, standardized technical terminology, or shared decision-making framework. Procedures performed under the broad label of "aesthetic vaginoplasty" include perineoplasty, posterior colporrhaphy-based repairs, levator ani-plication, mucosal excision techniques, energy-based adjunctive modalities, and hybrid reconstructive combinations, yet these are routinely reported under inconsistent or interchangeable nomenclature.[3,4] No internationally endorsed guideline or clinical algorithm exists to guide patient selection, technique choice, perioperative management, or outcome assessment. As a result, practice is largely shaped by individual training and personal experience, and considerable variation persists in surgical approach, patient selection criteria, perioperative protocols, and the instruments used to measure outcomes.

It was this combination of limited evidence and fragmented practice that motivated PETKOZ to undertake the present project. The aim was to bring together a group of nationally recognized specialists and, through a structured Delphi process, identify where expert opinion converges, establish a shared reference framework for clinical decision-making, and produce recommendations that practitioners can rely on until prospective comparative data become available. This statement is not intended as a substitute for high-quality evidence, which all participants recognized as the field's most pressing need. Rather, it represents a first step toward a common clinical language and a shared set of principles from which future research, outcome registries, and evidence-based guidelines can develop.

Nomenclature

Several terms have been used interchangeably in both the scientific literature and clinical practice to describe surgical procedures for vaginal laxity, including "aesthetic vaginoplasty," "vaginal tightening surgery," and "vaginal rejuvenation." These terms are not conceptually or procedurally equivalent, and their interchangeable use has contributed to heterogeneity in patient selection criteria, outcome reporting, and evidence synthesis. In accordance with terminology frameworks endorsed by the International Urogynecological Association (IUGA), the International Continence Society, and the American College of Obstetricians and Gynecologists (ACOG), this manuscript adopts the term "aesthetic vaginoplasty" as the preferred nomenclature. This term encompasses the surgical correction of vaginal laxity for cosmetic, sexual, and/or functional reasons in the absence of a primary medical indication and reflects the procedural and functional dimensions of the surgery more precisely than the commercially derived term "vaginal rejuvenation," which lacks a standardized clinical definition and has been identified by ACOG as a non-specific and potentially misleading descriptor.[7] The term "vaginal tightening surgery" is used in this manuscript as a neutral descriptive synonym where appropriate.

Delphi Survey Design

This consensus statement was developed using a modified Delphi methodology incorporating three successive rounds.[9,10] The study adhered to the Guidance on Conducting and Reporting Delphi Studies reporting guidelines.[11] All three rounds were completed by all 26 participating panelists, giving a response rate of 100% in each round. Anonymity was maintained throughout the entire process: each participant received a unique, individually addressed survey link for every round, responses were submitted directly to a secure platform, and individual response data were not accessible to other panel members or to the steering committee until aggregate compilation was complete. Given the absence of universally accepted objective measurement systems for vaginal laxity, expert consensus methodology was considered particularly appropriate for this field, where clinical decision-making continues to rely substantially on accumulated specialist experience in the absence of high-quality comparative evidence. Ethics approval was not required for this study, as it did not involve the collection of patient data or direct clinical intervention with human subjects. Participation was voluntary, responses remained anonymous throughout all rounds, and all procedures complied with institutional ethical standards. Survey distribution and anonymous data storage were managed via Google Forms (Google LLC, Mountain View, CA, USA).

Questionnaire Development

A steering committee comprising senior members of PETKOZ with expertise in pelvic floor surgery, vaginal reconstructive surgery, and cosmetic gynecology was responsible for the conceptual development and overall direction of the project. To inform statement development, a structured literature search was conducted in PubMed/MEDLINE, EMBASE, and the Cochrane Central Register of Controlled Trials, with no restriction on publication start date and a search cutoff of May 2026. The following search terms were applied individually and in Boolean combination:"vaginoplasty," "vagina surgery," "vaginal laxity," "vaginal tightening," "vaginal rejuvenation,"

"vaginal relaxation," "vaginal recalibration," "perineoplasty," "perineum surgery," "colpoperineoplasty," "colporrhaphy," "cosmetic surgery," "gynecologic surgical procedures," "female genital cosmetic surgery," "sexual dysfunction," "sexual function," "dyspareunia," "pelvic floor surgery," "pelvic organ prolapse surgery," "urinary incontinence stress surgery," "reconstructive surgical procedures," "patient satisfaction," and "quality of life". Eligible publications included original research articles, systematic reviews, meta-analyses, and clinical practice guidelines published in English. Case reports, letters, editorials, conference abstracts, and non-peer-reviewed sources were excluded. Reference lists of all identified articles and relevant society position statements were hand-searched to capture additional studies not retrieved by the electronic search. The committee reviewed the retrieved evidence with a focus on patient selection, surgical technique, perioperative management, clinical outcomes, and safety. In view of the limited and heterogeneous nature of the available evidence, supplementary guidance was sought from position statements and committee opinions issued by major international organisations, including the ACOG, the Royal College of Obstetricians and Gynaecologists (RCOG), the American Urogynecologic Society (AUGS), and the IUGA. Based on this synthesis and on the collective clinical experience of the steering committee, an initial pool of candidate statements was developed and organized across 14 clinical domains: (1) contraindications; (2) preoperative assessment; (3) indications; (4) surgical principles and goals; (5) technical selection; (6) intraoperative management; (7) revision surgery; (8) complications; (9) perioperative management; (10) postoperative care; (11) clinical outcomes; (12) guidelines and future directions; (13) advanced technical and clinical topics; and (14) ethics and psychosexual evaluation. The ethics and psychosexual evaluation domain was developed as a supplementary module following completion of the initial 13-domain statement pool. Given the smaller number of candidate statements in this domain, it was administered to a subset of 19 panelists who indicated specific expertise in psychosexual medicine or female genital cosmetic surgery ethics. Participants rated their agreement with each statement on a 5-point Likert scale (strongly disagree, disagree, neutral, agree, strongly agree).

Expert Panel

Nationally recognized experts in gynecology, urogynecology, pelvic floor surgery, and related disciplines with documented clinical experience in vaginal reconstructive and/or aesthetic pelvic procedures were invited via email to participate. All experts provided informed consent. A total of 26 experts agreed to participate and completed all three rounds of the survey, giving a retention rate of 100%. Panel demographic characteristics are summarized in Table 1.

Modified Delphi Process and Consensus Development

The modified Delphi process is illustrated in Figure 1. Each participant received a unique anonymous survey link by email for every round. All 26 panelists completed all three rounds, with a response rate of 100% per round and no missing data.

Table 1. Demographic characteristics of the expert panel (n=26)

Variable	n	%
Age group		
30-39 years	4	15.4
40-49 years	14	53.8
50-59 years	3	11.5
≥60 years	5	19.2
Sex		
Male	16	61.5
Female	10	38.5
Academic title		
Specialist	9	34.6
Assistant professor	1	3.8
Associate professor	6	23.1
Professor	10	38.5
Primary clinical specialty		
General gynecology	9	34.6
Cosmetic gynecology	9	34.6
Urogynecology	5	19.2
Pelvic reconstructive surgery	2	7.7
Other	1	3.8
Additional subspecialty training[a]		
Aesthetic/cosmetic surgery	24	92.3
Laser and energy-based devices	15	57.7
Psychosexual medicine	5	19.2
Pelvic floor physiotherapy	2	7.7
None	2	7.7
Disciplines in clinical practice[a]		
Gynecology	26	100.0
Urogynecology	24	92.3
Pelvic floor surgery	21	80.8
Aesthetic and plastic surgery	15	57.7
Psychosexual medicine	7	26.9
Pelvic floor physiotherapy	5	19.2
Other	3	11.5
Total years of surgical experience		
5-10 years	5	19.2
11-20 years	10	38.5
>20 years	11	42.3
Annual vaginoplasty/perineoplasty volume		
10-25 procedures/year	6	23.1
26-50 procedures/year	10	38.5
>50 procedures/year	10	38.5
Institution type		
Private clinic or hospital	22	84.6
University hospital	3	11.5
Public hospital	1	3.8

Table 1. Continued		
Variable	**n**	**%**
Geographic region (Turkey)		
Marmara	15	57.7
Aegean	6	23.1
Black Sea	2	7.7
Central Anatolia	2	7.7
Southeastern Anatolia	1	3.8
Country of surgical training		
Turkey	26	100.0
SCI-indexed publications (pelvic surgery)		
0-5	12	46.2
6-15	7	26.9
16-30	4	15.4
>30	3	11.5
Prior Delphi/consensus study participation		
Yes	10	38.5
No	16	61.5
PETKOZ membership duration		
<2 years	1	3.8
2-5 years	14	53.8
6-10 years	5	19.2
Not a member	6	23.1

[a]Multiple responses permitted; percentages exceed 100%
PETKOZ: Pelvic Floor and Cosmetic Gynecology Association

Aggregate results from rounds 1 and 2 were compiled by the steering committee and circulated to all panelists as feedback before the subsequent round, enabling experts to reconsider their responses in light of group opinion. Between rounds, statements that remained below the consensus threshold were reviewed by the steering committee: wording was revised where panel comments indicated that ambiguity or lack of clarity had contributed to disagreement, while statements reflecting genuine substantive controversy were retained unmodified and resubmitted to the panel with a summary of the preceding round's distribution of responses. Response stability between consecutive rounds was monitored by comparing the proportion of panelists endorsing each statement across rounds; statements showing substantial shifts in agreement rates prompted targeted discussion at the virtual consensus meeting. Agreement scores for each statement were summarized using median Likert scores and the interquartile range (IQR), with the IQR serving as a measure of response dispersion and convergence across rounds. Prior to round 3, a virtual consensus meeting was held to allow structured discussion of statements that had not yet reached the predefined threshold. The meeting was moderated by a member of the steering committee who had not contributed to statement development, to preserve neutrality. Each borderline statement was presented with its round 2 aggregate response distribution, and panelists were invited to articulate their reasoning before revoting anonymously. Statements were revised in wording if the discussion identified specific language as the source of disagreement; statements where disagreement reflected divergent clinical opinion rather than interpretive ambiguity were retained unchanged and subjected to a final anonymous vote. Following this meeting, round 3 was administered anonymously. No sensitivity analyses were performed, as the 100% response rate across all rounds precluded missing-data scenarios that would have required such procedures. The final manuscript was drafted by the core group and reviewed and approved by all participating experts.

Consensus was defined as ≥70% agreement of the experts, corresponding to a response of agree or strongly agree on the 5-point Likert scale. A threshold of ≥70% was selected in accordance with previously published Delphi-based consensus methodologies in clinical guideline development,[9,10] reflecting a balance between the requirement for meaningful expert convergence and the recognition that absolute unanimity is rarely achievable in fields where evidence is limited and practice variation is substantial. To facilitate interpretation of agreement levels across domains, consensus strength was categorized as follows: very strong consensus for agreement rates above 95%, strong consensus for rates of 85 to 95%, and moderate consensus for rates of 70 to 85%. Statements achieving consensus were finalized and not reconsidered in subsequent rounds. Statements failing to reach the threshold after round 3 are reported separately.

RESULTS

Delphi Survey Rounds

Twenty-six experts completed all three rounds of the modified Delphi process, with a retention rate of 100%. A total of 211 statements were evaluated across 14 clinical domains. Of these, 198 statements (93.8%) reached the predefined consensus threshold of 70% or above (Supplementary Table 1). Thirteen statements (6.2%) did not reach consensus and are presented in Supplementary Table 2. Agreement rates for statements that achieved consensus ranged from 70.0% to 100%, with the majority reaching 88% or above. For interpretive purposes, consensus strength was categorized as very strong (agreement above 95%), strong (85 to 95%), or moderate (70 to 85%), as defined in the Methods section. Domain-level agreement statistics are summarized in Supplementary Table 3. Domain-level Likert response statistics and Kendall's coefficient of concordance are reported in Supplementary Table 4. Domain-level consensus rates are illustrated in Figure 2.

Consensus Outcomes

Across multiple domains, the panel consistently prioritized preservation of vaginal function, neurovascular integrity, tissue quality, and psychosexual wellbeing over excessive narrowing or purely cosmetic goals. This recurrent theme represents one of the strongest conceptual messages of the consensus and is described in the domain-specific findings below.

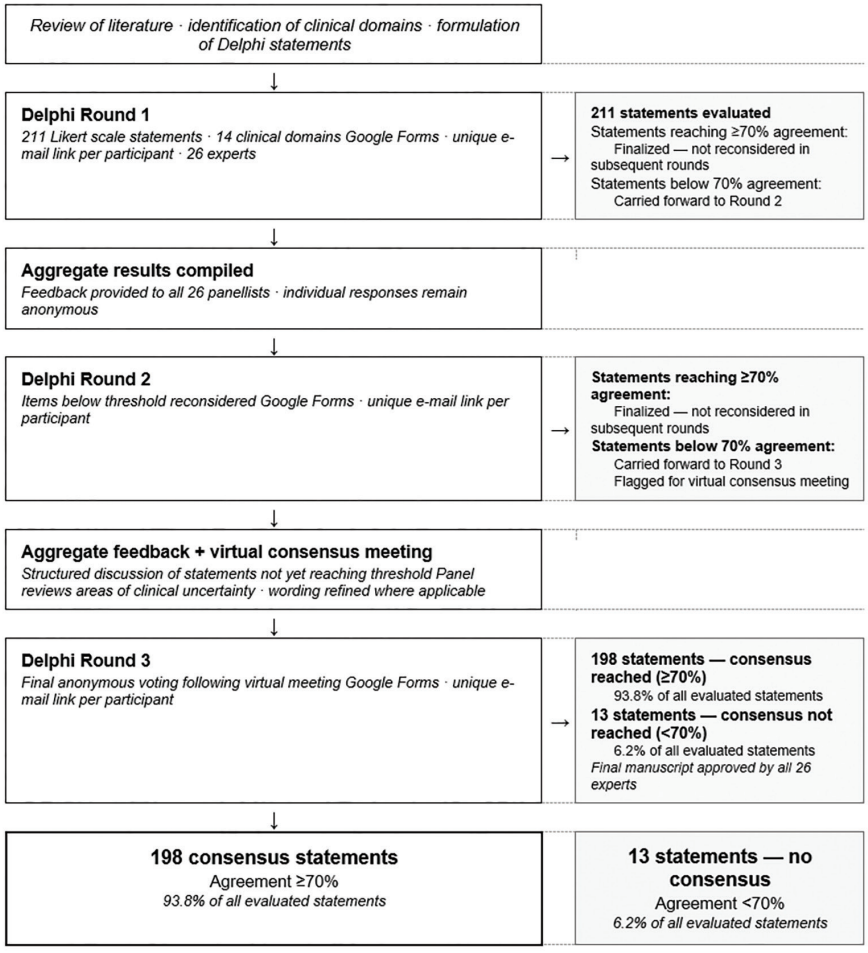

Figure 1. Modified Delphi consensus process for the development of the PETKOZ consensus statement on aesthetic vaginoplasty. A total of 211 statements across 14 clinical domains were evaluated over three successive rounds by 26 nationally recognized experts. Statements achieving the predefined threshold of ≥70% agreement at each round were finalized and not re-evaluated in subsequent rounds. A virtual consensus meeting was held prior to round 3 to allow structured discussion of statements that had not yet reached the threshold. The final manuscript was drafted by the core group and approved by all participating experts

PETKOZ: Pelvic Floor and Cosmetic Gynecology Association

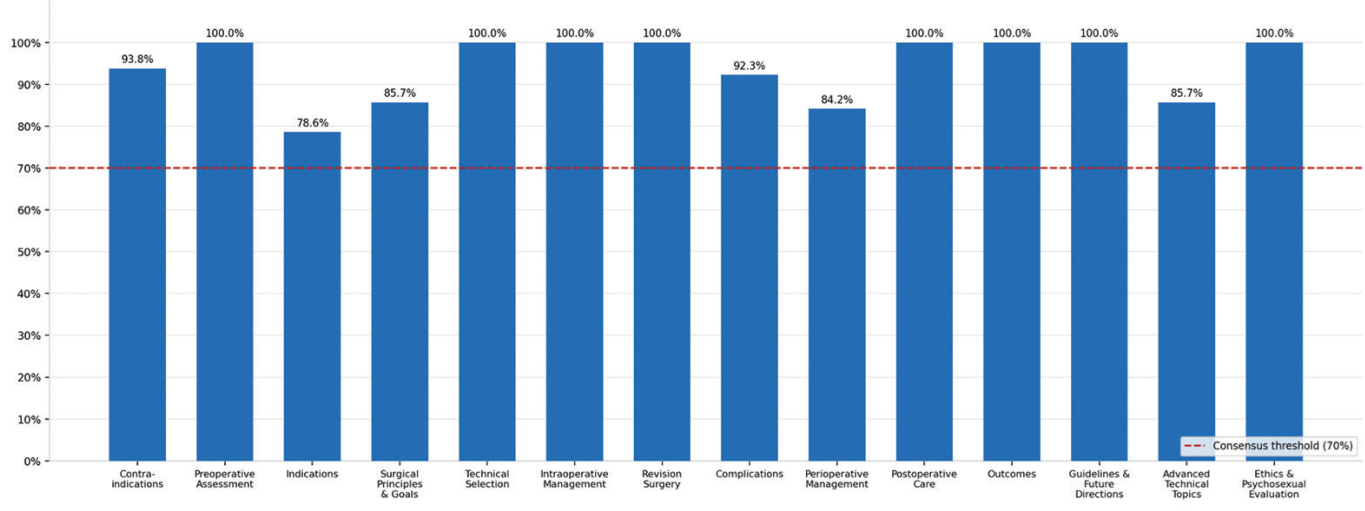

Figure 2. Consensus agreement per domain (%). n=26 experts; consensus threshold ≥70% (dashed red line); percentages represent proportion of statements reaching consensus within each domain

Contraindications to aesthetic vaginoplasty

Accurate patient selection requires clear identification of surgical contraindications, particularly in elective procedures where the risk-benefit balance must be carefully established before any surgical commitment. Consensus was reached on 15 of 16 evaluated statements. Absolute contraindications with unanimous or near-unanimous agreement included pregnancy and the early postpartum period, a history of pelvic radiotherapy, connective tissue disease with impaired wound healing, unrealistic patient expectations, active genital herpes, age under 18 years, and stage III or higher pelvic organ prolapse. Body dysmorphic disorder was accepted as an absolute contraindication (84.6%), and previous vaginal surgery was recognized as a risk-modifying factor requiring increased surgical caution. In cases of high-risk human papillomavirus positivity, surgery was agreed to be appropriate only following Pap smear and colposcopic evaluation. Whether condyloma acuminata constitutes an absolute contraindication did not reach consensus. Taken together, these findings reflect a conservative and ethically grounded approach to patient selection, with particular weight placed on psychological fitness and the exclusion of structural or systemic factors that would compromise the safety or meaningfulness of an elective procedure.

Preoperative assessment and patient preparation

Structured preoperative evaluation forms the foundation of safe surgical decision-making in aesthetic vaginoplasty, addressing both anatomical and psychosexual dimensions of the patient's complaint. Consensus was reached on all 26 evaluated statements. Core requirements endorsed with near-unanimous agreement included pelvic examination, perineal body assessment, documentation of functional symptoms, and systematic review of prior pelvic and vaginal surgeries. Use of the female sexual function index (FSFI) or pelvic organ prolapse/urinary incontinence sexual questionnaire-12 (PISQ-12), pelvic organ prolapse quantification (POP-Q) staging, and the vaginal laxity questionnaire all met the threshold. Pelvic floor muscle function assessment, psychosexual evaluation in selected patients, and hormonal preparation in postmenopausal or atrophic tissue were similarly endorsed. A standardized informed consent form was unanimously required, including explicit discussion of potential effects on sexual function; patients must be informed of the limited and heterogeneous evidence base prior to surgery (92.3%). These findings signal increasing recognition within the field that psychosexual and functional factors are as central to preoperative assessment as anatomical examination, and that informed consent in this setting carries an ethical obligation concerning transparency about the limits of the available evidence.

Surgical indications

Defining appropriate surgical candidacy in the absence of a validated objective measure of vaginal laxity is one of the most debated areas in aesthetic vaginoplasty, and this was reflected in the pattern of consensus across this domain. Consensus was reached on 11 of 14 evaluated statements. Objectively demonstrable vaginal laxity was accepted as a surgical indication, and its combination with subjective patient complaint was agreed to constitute a definitive indication. Perineal body defect, obstetric trauma and perineal damage, recurrent vaginal relaxation, and aesthetic concerns in appropriately selected patients were accepted as valid indications. Symptom severity and its impact on quality of life were agreed to be determinative criteria in the surgical decision (96.2%). Surgery must not be recommended to resolve relationship problems or with the expectation of improving partner fidelity, and the surgical decision must be based solely on patient autonomy (96.2%). Three statements did not reach consensus: subjective vaginal laxity alone as a sufficient indication (30.8%), sexual dysfunction or psychosexual distress alone as justification for surgery (57.7%), and partner expectation as a determinative factor in decision-making (19.2%). The failure to reach consensus on these three items is clinically and ethically significant. The panel's rejection of subjective laxity, unaccompanied psychosexual distress, and partner influence as standalone surgical justifications reflects a collective position that surgery should not proceed without objective clinical correlation and independently verified patient autonomy. These are among the strongest ethical contributions of the present consensus, establishing that aesthetic vaginoplasty must be grounded in clinical findings rather than subjective or externally driven concerns alone. The disagreement in these areas likely reflects ongoing variability in how individual practitioners weigh functional and psychological evidence, differing training backgrounds, and the absence of validated objective tools for measuring laxity, all of which make consistent threshold-setting difficult in current practice.

Surgical principles and goals

Agreement on core surgical principles reflects a shared conviction that functional preservation must guide aesthetic modification rather than be subordinate to it. Consensus was reached on 18 of 21 evaluated statements. Preservation of natural anatomical structures and vaginal function was unanimously identified as the primary surgical goal, and functional outcomes were agreed to carry equal weight to aesthetic outcomes. Excessive muscle plication was unanimously identified as a risk factor for postoperative dyspareunia, conservative mucosal resection was endorsed, and protection of neurovascular structures was unanimously required. Vaginal canal diameter and length preservation, vaginal axis maintenance, and combined perineoplasty in selected patients were similarly endorsed. Pelvic floor physiotherapy was supported as first-line treatment before surgical referral (92.3%). Three statements did not reach consensus: energy-based devices as a direct surgical alternative (26.9%), an approach focused solely on aesthetics without functional evaluation (19.2%), and routine levator ani plication in selected patients (69.2%). These three non-consensus items are conceptually coherent: the panel declined to endorse any approach that circumvents functional evaluation, whether by substituting energy devices for surgery, omitting functional assessment entirely, or applying levator

plication routinely without individualized indication. Taken together, the findings in this domain represent a clear departure from older tightening-centred surgical paradigms and signal a modern reconstructive philosophy in which neurovascular protection, conservative tissue handling, and preservation of vaginal compliance are non-negotiable priorities. The disagreement around energy-based devices and levator plication specifically reflects the limited comparative evidence for these modalities, which has not yet reached a level that would support their routine endorsement by a nationally representative expert panel.

Surgical technique selection

Technique selection in vaginal tightening surgery cannot be standardized across patients, as anatomical and functional profiles differ considerably, based on obstetric history, tissue quality, and the location and severity of the defect. Consensus was reached on all 11 evaluated statements. The degree and distribution of vaginal laxity were agreed to be determinative in technique selection, with a limited approach considered sufficient in isolated introital laxity. A technique based solely on distal tightening was not accepted as appropriate when proximal vaginal support defects are present. Combined assessment of the perineal body, posterior fourchette, and perineal fascia was agreed as required during planning. Scar tissue and tissue loss, prior pelvic or vaginal surgery, atrophic tissue, concomitant pelvic organ prolapse or incontinence, and the risk of excessive tightening were all recognized as technique-modifying factors. Individualized planning based on anatomical findings, functional goals, and patient expectations was unanimously endorsed. Based on these consensus findings, a procedural classification framework was developed that organizes aesthetic vaginoplasty into five standardized technique categories: (1) perineoplasty, indicated for isolated introital laxity and perineal body defects; (2) posterior colporrhaphy-based repair, for mid and distal vaginal laxity with conservative mucosal excision and fascial plication; (3) levator ani plication, reserved for selected cases with central support defects; (4) energy-based adjunctive procedures, including fractional CO_2 laser and radiofrequency, applied as adjuncts rather than primary surgical replacements; and (5) hybrid reconstructive approaches, combining the above techniques in patients with multi-compartment defects or concurrent pelvic organ prolapse. A schematic algorithm presenting this classification system and the technique selection pathway is provided in Figure 3. The panel strongly endorsed individualized reconstruction rather than standardized tightening approaches, recognizing that no single technique is universally appropriate and that reconstruction must be guided by the anatomical and functional heterogeneity of each patient's presentation.

Intraoperative management

Intraoperative decisions regarding tissue handling, suture technique, and the degree of tightening are direct determinants of both short-term complications and long-term functional outcomes. Consensus was reached on all 19 evaluated statements. Suture material selection was agreed to affect complication rates, layered closure to improve wound healing, and dorsal lithotomy to be the most appropriate patient position. Excessive electrocautery use was agreed to increase tissue damage and complication risk. Intraoperative assessment of vaginal canal diameter and symmetry was unanimously required, and the degree of tightening must be confirmed before wound closure to prevent dyspareunia risk. Closure of vaginal mucosa under excessive tension was agreed to adversely affect wound healing, correct anatomical plane identification during perineal body reconstruction was unanimously agreed to improve surgical success, and vaginal axis preservation throughout the procedure was unanimously endorsed as important for functional outcomes. The consistent emphasis across these findings on avoiding overcorrection and preserving vaginal compliance reflects an intraoperative philosophy oriented toward functional safety rather than maximal anatomical narrowing. Notably, suture size preference for fascial and muscular layers did not reach full consensus in the advanced topics domain, indicating that while the principle of appropriate suture selection is widely endorsed, specific material recommendations require further evidence before universal adoption.

Revision surgery

Revision vaginoplasty carries distinct clinical challenges that differ substantially from those of primary procedures, including a higher complication burden and greater technical complexity due to scarring and altered tissue planes. Consensus was reached on all 13 evaluated statements. Revision surgery was unanimously agreed to carry higher complication rates than primary vaginoplasty, and a minimum healing interval of 3 to 6 months before re-operation was endorsed. More careful evaluation of patient expectations in revision cases, detailed psychosexual assessment before proceeding, and analysis of the prior surgical technique were all unanimously required. Scar tissue was agreed to increase technical complexity, re-evaluation and reconstruction of fascial planes was agreed as necessary, and revision surgery was agreed to be indicated only in the presence of a functional problem or significant aesthetic concern (88.5%). The unanimous support for mandatory psychosexual reassessment before revision surgery is particularly important, as it signals that persistent dissatisfaction alone does not constitute sufficient grounds for reoperation and that the underlying expectations and psychological context must be re-evaluated before any further surgical commitment is made.

Complications

Dyspareunia and excessive tightening represent the most clinically significant functional consequences of vaginal tightening surgery, and their prevention is central to the safe delivery of these procedures. Consensus was reached on 12 of 13 evaluated statements. Dyspareunia was agreed to be among the most important complications following vaginoplasty, and excessive tightening was unanimously agreed to require active prevention at the time of surgery. Vaginal stenosis was accepted as a rare but serious complication, and suture line dehiscence as clinically significant. Hematoma and early-period bleeding,

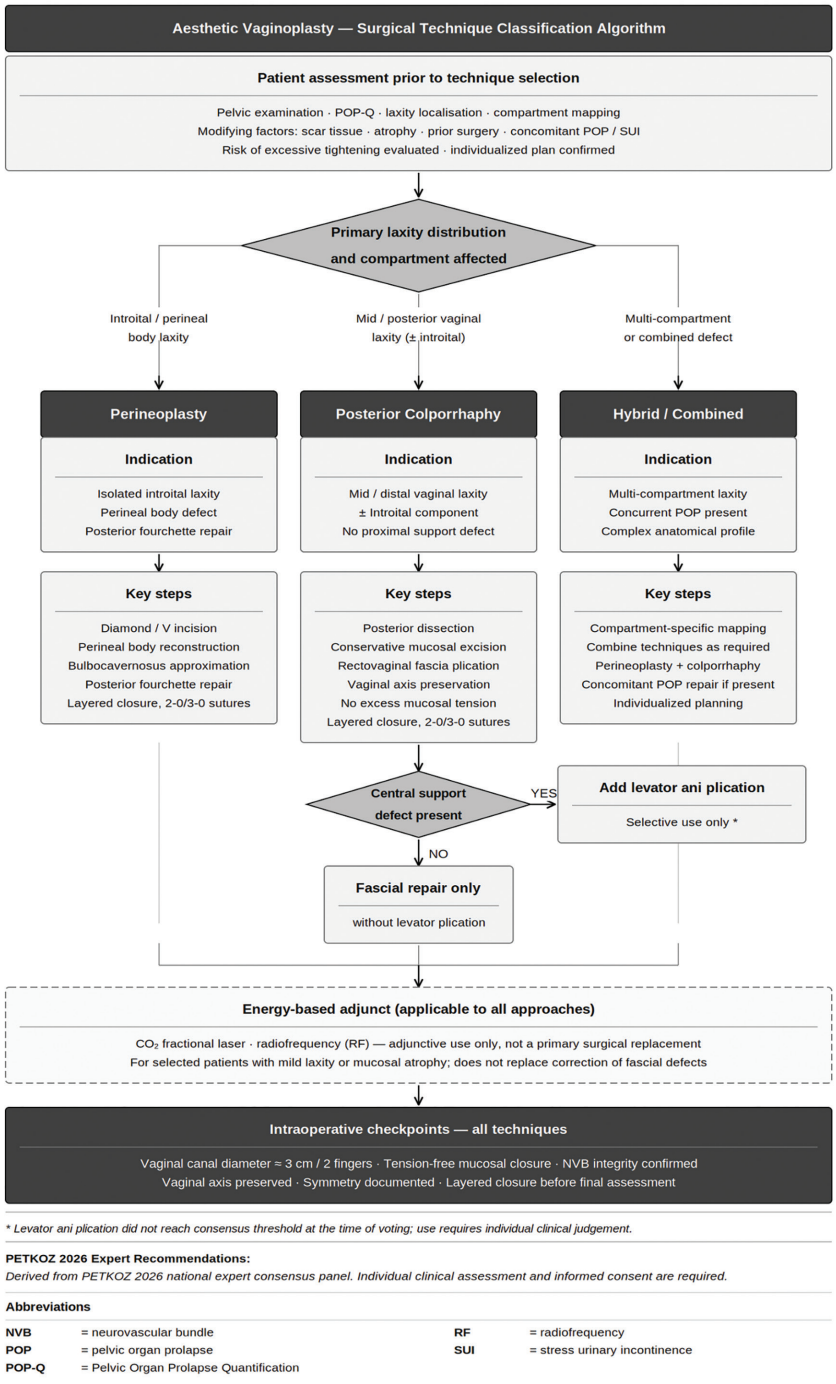

Figure 3. Surgical technique classification algorithm for aesthetic vaginoplasty, based on the PETKOZ 2026 national expert consensus panel

NVB: Neurovascular bundle, POP: Pelvic organ prolapse, POP-Q: Pelvic Organ Prolapse Quantification, RF: Radiofrequency, SUI: Stress urinary incontinence, PETKOZ: Pelvic Floor and Cosmetic Gynecology Association

low infection risk with appropriate technique, delayed wound healing in relation to technique and tissue quality, prolonged postoperative pain, and sensation changes as determinants of patient satisfaction all reached consensus. Whether patient dissatisfaction constitutes an important indicator of surgical success did not reach consensus (57.7%). The inability to reach agreement on patient dissatisfaction as a success indicator is worth noting and reflects genuine philosophical disagreement about whether subjective dissatisfaction in the absence of objective functional failure should carry clinical weight, particularly in an elective procedure with a high baseline satisfaction rate. More fundamentally, the panel's collective emphasis on dyspareunia prevention throughout this domain reframes this complication not merely as an adverse event but as a functional outcome failure, one that directly negates the sexual and quality-of-life benefits that patients seek from surgery and that must therefore be treated as a primary safety endpoint rather than a secondary concern.

Perioperative management

Standardized perioperative protocols are essential for ensuring reproducible outcomes and patient safety, and the panel identified several areas where current practice varies without clear justification. Consensus was reached on 16 of 19 evaluated statements. Routine antibiotic prophylaxis, individualized pain management, perioperative risk assessment, standardized patient preparation including antisepsis, smoking cessation counselling, and written patient information on the postoperative course were all endorsed, with several reaching unanimous agreement. Early mobilization was agreed to reduce complication risk, and the time to return to both sexual activity and intense physical activity should be standardized. Three statements did not reach consensus: whether surgery can be performed under local anesthesia (30.8%), whether routine urinary catheter and vaginal pack placement is indicated for all patients (57.7%), and whether same-day discharge is appropriate (50%). The failure to reach consensus on these three logistical items most likely reflects genuine heterogeneity in how the procedure is performed across different settings rather than disagreement on principle. Local anesthesia feasibility, catheter necessity, and discharge timing are all highly dependent on procedural complexity, institutional infrastructure, and the experience of individual surgeons, and the absence of procedure-specific published data on these management choices leaves practitioners with no shared reference standard to align against.

Postoperative care

The postoperative period is a critical determinant of wound healing, patient comfort, and functional recovery, and uniform management protocols reduce the risk of preventable complications. Consensus was reached on all 13 evaluated statements. Sexual intercourse restriction for at least 4 to 6 weeks, and scheduled follow-up visits on days 10 to 15 and day 40 for wound and suture monitoring, were unanimously endorsed. Postoperative wound care, patient education for early complication recognition, and postoperative hygiene recommendations all reached unanimous agreement. Cold application was agreed to be effective in edema management, physical activity restriction was recommended in the early period, and pelvic floor rehabilitation or dilator use in selected patients was accepted as an appropriate recommendation (73.1%). The uniformity of consensus across this domain reflects a well-developed shared understanding of postoperative management priorities and suggests that postoperative care protocols are among the most implementation-ready components of this consensus for direct clinical adoption.

Clinical outcomes

Accurate outcome assessment in aesthetic vaginoplasty requires validated measurement tools and sufficient follow-up duration, given the multifactorial nature of sexual satisfaction and the time required for complete tissue healing. Consensus was reached on all 13 evaluated statements. A minimum of 3 to 6 months was agreed to be required before evaluating final surgical outcomes, patient satisfaction was agreed to be high after vaginal tightening surgery, and long-term outcomes were agreed to be stable and sustainable. Sexual function was agreed to improve in the postoperative period (80.8%), and psychosexual improvement was agreed to be a clinically significant outcome. Concordance between preoperative expectations and postoperative outcomes was unanimously identified as the primary determinant of patient satisfaction, and functional outcomes were unanimously agreed to carry equal weight to aesthetic outcomes. Long-term follow-up data were unanimously agreed as necessary for proper efficacy assessment. Particularly noteworthy is the panel's unanimous position that patient satisfaction alone does not constitute a sufficient definition of surgical success; by placing expectation concordance and functional improvement at the center of outcome evaluation, the consensus moves toward a more rigorous and multidimensional framework for assessing what this surgery actually achieves.

Guidelines and future directions

The absence of standardized guidelines and prospective data infrastructure was unanimously identified as the most pressing limitation of current practice in aesthetic vaginoplasty. Consensus was reached on all 13 evaluated statements. A standardized clinical guideline was agreed as necessary, and a multidisciplinary approach incorporating gynecology, pelvic floor physiotherapy, and psychosexual support was unanimously endorsed as the gold standard of care. More high-quality prospective and randomized controlled studies, data registry systems for long-term outcome evaluation, a more clearly defined ethical and medicolegal framework, and integration of patient-reported outcome measures were all unanimously endorsed. Formal training and certification programs were agreed as needed (92.3%). The strength of consensus across this domain substantially increases the value of the present statement: when a panel unanimously endorses the need for multidisciplinary care, prospective research, long-term registries, and formal training, it simultaneously acknowledges the current limitations of practice and sets a clear institutional direction. These findings position the PETKOZ consensus not as a definitive endpoint but as a structured starting point for the systematic infrastructure development that the field requires.

Advanced technical and clinical considerations

Several technical aspects of aesthetic vaginoplasty remain without established standards, reflecting the limited evidence base and the heterogeneity of current practice in this area. Consensus was reached on 12 of 14 evaluated statements. Preoperative vaginal mapping to identify compartment-specific defects was agreed as appropriate, and a target postoperative vaginal diameter of approximately two examining fingers or 3 cm was agreed upon (84.6%). Absorbable 2-0 or 3-0 sutures for vaginal mucosal repair were unanimously endorsed, and Enhanced Recovery After Surgery protocol application following vaginoplasty was agreed as appropriate. The neurosensory properties of the vagina were agreed to require consideration during tightening procedures, anterior vaginal wall mucosal excisions were agreed to be kept minimal, proximal vaginal pathology was agreed to require evaluation

and management when indicated, and compartment-specific documentation of pelvic floor findings at each follow-up visit was unanimously endorsed. Two statements did not reach consensus: whether absorbable sutures of size 1 or 2 are preferred for fascial and muscle repairs (69.2%), and whether non-absorbable sutures represent an appropriate option for fascial and ligament repairs (69.2%). The failure to reach agreement on suture selection for deeper tissue layers is consistent with the broader pattern of non-consensus in this survey: it reflects not philosophical disagreement but rather the practical reality that no published comparative data exist on suture-specific outcomes in aesthetic vaginoplasty, making it impossible for even experienced surgeons to align on a shared recommendation.

Ethics and psychosexual evaluation

The ethics and psychosexual evaluation domain was developed as a supplementary module administered to 19 panelists with documented expertise in psychosexual medicine or female genital cosmetic surgery ethics. Consensus was reached on all six evaluated statements. Preoperative clinical screening for body dysmorphic disorder was endorsed in patients requesting surgery without a functional indication when risk indicators are present (94.7%), and psychosexual evaluation was recommended in cases identified through risk indicators or clinician judgement (94.7%). The potential influence of social media content on genital appearance perception was agreed to warrant individualized discussion within preoperative counselling (94.7%), and the possible shaping of surgical motivation by partner pressure was agreed to warrant thorough evaluation with deferral of the surgical decision when necessary (84.2%). The potential effects of commercial marketing content on patient expectations were agreed to be incorporated into the informed consent process (89.5%). Unanimously endorsement was achieved concerning the position that the purpose of psychosexual evaluation is not to exclude the patient from surgery but to ensure appropriate informed consent and expectation management (100.0%). The strong agreement across this domain reinforces the ethical framework established throughout the consensus: psychosexual evaluation is a clinical tool for optimizing patient benefit, not a gatekeeping mechanism, and its integration into the preoperative pathway reflects a commitment to patient-centered care, grounded in autonomy and transparency.

Synthesis of Consensus Findings

Review of consensus patterns across all 14 domains reveals several thematic consistencies that transcend individual clinical questions and reflect a shared conceptual framework underlying the panel's collective judgement. First, functional preservation was endorsed as the primary surgical objective across every domain in which it was addressed, from the prohibition of excessive plication in surgical principles to the mandatory intraoperative diameter check to the equal weighting of functional and aesthetic outcomes in clinical assessment. This recurrence across independent domains suggests not incidental agreement but a genuine paradigm shift away from tightening-centered surgical models toward a philosophy of anatomically respectful, function-preserving reconstruction. Second, patient autonomy and psychosocial integrity emerged as cross-cutting requirements: the rejection of partner-driven indications, the mandatory psychosexual evaluation, the requirement for body dysmorphic disorder screening, the prohibition of surgery to address relationship problems, and the unanimous requirement for psychosexual reassessment before revision surgery collectively define a coherent ethical framework in which surgical access is conditional on independently verified, clinically grounded patient motivation. Third, the distribution of non-consensus items is itself informative. All areas of disagreement involved either logistical variables dependent on institutional and procedural context, such as anesthetic approach, catheterization, and same-day discharge, or technical choices for which no comparative evidence exists, such as suture size for deep tissue repair, energy devices as primary alternatives, and routine levator plication. The absence of non-consensus on core safety, ethical, and functional principles indicates that disagreement was bounded to operationally variable domains rather than foundational ones. Taken together, these patterns position the present consensus as a clinically actionable framework grounded in shared principle, while clearly delineating the evidence gaps that future research must resolve.

DISCUSSION

This study presents the first national expert-based consensus statement on aesthetic vaginoplasty developed by PETKOZ, covering 14 clinical domains and 211 statements evaluated by 26 nationally recognized experts. The only exception was the ethics and psychosexual evaluation domain which was assessed by a subset of 19 specialists with relevant expertise.

Consensus was achieved on 198 statements (93.8%), a rate that reflects broad agreement across the domains of contraindications, preoperative assessment, surgical technique, intraoperative management, revision surgery, complications, postoperative care, clinical outcomes, guidelines for future practice, and ethics and psychosexual evaluation. The lowest consensus rates were observed in surgical indications and perioperative management, reflecting genuine clinical uncertainty in the absence of high-quality prospective data. Across all domains, the clearest areas of agreement were the primacy of functional outcome preservation over aesthetic modification, the absolute necessity of structured patient assessment and informed consent, and the need for standardized outcome measurement and prospective data collection. These findings provide a clinical reference framework for aesthetic vaginoplasty practice in Turkey while identifying the specific questions that require resolution through future research. The following sections contextualize these consensus findings within the available evidence base and discuss their implications for clinical practice and research.

A fundamental challenge in the vaginoplasty literature is the absence of a validated, objective definition of vaginal laxity. Garcia et al.,[3] in a systematic review specifically calling for

standardized outcome measures in cosmetic gynecology, identified this as the single most important barrier to evidence synthesis across the field. The Alavi-Arjas et al.[8] systematic review of sexual function outcomes after vaginal tightening surgery, the most comprehensive evidence synthesis to date, identified only 11 eligible studies with 806 patients over 18 years and concluded that definitive conclusions on efficacy were not possible due to heterogeneous techniques and unvalidated instruments. A multicenter cross-sectional study found no significant association between self-reported vaginal laxity and objective examination findings, questioning the reliability of subjective complaint as a standalone indicator for surgical candidacy.[12] This dissociation between subjective report and objective findings is not merely a measurement problem; it has direct clinical consequences, as it means that the indication for surgery in a substantial proportion of candidates rests on patient-reported perception alone, without an independently verifiable anatomical or functional correlate. Several emerging technologies hold promise for the development of objective laxity assessment. Tactile imaging devices, which reconstruct the mechanical properties of pelvic floor tissues through pressure-mapping probes, have demonstrated reproducibility in mapping fascial support defects and may provide a quantitative tissue compliance metric applicable to surgical candidacy assessment. Elastography, both ultrasound-based and magnetic resonance-based, offers a non-invasive means of quantifying tissue stiffness and has been applied to pelvic floor musculature with encouraging early results. Dynamic magnetic resonance imaging enables real-time assessment of pelvic floor descent, hiatal dimensions, and compartment-specific prolapse under Valsalva, providing structural information that static examination cannot capture. Three-dimensional ultrasound has been used to characterize levator ani morphology and hiatal area with good inter-rater reliability and may be adaptable to introital and posterior compartment assessment. Biomechanical modelling approaches, using finite element analysis derived from patient-specific imaging data, represent a longer-term research direction that could eventually enable individualized surgical planning based on tissue property prediction. None of these technologies is currently validated for routine clinical application in aesthetic vaginoplasty, and their integration into surgical decision-making will require prospective studies with standardized protocols. In this context, the expert panel's endorsement of the FSFI, PISQ-12, vaginal laxity questionnaire, and POP-Q as minimum assessment instruments provides a practical measurement framework for the near term, while the development of objective biomechanical tools remains the field's most pressing methodological priority.

The management of patient selection is further complicated by the medicolegal and psychosocial dimensions inherent to elective genital cosmetic procedures. Body dysmorphic disorder is a recognized risk factor in cosmetic surgery populations, and its relevance is particularly high in genital aesthetic procedures where the perceived defect is not apparent to others. Hostiuc et al.[13] demonstrated that patients with body dysmorphic disorder systematically fail to benefit from cosmetic surgery because the disorder distorts body perception rather than informing genuine preference and argued that autonomous decision-making is functionally impaired in this setting. The ACOG Committee Opinion similarly identifies body dysmorphic disorder screening as mandatory before any elective female genital cosmetic procedure and states that patient motivations must be autonomous and free from external pressure.[7] Agreement on body dysmorphic disorder as an absolute contraindication (84.6%), psychosexual evaluation in selected patients, and explicit counselling on the limited evidence base prior to surgery (92.3%) is consistent with these professional recommendations. Beyond clinical psychiatric diagnoses, the broader sociocultural context in which demand for aesthetic vaginoplasty arises warrants explicit attention. The exponential growth of social media platforms has created new channels through which idealized and frequently non-representative genital images are disseminated, shaping body image expectations among women who may have had no prior awareness of procedural options. Commercial marketing by aesthetic clinics, often conducted outside regulated advertising frameworks, can amplify perceived inadequacy and frame elective genital modification as a medical necessity rather than a discretionary cosmetic choice. Exposure to pornography-derived aesthetic norms, which bear no relationship to the anatomical diversity of the female pelvis, has been identified in qualitative research as a driver of genital dissatisfaction and is increasingly encountered in preoperative consultations for female genital cosmetic surgery. Partner influence, even when not rising to the level of coercion, can shape patient motivation in ways that compromise autonomous decision-making. The panel's rejection of partner expectation as a surgical indication (19.2%), its prohibition of surgery to address relationship problems (96.2%), and its unanimous requirement for patient-autonomous decision-making collectively establish that this consensus recognizes and guards against these vulnerabilities. Structured preoperative psychosexual assessment, conducted by practitioners with training in sexual medicine or clinical psychology, represents the most reliable available means of distinguishing clinically grounded surgical candidacy from requests driven by external social pressures, unrealistic expectations, or psychological vulnerability, and should be considered a standard component of the preoperative pathway rather than an optional adjunct.

The positions taken by the PETKOZ panel are broadly consistent with, and in some respects extend beyond, those of major international organizations. The RCOG has taken one of the most restrictive stances in this field, advising clinicians not to perform cosmetic vaginal procedures such as vaginal tightening, G-spot amplification, and clitoral hood reduction in response to a perceived demand, and emphasizing that the evidence base for these procedures is poor and that the risks have not been adequately established. The RCOG position explicitly raises concerns about the influence of marketing and media on patient decision-making and calls for robust informed consent that includes an honest discussion of the absence of evidence for benefit.[14] The AUGS has similarly cautioned that elective vaginal procedures are not supported by evidence of safety or efficacy and has called for rigorous

outcome data before widespread adoption. These stances highlight the extent to which the PETKOZ consensus, though developed in a permissive clinical context where demand for these procedures is growing, aligns with international caution: the panel's unanimous endorsement of structured informed consent including disclosure of the limited evidence base, mandatory body dysmorphic disorder screening, and the prohibition of surgery to resolve relationship problems collectively reflects the ethical safeguards that international bodies have identified as minimum requirements.

Where this statement advances the international discussion is in its provision of a procedural classification framework, a structured technique selection algorithm, and a minimum outcome measurement toolkit, none of which have been formally proposed by RCOG, AUGS, or International Society of Aesthetic Plastic Surgery in their current guidance documents. The International Society of Aesthetic Plastic Surgery recognizes vaginal tightening as an established aesthetic procedure and provides general patient-facing information on surgical options but stops short of issuing clinical practice recommendations on technique selection, patient assessment protocols, or outcome standards.[6] The present consensus therefore occupies a distinct position in the international literature; it accepts the legitimacy of these procedures in carefully selected patients while providing the operational framework that existing position statements have not.

Dyspareunia is the complication with the greatest direct impact on surgical outcomes in vaginal tightening surgery, as it specifically reverses the improvement in sexual function that patients seek. Ulubay et al.,[15] in a retrospective study of perineoplasty for the sensation of a wide vagina, reported an overall success rate of 87.9% at 6 months but found that 10% of patients reported introital dyspareunia at follow-up, even in a well-selected cohort treated by experienced surgeons. İnan et al.[16] found that perineoplasty produced significant improvements in sexual desire, arousal, lubrication, orgasm, and satisfaction on the FSFI, but did not yield a significant improvement in the pain domain, suggesting that dyspareunia following vaginoplasty may be resistant to surgical correction once established. Across multiple series in the Alavi-Arjas et al.[8] systematic review, *de novo* dyspareunia rates ranged from 10% to 61.1% depending on technique and patient population. These figures are not merely complication statistics; they represent a form of functional surgical failure. In a procedure performed to improve sexual function, the induction of persistent dyspareunia constitutes a direct negation of the therapeutic objective and must therefore be classified as a primary outcome failure, carrying the same clinical and medicolegal weight as any other major surgical complication. This reframing has practical consequences: it means that dyspareunia prevention cannot be relegated to a postoperative consideration but must be the organizing principle of every intraoperative decision, from suture selection and tissue plane management to the degree of plication and the final diameter confirmation. The panel's strong agreement that excessive muscle plication carries a risk of postoperative dyspareunia, that intraoperative control of tightening degree is required before wound closure, and that a target postoperative vaginal diameter of approximately two examining fingers or 3 cm should be maintained (84.6%) reflects an evidence-based precautionary approach that, in the context of this reframing, acquires the character of a non-negotiable safety standard rather than a technical preference.

Sexual function outcomes following vaginal tightening surgery are broadly positive in the published literature, but with clinically relevant domain-specific variation. Goodman et al.[17] conducted a large multicenter outcome study of female genital plastic surgery and reported high rates of sexual enhancement for both patients and their partners. Among studies using validated instruments, Jamali et al.[18] found significant FSFI improvement in all domains except pain and lubrication, and Fang et al.[19] reported significant improvement in desire, arousal, orgasm, and satisfaction following bilateral wall tightening without mucosal excision.[8] In contrast, Park and Whang[20] found statistically significant improvement only in the satisfaction domain, and Li et al.[21] reported no significant change in total FSFI score despite an isolated orgasm subscore benefit.[8] This variability suggests that sexual function improvement after vaginal tightening is not uniform across domains and is likely influenced by the match between patient expectations and the functional changes the procedure produces, which is consistent with the panel's unanimous position that concordance between preoperative expectations and postoperative outcomes is the primary determinant of patient satisfaction. This domain-specific variability also underscores a broader problem, namely the absence of a standardized outcome assessment framework. The current evidence base draws on a heterogeneous array of instruments, many of which are either unvalidated or applied inconsistently, making meaningful cross-study synthesis impossible. The panel's endorsement of the FSFI, PISQ-12, Vaginal Laxity Questionnaire, and POP-Q as minimum preoperative and postoperative assessment instruments represents an important step toward standardization. However, adoption of these tools must be operationalized through formal inclusion in study protocols, registry systems, and training curricula if the field is to generate guideline-quality evidence. Without this infrastructure, the scientific credibility of aesthetic vaginoplasty research will remain limited regardless of the volume of data produced.

An important and rapidly evolving domain in aesthetic vaginoplasty and non-surgical vaginal procedures is the use of energy-based devices, including fractional CO_2 laser and radiofrequency technologies, which are increasingly used as non-surgical alternatives for vaginal laxity and sexual dysfunction. An international multidisciplinary expert panel reviewing the available literature concluded that no formal clinical guidance exists for the use of these technologies and that the available randomized controlled trial data were insufficient to support definitive recommendations at the time of the review.[22] Although a small number of randomized controlled trials have since been published, most studies in this area remain prospective or retrospective case series without control groups, and comparative data between energy-based and surgical approaches are largely absent. A systematic review evaluating 74 studies of 15 different nonsurgical vulvovaginal

restoration devices found that improvement in symptoms was reported across all included studies. However, adverse events were identified across all device categories, with CO_2 laser devices associated with the highest frequency of reported complications, and the authors concluded that a substantial gap in level I evidence persists.[23] It must be stated clearly that the current evidence base does not support the use of energy-based devices as equivalents to or replacements for surgical correction in women with demonstrable structural vaginal laxity. Their mechanism of action, which relies on thermal stimulation of collagen remodeling, does not address the fascial support defects, perineal body disruption, or mucosal redundancy that typically underlie clinically significant laxity. Until randomized controlled trials with validated laxity measures, standardized patient selection criteria, and minimum 12-month follow-up are available, the clinical positioning of these devices should remain adjunctive. The panel's failure to reach agreement on energy-based devices as a direct surgical alternative is a scientific position grounded in this evidential reality. Notably, a distinct statement endorsing energy-based devices as a selective option in appropriately chosen patients, which was framed as an adjunctive modality rather than a direct surgical replacement, did reach consensus (88.5%), indicating that the panel's disagreement was specifically with designating these technologies as primary surgical equivalents in patients with demonstrable structural laxity, not with their targeted use in selected cases where structural defects are absent or minimal. As comparative data accumulate, a dedicated consensus exercise or evidence-based guideline on non-surgical aesthetic vaginal procedures will be needed.

A persistent structural limitation of the aesthetic vaginoplasty literature is the absence of a validated procedural classification system. The field currently encompasses a heterogeneous spectrum of interventions, including perineoplasty, posterior colporrhaphy-based repairs, levator ani plication techniques, mucosal excision approaches, energy-based adjunctive procedures, and hybrid reconstructive combinations that are frequently described under inconsistent or interchangeable nomenclature, without an agreed framework for categorizing surgical approaches or standardizing technical terminology.[3,4] This heterogeneity directly undermines evidence synthesis and cross-study comparability. As described in the results section, the present consensus addresses this gap by proposing a five-category procedural classification system based on anatomical indication and technical approach, with a corresponding technique selection algorithm. Adoption of this classification and the associated standardized terminology in future clinical research would enable technique-stratified outcome analysis, improve the reproducibility of surgical descriptions, and facilitate the generation of comparative evidence across procedural variants, all of which are essential preconditions for evidence-based guideline development in this field.

Several perioperative management questions produced the lowest consensus rates in the survey, with local anesthesia (30.8%), routine urinary catheter and vaginal pack placement (57.7%), and same-day discharge (50%) all below threshold. These items relate to logistical and institutional practice rather than to surgical principles or patient safety in a direct sense, and the published literature does not address them specifically for elective vaginal tightening surgery. Furnas et al.[24] noted that anesthetic approach, patient preparation, and postoperative monitoring in female genital plastic surgery should be tailored to institutional resources, patient comorbidities, and procedure complexity rather than applied as a fixed protocol. The absence of consensus on these points reflects variation in current practice and highlights the most operationally relevant questions for future prospective data collection.

Looking beyond the immediate horizon of this consensus, several directions will be critical in shaping the next generation of evidence in aesthetic vaginoplasty. The integration of artificial intelligence into surgical planning represents a particularly promising avenue. Machine learning algorithms trained on multimodal preoperative data, including three-dimensional pelvic imaging, validated patient-reported outcome scores, and tissue biomechanical parameters, could in principle generate individualized risk profiles, optimal technique predictions, and postoperative outcome estimates that exceed the accuracy of current expert-based heuristics. Personalized surgical algorithms, grounded in compartment-specific anatomical mapping and patient-specific functional goals rather than generalized technique preferences, are a natural extension of the individualized approach endorsed unanimously by this panel. Objective laxity scoring systems incorporating the biomechanical technologies discussed above would provide a standardized entry criterion that current surgical candidacy assessments lack, enabling patient stratification that is reproducible across centers and investigators. Long-term multicenter registries capturing standardized demographic, anatomical, procedural, and outcome data at minimum follow-up intervals of one, three, and five years are the infrastructure without which technique-stratified analysis, complication incidence estimation, and revision rate benchmarking cannot be performed. Neurofunctional outcome assessment, addressing the preservation of vaginal sensory properties, introital mechanoreceptor integrity, and orgasmic response following different tightening techniques, remains almost entirely uncharted and represents a research priority that directly intersects with the functional preservation philosophy endorsed throughout this consensus.

A further structural limitation of the present consensus, and of consensus methodology in aesthetic vaginoplasty more broadly, is its surgeon-centered perspective. The statements evaluated in this process were developed, adjudicated, and voted upon by surgical specialists; the priorities, concerns, and lived psychosexual experiences of the women who undergo these procedures were not directly represented. This gap matters because the definition of a successful outcome in elective genital surgery is ultimately patient-defined, and what surgeons regard as technically adequate results may diverge considerably from what patients regard as functionally and psychosexually meaningful improvements. Incorporating patient-reported priorities into future consensus development, through structured qualitative interviews, validated preference-elicitation instruments, or formal patient and public involvement panels integrated into the Delphi

methodology, would substantially increase the clinical validity of the recommendations produced. Patient-centered outcome models, in which the minimum clinically important difference is defined by patient preference rather than by statistically significant change in mean values on a (subjective) scale, should be the standard for efficacy assessment in future clinical trials of aesthetic vaginoplasty. The panel's unanimous agreement that concordance between preoperative expectations and postoperative outcomes is the primary determinant of patient satisfaction (100%) is a first step in this direction. Systematic patient involvement in defining what those expectations should reasonably encompass is the logical next step.

This study has several limitations. The expert panel reflects national practice in Turkey, and the recommendations may not be directly transferable to settings with different regulatory frameworks, resource environments, or procedural volumes. As with all Delphi studies, the consensus reflects structured expert opinion rather than data from clinical trials. Furthermore, the 70% agreement threshold identifies convergence of practice, not evidence of efficacy or safety. Patient perspectives were not included in the consensus development, which is an important limitation given that patient experience and reported outcomes should ultimately drive the evolution of these procedures. A further limitation relates to the composition of the expert panel itself: all 26 participating specialists were surgeons, and no representation was included from allied health professionals whose involvement is integral to safe and effective aesthetic vaginoplasty practice. Pelvic floor physiotherapists, whose role in preoperative assessment, postoperative rehabilitation, and the conservative management of dyspareunia is well established, were not part of the consensus process, nor were clinical psychologists, sexual medicine specialists, or gynecological nurses with expertise in perioperative care and patient support. Future iterations of this consensus should adopt a genuinely multidisciplinary panel composition to ensure that the full scope of the clinical pathway is represented, and that recommendations reflect the perspective of all professionals who contribute to patient outcomes rather than the surgical perspective alone.

Clinical Practice Recommendations

The following recommendations are derived from synthesis of consensus findings across 14 clinical domains and are intended to provide practical guidance for clinicians at all levels of experience in aesthetic vaginoplasty.

(1) Aesthetic vaginoplasty must not be offered on demand. Surgery is appropriate only when vaginal laxity is confirmed on pelvic examination, functional or psychosexual impairment attributable to laxity is documented, absolute contraindications are excluded, and the patient's decision is autonomous and free from partner or relational pressure. Surgery must not be recommended to resolve relationship problems or meet partner expectations.

(2) All candidates must undergo a structured preoperative assessment including pelvic examination with POP-Q staging, perineal body assessment, documentation of functional and sexual symptoms, and pelvic floor muscle evaluation. As a minimum, one validated patient-reported outcome instrument (FSFI, PISQ-12, or vaginal laxity questionnaire) must be administered before surgery and at postoperative follow-up. Informed consent must include explicit discussion of the limited evidence base.

(3) Psychosexual evaluation must be performed when the surgical request appears discordant with clinical findings, or where psychological vulnerability, unrealistic expectations, or external pressure are identified as primary drivers. Where the complaint is disproportionate to objective findings or consistent with a body image disturbance, formal psychiatric evaluation must precede any surgical planning. Body dysmorphic disorder is an absolute contraindication to surgery.

(4) Pelvic floor physiotherapy must be offered as first-line treatment before surgical referral when structural support defects are absent. Where postoperative dyspareunia or pelvic floor dysfunction is identified, physiotherapy-based rehabilitation must be initiated promptly. Access to pelvic floor physiotherapy is a standard component of the care pathway, not an optional referral.

(5) Technique selection must be individualized. Perineoplasty is indicated for isolated introital and perineal laxity; posterior colporrhaphy-based repair for mid- and distal-vaginal laxity; levator ani plication selectively for confirmed central support defects only; and hybrid approaches for multi-compartment defects. No single technique is universally appropriate. Selection must be guided by anatomical findings and documented accordingly.

(6) Dyspareunia prevention is the primary intraoperative safety principle. Excessive muscle plication, mucosal closure under tension, and tightening beyond functional optimum must be avoided. Vaginal canal diameter must be confirmed before wound closure, targeting approximately two examining fingers or 3 cm, and vaginal axis must be preserved. Persistent postoperative dyspareunia constitutes a functional surgical failure and must be managed accordingly.

(7) Energy-based devices (fractional CO_2 laser, radiofrequency) are adjuncts to surgical correction and must not be offered as equivalents to surgery in patients with demonstrable structural laxity or fascial defects. Patients must be informed that current evidence does not support these modalities as primary interventions and that formal guidelines do not endorse them in this role.

(8) Postoperative care must follow a standardized protocol: sexual intercourse restricted for at least four to six weeks; follow-up visits at days 10 to 15 and day 40; written instructions covering wound care, hygiene, and activity restrictions; formal outcome assessment with the preoperative validated instrument at three to six months postoperatively.

(9) Revision surgery must not be undertaken without review of the primary procedure, full psychosexual reassessment, and re-confirmation of patient expectations. A minimum healing interval of three to six months must be observed. Patient dissatisfaction without a demonstrable functional or anatomical problem is not a sufficient indication for reoperation.

(10) Aesthetic vaginoplasty should be delivered within a multidisciplinary framework incorporating access to pelvic floor physiotherapy, psychosexual medicine, and clinical psychology. Surgical volume, complication rates, and patient-reported outcomes must be documented systematically. Formal training with structured mentorship before independent practice is an ethical and professional requirement.

CONCLUSION

Aesthetic vaginoplasty is a rapidly growing field of gynecological practice that currently operates without validated clinical guidelines. This consensus statement by PETKOZ establishes the first national expert-based framework governing patient selection, surgical technique, perioperative management, complications, and outcome assessment for these procedures in Turkey. The central message of this consensus is that aesthetic vaginoplasty must be approached as a functional surgical procedure first and a cosmetic one second. The protection of neurovascular structures, the prevention of dyspareunia, the preservation of vaginal axis and diameter, and the alignment of surgical outcomes with patient expectations are non-negotiable standards regardless of the indication. No surgical decision should be made without structured preoperative evaluation. Standardized validated outcome instruments must replace the currently fragmented measurement landscape. This statement does not substitute for high-quality evidence, which the panel unanimously identified as the field's most urgent need. It is intended as a practical guide for clinicians implementing aesthetic vaginoplasty in Turkey until that evidence becomes available, and as a foundation for the standardization of practice that will make generating such evidence possible. The trajectory that this consensus defines, toward evidence-based patient selection, functional outcome preservation, ethical practice, and multidisciplinary care, is not merely a description of current best practice but a statement of direction. Aesthetic vaginoplasty will become a credible and internationally respected surgical discipline only when its practitioners commit to measuring what they achieve with the same rigor they apply to achieving it, when patients are protected by robust screening from procedures they would not benefit from, and when the surgical decision is guided by functional anatomy rather than aesthetic expectation. This consensus is offered as a step toward that standard.

Plans for Updating

This consensus statement is intended to be a living document, subject to formal review and revision as new evidence becomes available. Given the expectation of new data from ongoing prospective studies, national registry initiatives, and emerging comparative trials in aesthetic vaginoplasty, PETKOZ plans to conduct a formal update of this statement within three years of its initial publication date. An interim literature review will be conducted on the first anniversary of publication to identify newly published high-quality studies that may warrant expedited modification of specific recommendations before the scheduled full update. Areas most likely to be revised in the near term include the management of perioperative logistical variables that did not reach consensus in the present process, the role of energy-based adjunctive devices as evidence from randomized controlled trials matures, and the integration of objective laxity assessment tools if validated instruments become available. The updated statement will be subject to the same modified Delphi methodology, expert panel selection criteria, and consensus threshold applied in the present document. Efforts will be made to expand panel composition to include multidisciplinary representation from pelvic floor physiotherapy, sexual medicine, and clinical psychology in future iterations, and to incorporate patient-reported priorities through structured consultation with patient advocacy groups. Clinicians and institutions are encouraged to consult the PETKOZ Association for announcements regarding updated recommendations and supplementary guidance as they become available.

Footnotes

Authorship Contributions

Surgical and Medical Practices: O.D., M.Y., A.E.K., E.Ç., P.K., E.H.C., Concept: O.D., M.Y., Design: O.D., M.Y., Data Collection or Processing: O.D., M.Y., A.E.K., E.Ç., P.K., E.H.C., C.A., E.A., K.B., M.B., P.B.İ., S.B., S.B.K., Y.C., T.D., M.E., S.E., G.G., S.H.K., Ü.K.D., O.K., C.K., Ö.L., A.M., N.P., H.Ş., M.B.Ş., A.S., İ.S., Ö.T., E.U., Analysis or Interpretation: O.D., M.Y., A.E.K., E.Ç., P.K., E.H.C., Literature Search: O.D., M.Y., A.E.K., E.Ç., P.K., E.H.C., Writing: M.Y., P.K.

Conflict of Interest: Six authors of this article, Ozan Doğan, Murat Yassa, Eray Çalışkan, Sevtap Hamdemir Kılıç, Aşkı Ellibeş Kaya, Mehmet Baki Şentürk are members of the Editorial Board of the Anatolian Journal of Obstetrics and Gynecology Research. However, they did not involved in any stage of the editorial decision of the manuscript. The editors who evaluated this manuscript are from different institutions. All other authors declare that they have no conflict of interest.

Financial Disclosure: All those involved in the development of this guideline were unpaid volunteers and receive no direct funding for their work in producing the guideline.

Supplementary Materials 1-4: https://d2v96fxpocvxx.cloudfront.net/f6118de3-f656-440d-95f2-50c620149951/content-images/f497811d-b07d-40f6-8fb0-875b40d39962.pdf

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