Contemporary dentistry is, first of all, characterized by diverse accelerated development, owing to improvements of information and other technologies, as well as the development of dental materials (shape-memory biomaterials, nanomaterials, biomaterials for application in tissue engineering, etc.). Expert doctrinaire attitudes move from the direction of operative interventions, whereby disease and acute symptoms are primarily treated, towards the strengthening of oral health by minimally invasive procedures. A particular place in patients’ total rehabilitation belongs to numerous esthetic procedures which, to a large extent, make up a wants-based service, led by the patients’ needs and affinities.

This paper deals with differences between cosmetic and esthetic dentistry. The complexity of esthetic dentistry, which favors therapy with the change of function parameters in care for the patient, is emphasized. On the other hand, more attention is paid to the need to know and respect ethical and marketing principles that follow any activity of dentists, starting from the first contact with the patient, the selection of certified materials, to the implementation of the appropriate treatment plan.

Well-directed communication and comprehensive awareness of the patient, the use of the visual analog scale, consideration of realistic resources in therapy, and the acceptance of de Bono model of adopted parallel thinking are determinants which help dentists define a problem adequately, find quality solutions, open alternative solutions, and reduce the potential risks in patients’ therapy.

**Keywords:** esthetic dentistry; cosmetic dentistry; ethics; marketing

Dental practice has been dramatically changed in the last 30 years. Many analysts call these changes a real revolution, but a revolution always denotes current and essential changes. However, tumultuous development of dentistry could rather be characterized as an evolutionary, gradual progress, supported by different factors. It should be emphasized that the present practice, implemented by an increasing number of practitioners, engendered from situations in which solely acute symptoms are treated, as well as operative interventions, whereby the disease is rehabilitated (needs-based service).

Nowadays, a significant emphasis is put on preserving and strengthening oral health by minimally invasive procedures, whereby patients are, to a large extent, treated with respect to their wishes and expectations (customer-driven, wants-based service). Patients have open access to information on overall health, and increased awareness of their problems results in numerous questions and great expectations. Attractiveness and youthful appearance represent a part of the vitality of an individual and a symbol of personal success. In addition, the development of different modern restorative systems makes everyday application more complex, creating new possibilities in esthetic dentistry. The point that should be considered with much care is the fact that most information accepted by patients originates from mass media, not from professional authorities. This undoubtedly increases unrealistic expectations of patients, discrediting the rational and possible therapeutic results.

Modern trends favor esthetic dentistry in its complete expansion with a colorful range of processes and procedures demonstrated by everyday practice. Only one simple, inevitable didactic question for the profession remains open – what dentistry is non-esthetic?

According to the above mentioned statements, the purpose of this paper is to point out the differences in understanding the concepts of cosmetic and esthetic dentistry, discuss the ethical quality of procedures and therapeutic modalities present in esthetic dentistry, and to explain in a critical manner the importance of marketing in dentistry practice.

**ESTHETIC OR COSMETIC DENTISTRY**

It must be admitted that there is confusion in terms and essence of perception of esthetic and cosmetic dentistry. This is due to the fact that there is an overlap of different aesthetic and cosmetic treatments, and to the fact that esthetic and cosmetic procedures in medicine, particularly in surgery, are defined as cosmetic practice.

It is useful to familiarize ourselves with the etymology of the words esthetics/esthetic and cosmetics/cosmetic. The noun ‘cosmetics’ de-
rives from the Greek word 'kosmetike', which means 'the art of dressing and decoration', while the adjective 'cosmetic' derives from the Greek word 'kosmetikos', which means 'the skill of decorating and ornamenting' or a superficial touch-up of the face and body in order to presents oneself as better, more beautiful, and more impressive [1, 2, 3]. The word 'esthetics' is of similar origin (the Greek word 'aisthetikos') but means 'sensitive', 'perceptive.' Esthetics also represents the branch of philosophy concerned with beauty as a quality determined by all that satisfies senses, realized by line, color, shape, proportion, gesture, behavior, and attitude. Therefore, the concept of esthetics is more complex than the concept of cosmetics, which implies that esthetic dentistry is more comprehensive and more complex than cosmetic dentistry.

When it comes to treatment of patients, cosmetic treatment would be the treatment that includes reversible procedures undertaken to provide the so-called optimum patients' appearance, which is sociological, cultural, and limited in time. Thus, the diagnostic composite mock-up, which directly polymerizes with non-etched surface of the teeth enamel, and provides the assessment of the future reconstruction, could be considered a cosmetic treatment. Used in this way, it is temporary, superficial, reversible, and does not damage or changes the structure of supporting tissues. On the other hand, esthetic procedures are adapted to the individual priorities of patients. They are dynamic, coordinated to the expectations of patients, their subjective criteria, but with morphophysiological determinants. It seems that the creation of a patient's smile by appropriate restorations represents the most controversial segment in dentistry. There are data stating that out of 10 dentists who assess a patient's attractiveness of smile, 11 different answers can be obtained, starting from therapists favoring natural appearance to those who point out the beauty of artificially designed compositions [4, 5, 6]. Also, the fact is that the existence of trends and determinants in culture inevitably leaves a mark in the dentistry practice.

It can be stated that procedures in cosmetic dentistry repair patients' appearance only, without changing or enhancing the function, while treatments in the domain of esthetic dentistry imply the application of biological parameters and procedures by which the patients' ideal form, function, and appearance with long-standing effects is achieved [7]. However, in practice, cases that imply esthetic and cosmetic procedures with the same objective are frequent, so that their practical interweaving can still seem confusing.

Terminological ambiguity often leads to a deeper confusion, where 'cosmetic' and 'esthetic' are understood as 'beautiful.' In addition, the subjective aspect should be added, by which, for example, very white teeth are deemed a feature which makes an individual attractive, and, therefore, whitening protocols are the domain of esthetic dentistry. Alternatively, such a view of things seems variable, because it has beautifying as the sole objective, and therefore is of cosmetic character. Finally, it must be admitted that different starting attitudes are personal choices and may be deemed neither right nor wrong. Perhaps it is more to point out the need of observing esthetic dentistry as a bioesthetic discipline which emphasizes the beauty of living beings and things in their original forms and functions [1].

ETHICS IN ESTHETIC DENTISTRY

Ethics is a branch in philosophy dealing with study and analysis of moral values, which essentially means the standardization of practical life effects of humans [8]. It is deemed that ethical considerations related to procedures indicated and realized in patients' esthetic rehabilitation are extremely complex and severe. Such complexity is the result of a large number of problems that become obvious by examination, while the severity reflects in the different perception of patients addressing the therapists. Numerous real dangers should be added to this sensitive field, where the facts are rarely perceptible. Sometimes it is possible to quickly notice the physical problem, but more frequent is the situation in which the cause that brought the patient to the doctor remains unclear. In addition, it seems that this group of patients is not average, and it is not easy to discern their wishes, aspirations, and expectations. Changes brought by 'the new teeth and new appearance' have an improving effect on the quality of life, i.e. easier selection of a partner, or easier access to better paid jobs, in general making people happier. Such patients' contemplations should be respected, but marked and practically implemented only within the limits of what is realistic and agreed upon.

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In general making people happier. Such patients' contemplations should be respected, but marked and practically implemented only within the limits of what is realistic and agreed upon.

Prior to the patient's consent, it is ethical to inform him/her about potential risks and consequences borne by the selected esthetic procedure. This primarily refers to indications that require creating ceramic and metal-ceramic dental crowns and bridges as complex esthetic and functional solutions. Particular attention should be paid to young patients, in whom solutions that are "more aggressive" can result in unfavorable future effects. There are data showing that in patients younger than 30 years of age such treatments cause numerous complications [6, 9]. Failure to familiarize the patient with the data on the quantity of tooth substance that will be removed in tooth preparation to accept, for example, ceramic restoration is
deemed unethical. In such cases, there is around 20% risk that the pulp will be damaged or that abscesses or painful sensibility will appear, while the patient’s reactions can be anger, disappointment, or lawsuits [10]. Subgingival localized demarcations of preparation, and consequential recession around artificial crowns, particularly in patients with a thin gingival biotype, are also realistic complications with poor esthetic outcome to which the patient should be warned prior to the beginning of treatment.

Unfortunately, destructive (esthetic) procedures without real cause, with unethical biological scenario, are sometimes unjustifiably advised to patients. In the profession, attitude by which teeth are depicted as parts of a group are well known. In the reconstruction of a single central incisor it is not uncommon to perform restoration of the neighboring incisors without real cause. Sometimes, all incisors are reconstructed with the same material during one session to achieve the effect of group esthetic matching. Such situations can often get out of hand and therapists-enthusiasts easily expand their philosophy to canine teeth and the lateral teeth region. It is not uncommon that teeth from the first molars on one side to the first molars on the other side are fitted with porcelain veneers as a popular esthetic modality with uncertain model of occlusion. Recently, “non-aggressiveness” of porcelain veneers has been criticized when a tooth should be sacrificed due to minimum malposition or a group of teeth should be sacrificed in order to attain a wide buccal corridor, which is not considered a natural esthetic quality. Such indications are characterized as “cosmetic crime” and are deemed unethical procedures. In addition, researches following the described trend are short-term, insufficiently objective, and frequently sponsored by dental manufacturers [5, 10, 11]. An even more dramatic example is “forced” implant placement (previous pretreatment in further prosthetic therapy) of appropriate manufacturers followed by insufficiently verified clinical certification.

In search of proper communication with patients whose esthetic problems are in their own focus, it is useful to ask some questions and consider their attitudes through objective self-evaluation of the desired treatment. To what extent dental tissues will be “scarified” by the appropriate esthetic protocol and what will remain for possible reconstructions (self-preservation), will the recommended treatment of teeth improve their appearance (self-improvement), and has the objective of the implemented destructive therapy on teeth brought an esthetic change of smile and face (self-destruction) – these are the questions that should be answered by the patient during discussion. Unfortunately, awareness of possible side effects and later consequences of esthetic therapeutic procedures, which is in close relation with the wide variety of information in dental advertising brochures neglecting this aspect of notification, often do not exist in patients.

In everyday practice, it would be useful to adopt and use the possibility that the patient himself/herself puts forward his/her system of values concerning several essential questions. The visual analogue scale (VAS) is a known instrument of esthetic analyses in scientific researches; however, it is rarely used in routine work. The essence is to obtain brief visual answers on the scale from 1 to 100, where the patient’s personal attitude to asked questions is demonstrated through the following positions: not important, important, and very important. The VAS scale questions are similar to those already mentioned, when the patient thinks about the importance of existence of strong and healthy teeth, about the possibility that teeth appear more beautiful, and about methods to avoid major damage to teeth as well as possible future complications. An addition includes questions representing the patient’s concern regarding teeth color and position. Potential conflict between the patient’s wishes and clinical reality is the situation which is discussed in detail and confirmed in writing prior to starting the therapy.

In order to find the best compromise between esthetic solutions which unite patients’ desires and sophisticated professional therapy with minimum biological complications, it is necessary to answer in a critical manner these open questions: 1. What is the benefit of the proposed therapy, and how great are the risks?; 2. What are realistic problems that follow the appropriate esthetic modality?; 3. What are the real motives that determine the therapy?; 4. Is the realistic description of the procedure and long-standing effects that the patient can expect given?; 5. Are there alternatives for the proposed therapy?; 6. What are material costs?; 7. What are the possibilities of correction/change if the treatment gives rise to unforeseen developments?; 8. Does the doctor propose the same treatment to himself/herself and his/her loved ones if he/she is in the role of the patient? [12].

The fact is that the public, as well as every patient, expects appropriate service from dental profession. Observance of ethical standards within the profession is deemed dentists’ basic duty, with emphasis on elementary principles of preserving health: to do good, work in the best interest of patients (beneficence), and not to harm the patient (non-maleficence). Essentially, a set of ethical principles, bearing moral prefix, determines the behavior of the profession in solving patients’ esthetic problems. Having free framework of the most important determinants, ethics nevertheless differs from law, but also from absolute freedom in activities, and is described as “devotion to inapplicable” [12]. In the profession, ethical behavior is deemed mandatory, not optional.

Almost every decision, diagnosis or set-up indication in esthetic or cosmetic segment bears the ethical and legal component. Though there are cultural specificities, specifically within races, it seems that there is a largely established hegemony in creating very white teeth arranged in the ideal composition without pronounced individuality of each tooth. It should not be forgotten that the social codices in the modern world have been changed, compared with the past, and the loss of teeth is no longer accepted as a sign of natural aging, but as a situation which is prevented or successfully solved in different accessible ways. There is a consideration that cosmetic dentistry in its “noninvasiveness” is a great threat to the preservation of health of natural teeth [12].
MARKETING IN ESTHETIC DENTISTRY

Viewing inevitably present marketing postulates, it should be pointed out that there are complex relations in social couplings between dental science and practice, which additionally contribute to confusion, foremostly in patients [13]. Apart from esthetic criteria, which are inherited or acquired through the influence of the environment, dentists and patients (directly or indirectly) are being satiated with numerous recommendations they receive from mass media and guerilla actions of corporative marketers. Mass media through contents in different forms (announcements, advertisements, recommendations, testimonies, presentations, etc.) launch information which is most often the result of paid campaigns of corporations or organizations aiming at earning profit. All other guerilla actions relate to numerous alternative methods whereby the patient is reached through an intermediary – a dentist or a dental technician. These actions are sometime foreseeable (they include workshops, accompanying programs on symposiums, distribution of flyers and other material), and sometime quite innovative.

Surrendering to such information, patients, thinking that they make decisions on certain desirable characteristics (appearance of their teeth) independently, in fact implement the dictated instructions [14]. This takes place on two levels: the first one is clear, perceptible, aware of the plan, and the other very subtle, subconscious, and emotional [15, 16, 17]. By these messages, the intelligence or differentiation of patients’ is in no way diminished; the messages simply appeal to parts of personality that are not cognizable [18, 19].

Thus, marketing (as science, discipline, philosophy, theory and practice, aiming at market research, recognition or creation of needs, design of products, goods, services, information, and all-comprehensible, satisfying determined needs, promotion, marketing, and sale at a certain price) and ethics joined together imply relatively simple cognition: that all processes of research, creation, and marketing of services/products must be conceptualized and realized to the benefit of all involved parties [8, 20, 21, 22].

Taking into account that all technological innovations and advanced possibilities of digital media change the nature of interaction between dental companies and dentists, today it is possible to communicate with a patient by name and surname, to develop long-term relations with him/her, to forge partnerships, and to enable him/her to come to therapy whenever it suits him/her. In digital strategy, it is known as ‘Martini principle’ – anytime, anywhere, anyhow. In addition, digital channels enable new interventions that simply could not exist without the Internet. Interactivity and real-time dialog created the digital marketing – more flexible, more precise, and more measurable than the traditional one. Also, new technologies have brought new possibilities: marketing specific for the location of the message recipient, a completely new method of interaction in markets, and the movement of advertising from the model called ‘interruption marketing’ (‘interrupts’ uncalled into our life) to the so-called ‘permission marketing’ (in which we give permission so that the advertising message we want can be sent to us when we want it) [23].

The interweaving of ethical and marketing spheres is regulated by law (the Law on Advertising), standards, and codices, but corporations, dental companies, private doctors’ offices, clinics, and creative individuals are given certain freedom in representing and advertising [24].

Nowadays, the research of pathology and oral health includes systematic collecting, registering, and analyzing of available information on patients, identifying possible solutions and potential added problems (Figure 1). Consequent examinations in the sphere of presenting esthetic dentistry lead to the following three conclusions:

1. The application of simple but aggressive marketing tools, which are on the one hand directed at dentists and on the other one at patients, is observed. By lobbying and exposing to constant activity of promoters and training on courses and workshops, companies inspire the primary target group, dentists, to become dominant leaders (opinion leaders), who thereby obtain exclusivity (or an illusion thereof in the domain of prestige, the public, visibility, popularity) in certain markets [25, 26];
2. The secondary target group, patients, attain the digest version of services in commercials (toothpastes, antiseptics, denture adhesives, etc.) with permanent pressure that lifestyle is determined not only by healthy, but white, evenly spaced teeth which form the charming smile (Hollywood or Bollywood film stars). Information is offered by attractive photographs / visual content, and important facts are brushed aside (e.g. inscriptions at the end of commercials in small letters, or fast pronunciation for the purpose of shorter duration of commercials, and therefore lower price);

3. Dental companies, dealing with the production of dental materials implement very short researches (e.g. frequent one-year retrospective studies, instead of desirable years-long prospective studies), rebranding the existing products and changing only some particular ingredients. Due to aggressive campaigns of marketing “new” products in the market, by general hyperproduction, companies overwhelm specialists, who heavily follow fast, more formal than essential, changes of trends. The most frequent outcomes of such a strategy in practice is either hanging on to one manufacturer or consuming seemingly the most attractive or the most accessible product in an utterly unfair competition.

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In this direction, one of the useful models of parallel thinking is de Bono model of Six Thinking Hats. The model explains the possible strategy of mental thinking through processes of hat color by the use of different tools [29]. With all dilemmas, it should be concluded that a positive shift of the complete dental profession is present, which, by developing and changing known attitudes, puts a focus on respecting wishes and needs of patients [30].

Alike, esthetic dentistry, largely marketing oriented, bears an obligation of the therapist to recognize the patient being uninformed, familiarize him/her with different cosmetic and esthetic procedures, really point out possible negative consequences of proposed therapeutic modality, and propose the most optimum therapy.

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Етика и маркетинг у естетској стоматологији

Косовка Обрадовић-Ђуричић1, Тијана Ђуричић2, Весна Медић1, Катарина Радовић1

1Универзитет у Београду, Стоматолошки факултет, Клиника за стоматолошку протетику, Београд, Србија;
2Нова академија уметности, Београд, Србија

САЖЕТАК
Данашњу стоматологију карактерише убрзани развој захваљујући унапређењу информационих и других технологија, као и развоју данашњих материјала (биоматеријали са меморисаним обликом, биоматеријали, наноматеријали, биоматеријали за примену у ткивном инжењерингу и др.). Стручни доктринарни ставови крећу се из правца оперативних интервенција, којима се привремено санирају болест и акутни симптоми, ка јачању оралног здравља малом инвазивним поступцима. Посебно место у свеукупној реабилитацији болесника припада бројним естетским процедурама, које у великој мери чине праксу вођену потребама и афинитетима болесника. У раду се дискутује о разликама у поимању козметске и естетске стоматологије. Наглашена је сложеност естетске стоматологије, која даје предност терапији са променом функцијских параметара у збрињавању болесника. С друге стране, акценат се ставља на потребу познавања и поштовања етичких и маркетинга нарочито важних за сваку активност лекара, почев од првог контакта са болесником, одабира сертификованог материјала до реализације одговорна терапијског плана. Добро усмерена комуникација и своебудна информисаност болесника, употреба БАС скале, као и сагледавање реалних ресурса у терапији одреди не ради помажу стоматологу да дефинише проблем на прави начин, изнађе квалификације решења, отвори альтернативне оптималне и смање могуће ризике у терапији болесника.

Кључне речи: естетска стоматологија; козметска стоматологија; етика; маркетинг