COSMETIC DERMATOLOGY

A GENERAL GUIDELINE

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Financial Disclosure

- Allergan – Advisory Boards, Trainer, Shareholder
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Opportunities in Cosmetic Dermatology > $30 Billion Annually

The Global Medical Aesthetic Market is Expected to Post Growth of 12.1% per Year from 2014 to 2019

<table>
<thead>
<tr>
<th>Market Segment</th>
<th>CAGR 2014 - 2019</th>
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<tbody>
<tr>
<td>Energy-Based Devices**</td>
<td>9.3%</td>
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<tr>
<td>Skin Tightening and Body Shaping**</td>
<td>13.6%</td>
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<tr>
<td>Neurotoxins</td>
<td>8.2%</td>
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<tr>
<td>Dermal Fillers</td>
<td>10.5%</td>
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<tr>
<td>Chemical Peels</td>
<td>3.7%</td>
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<tr>
<td>Liposuction</td>
<td>2.3%</td>
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<tr>
<td>Breast Implants</td>
<td>3.9%</td>
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<tr>
<td>Physician-Dispensed Topicals</td>
<td>8.9%</td>
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<tr>
<td>Emerging Products</td>
<td>67.6%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>12.1%</strong></td>
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** note: device platforms only; does not include disposable components
Who are the Pioneers? A Critical Analysis of Innovation and Expertise in Cutaneous Noninvasive and Minimally Invasive Cosmetic and Surgical Procedures

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BACKGROUND Few studies illustrate the contributions made by various specialties in pioneering commonly performed noninvasive and minimally invasive cosmetic and surgical procedures.

OBJECTIVE To evaluate the contributions made by various specialties in pioneering noninvasive and minimally invasive cosmetic and surgical procedures.

MATERIALS AND METHODS Key words using the Medical Search Headings Database were used to query in the Thomson Reuters Web of Science Database. The 25 most highly cited studies were sorted according to the citation number. The author specialty was identified and assigned scores based on the number of citations.

RESULTS Dermatology was identified as the specialty with the greatest contribution to botulinum toxin treatments for rhytides, injectable fillers, laser treatments, chemical peels, and noninvasive body contouring. Neurology was identified as the leading specialty in botulinum toxin treatments for hyperhidrosis, and vascular surgery was identified as leading specialty in sclerotherapy. Plastic surgery was identified as having made the greatest contribution to hair transplantation, and liposuction.

CONCLUSION Dermatology was identified as the leading specialty for the majority of noninvasive and minimally invasive cosmetic procedures. Other specialties have also contributed important literature to this area.

The authors have indicated no significant interest with commercial supporters.
My personal transition from a General/Surgical Dermatologist to Solely Minimally Non-Invasive Surgical Cosmetic Dermatologist

Why Solely Cosmetic Dermatology?
- Scheduling
- Insurance reimbursement
- Staff responsibilities and personalities
- Reducing liability
- IQ & EQ
- Artistic Purposeful Practice
Who or what defines beauty?

Evolution dictates our perception of beauty as a way of improving offspring viability.

Attractiveness are “hard wired” into our brains; beauty is not defined by popular culture.

Features that are regarded as beautiful in all cultures:

- Clear skin may connote a healthy, clean, parasite-free body.
- In females, a waist to hip ratio of 0.6 implies fertility and well-nourished bodies.
- Proportionate facial symmetry is a universal feature deemed attractive.

The Impact of Cosmetic Dermatology on Our Patients

Research has documented that in our society, physical appearance has a large impact on how individuals are perceived by others.

- **Attractive** receive preferential treatment in education, employment, medical care, legal proceedings, and romantic encounters that often result in their being happier, more successful, more socially adept, and more sexually fulfilled than others.

- Above average in attractiveness earn more money.

- Attractive appearance promotes psychological well-being.


The subliminal difference: treating from an evolutionary perspective.

Beauty serves as a subconscious form of communication, signaling our health, vitality, and ability to reproduce.

Processed in primitive neural pathways in the amygdala and posterior cingulated cortex.

Most appropriate treatments?

- Surgical treatments vs. nonsurgical vs nothing at all

Obvious cosmetic interventions may be counterproductive interfering with the subconscious message.

Patient’s Motivation for Treatment

The face is the focus of human interactions and emotional expressions.

Their appearance is not communicating their emotions, age or health status properly.

It’s for those who simply want to look their best.

Appearances profoundly affect self-esteem.


Non-Surgical Cosmetic Dermatology
Treatment Result
Non-Surgical Cosmetic Dermatology Treatment Result
Non-Surgical Cosmetic Dermatology Treatment Result
Non-Surgical Cosmetic Dermatology Treatment Result
You are the Doctor, treat like it

Diagnosis and treat

Faces and bodies are 3D
  the mirror is 2D, use photos as a 3D tool to educated

Don't treat for the mirror symptoms
Use photos of frontal view, 45° view, side view, and animation for face to decide treatment plan and pt. education.
Treatment Plan Goals

- Improve Skin Quality and Texture
- Reduce uneven pigment and "age spots"
- Reduce Wrinkles (rhytids)
- Reshape for lost volume
- Reduce sun damage
- Reduce Benign tumors
- Reduce Scars
Understanding the aging face
Understanding the aging face

The shape of the aging face shifts from a Triangle to a Pyramid
Full understanding of anatomy is imperative for proper evaluation, treatment and safety.
Facial soft tissue deterioration most dramatic between the ages of 30 and 60.

Soft tissue augmentation and volume correction in these areas is strategic for aesthetic treatment.
Golden Ratio, Phi
1.618:1: 0.618

Natures mathematical artistic brush stroke

Fig. 8. Marquardt's female and male Golden Masks (www.beautyanalysis.com).

"BeautiPHIcation"

Fig. 36. Phi proportions in the face (see text). Green, x; blue, 1.618x (Phi x); black, 0.618x (phi x); orange, 0.382x (phi² x). Lip width of Phi correlates with a vertical line (dotted white line) dropped from the medial iris.

Fig. 37. Phi proportions in the lip (see text). Philtral columns are located just medial to the peaks of Cupid's bows.

Non/ Minimally Invasive Cosmetic Procedures Tools

- Botulinum Toxin – for rhytids (wrinkles) and Hyperhidrosis
- Injectable Fillers
  - Hyaluronic acids
  - Calcium hydroxyapatite
  - Poly-L-lactic acid
- Noninvasive Fat removal/ Cellulite treatment
  - Cryolipolysis
  - Deoxycholic Acid
- Absorbable Suture “thread lifting”
- Chemical Peels
- Lasers/Energy Devices
- Hair Transplantation
- Sclerotherapy
Patient Satisfaction and Efficacy of Full-Facial Rejuvenation Using a Combination of Botulinum Toxin Type A and Hyaluronic Acid Filler in Dermatologic Surgery 2015 by M. Beatriz MD et al.

Treatment of a single facial area may often be suboptimal

Greater than 96% of subjects were satisfied with the full-facial aesthetic outcome at 3 weeks and approximately 93% at 6 months..

95% of subjects reported that they would recommend injections to family or friends and that they would like to receive the same treatment again.
Injections Combined Approach

Neurotoxins- relaxes muscles lasts 3-4 months usually used in upper 1/3rd of the face, but excellent for neck and less often used in lower 1/3rd of face

Hyaluronic acids- multiple types available that fit many uses to manipulate shapes and wrinkles, huge advantage is it is reversible

Poly-L-lactic Acid- causes tissue growth stimulation also used to manipulate global shapes and wrinkles, more advanced techniques

Calcium Hydroxyapatite- implant like material

Neurotoxins

Currently 3 FDA approved Neurotoxins
OnabotulinumtoxinA
AbobotulinumtoxinA
IncobotuliniumtoxinA

Long History of safe and effective treatments, both in Cosmetic and Medical treatments

Has been a gateway drug to other cosmetic treatments

Relaxes muscle action and sweating to targeted treatment area for approximately 3-4 months in the Cosmetic arena

Awaiting FDA approval for longer lasting toxin…
Most Common Fillers Modify Shape and Wrinkles
Hyaluronic Acids (HAs)

Most commonly FDA Approved filler used today in the US

Hyaluronic acid is a type of sugar (polysaccharide) that is present in body

   Combines with water and swells when in gel form, causing a smoothing/filling effect.

Chemically modified (crosslinked) to make it last longer in the body.

Most available HAs have lidocaine added to reduce discomfort.

The effects of this material last approximately 6 – 12 months.
Hyaluronic Acids

Huge Advantage is its safety and reversibility

More unique properties for different approved brands allowing for better treatment options and outcome

- Lifting ability
- Flexibility in dynamic motion
- Duration
- Tissue integration
- Swelling ability
- Softness of textural changes
Hyaluronidase – How to treat SEs

Rescue

Used as a rescue injection in large quantities (200 units plus) if HA is accidentally injected into a vessel causing an occlusion which lead to tissue necrosis and/or even potentially blindness.

Small HA papules

Used in smaller doses (20 units) it can be used to correct small quantities of HA that may be creating a abnormal or unattractive outcome.
Hyaluronidase – How to treat SE
Poly-L-lactic acid (PLLA)

Poly-L-lactic acid (PLLA): PLLA is a biodegradable, biocompatible man-made polymer. This material has wide uses in absorbable stitches and bone screws. PLLA is a long lasting filler material that is given in a series of injections over a period of several months. The effects of PLLA generally become increasingly apparent over time (over a period of several weeks) and its effects may last up to 2 years. Tissue Stimulator (collagen synthesis) giving a global filling Effects are not reversible
Calcium Hydroxylapatite is a type of mineral that is commonly found in human teeth and bones.

FDA approved for wrinkle filling in the face or for the hand.

The effects of this material last approximately 18 months.

While in the body, calcium hydroxyapatite will be visible in x-rays and may obscure underlying features.

Not reversible
Examples of Before and After's
Neurotoxin & Poly-L-lactic Acid
Cheek Enhancement Hyaluronic Acid
Full Face
Hyaluronic Acids
Poly-L-Lactic Acid
Neurotoxin
Lip and Chin Enhancement with Hyaluronic Acid
Full Face
Neurotoxin, Poly-L-lactic acid, Hyaluronic Acids
Neurotoxin and Poly-L-lactic acid
Eye (tear trough) Hyaluronic acid
Hyaluronic Acid...

In the Nose
Treatment....?

HA in the Chin
Previously fillers were injected with sharp needles producing various undesirable effects such as pain, bleeding, hematomas, edema and inflammation.

Cannulas are tubes that can be used to administer products into the body and have blunt tips.

Cannula use allows for a significant reduction in these undesirable effects.

There is now a FDA approved HA filler used for lip enhancement using a cannula.

Needles vs Cannula
Energy-Based Devices & Body Contouring

Devices are the most costly investment in a cosmetic practice and serve very specific goals.

Lasers, Radiofrequency, Ultrasound are the most common devices

The goal is to target specific tissue parameters to even out the surface irregularities, skin and aging discolorations and to tighten tissue.

Excellent necessary modalities for a Cosmetic practice

Very operator dependent and results tend to vary based on downtime

Fat Reduction and Cellulite treatments
Focused Ultrasound

Non-invasive therapeutic focused ultrasound for lower face
Fractional CO2 Resurfacing & Radiofrequency via Micro-needling

Before

9 days post tx

30 days post tx
Cryolipolysis
Non-Surgical Permeant Fat Reduction

An innovative way to contour your face and body by freezing unwanted fat away with no surgery or downtime. Currently more than 6 million treatments have been performed worldwide.

Technology safely delivers precisely controlled cooling to gently and effectively target the fat cells underneath the skin while leaving the skin itself unaffected.
Cryolipolysis

FAT FREEZING DURING THE COOLSCULPTING PROCEDURE
3 sessions Cryolipolysis Torso
Male Torsos 1 Cryolipolysis Session
1 session Chin Cryolipolysis
1 session Chin Cryolipolysis
Inner thigh & Buttocks Cryolipolysis
Respecting facial anatomy and natural proportion are key

- Golden Ratio
- Fill 3D not 2D (Don’t fill for the mirror)
- Know when to say NO

Make it a partnership for restoration and then a maintenance treatment plan

- A treatment plan allows patient’s realistic expectations to be realized within budgetary parameters.
- A combination modality is a better method to meet patients expectation
- Schedule on going maintenance treatment plan
Is Cosmetic Dermatology Right For You?

Cosmetic vs non-cosmetic practice

- Doing aesthetics is a sub-specialty and should be treated as such, just like Mohs or Dermatopathology
- Practice time constraints
- Staff support
- Physical office layout – esp. in a more competitive market

Motivation and Self Reflection

- Helping your patients be the best they can be?
- Revenue stream that is not dependent on Insurance reimbursement?
- Your own personality
References


Dayan SH, Atkins JP. The subclinical difference: treating from an evolutionary perspective. Plast Reconstr Surg 2012;129:189e–90e.

Dermal Fillers Approved by the Center for Devices and Radiological Health U.S. FOOD & DRUG ADMIN (FDA). www.fda.gov.


