# Jonathan D. Hall, MD, FACS Board Certified Plastic Surgeon

The patient decision aid (PDA) for breast augmentation:

This PDA has been developed by the Aesthetic Society of Plastic Surgeons to improve the informed consent process for women 18 years of age and older who are considering breast augmentation for the first time. This written framework is meant to help prepare you to understand the decisions that need to be considered before breast augmentation.

It will help to educate you on the information needed to make the right decision for you

It will help to identify your goals, values, and preferences that are most relevant to each decision and provide you with a framework to clearly communicate them to your plastic surgery team.

Dr Hall recommends that you print this pdf and review it before your first office visit

It is broken down into 5 color coded sections that will help to guide you with such important questions as:

- \* How should you prepare for decision making?
- \* Is plastic surgery right for you?
- \* Should you have breast augmentation surgery?
- \* What questions should you ask your plastic surgeon?
- \* What are your next steps?

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# What is the purpose of this decision aid?

This decision aid is designed to **prepare you for decision-making** and to **facilitate shared decision-making with your plastic surgeon**, by helping to:

- *introduce* the **decisions necessary to consider** before primary breast augmentation surgery,
- educate you on the essential information you need to know to make each decision, and
- *identify* **your goals, values, and preferences** relevant to each decision and clearly communicate them to your plastic surgery care team.

# Who should use this decision aid?

#### This decision aid <u>is</u> for you if:

- You are a woman age 18 or older, and
- You are considering primary breast augmentation (enlargement) surgery with saline or silicone implants, for cosmetic reasons.
- *Primary* breast augmentation means you have <u>not</u> previously had a breast augmentation surgery.

#### This decision aid <u>is not</u> for you if:

- You are under the age of 18, or
- You are considering breast implant surgery for:
  - reconstructive purposes after breast cancer surgery,
  - o revision of a previous breast augmentation surgery, or
  - gender affirming male-to-female surgery.

Breast implant surgery for reconstructive, revision, or gender affirming reasons have different or additional information essential for decision-making but <u>not</u> covered in this decision aid, including options, risks, benefits, expectations or limitations.

# What content is and is not covered in this decision aid?

- This decision aid includes <u>only</u> the information considered essential for all patients to understand before surgery when considering primary breast augmentation surgery.
- This decision aid may <u>not</u> include information important to your individual decision-making process or relevant to your specific situation, such as information about certain treatment options, risks, or tradeoffs. This decision aid is not a replacement for consultation with a plastic surgeon.

# How should I use this decision aid?

Use this decision aid before and throughout the consultation and informed consent process with your board-certified plastic surgeon. It is structured to help you answer the following questions:

How should I prepare for decision-making?

Is plastic surgery right for me? Should I have breast augmentation surgery? What questions should I ask my plastic surgeon?

What are my next steps?

# How should I prepare for decision-making?

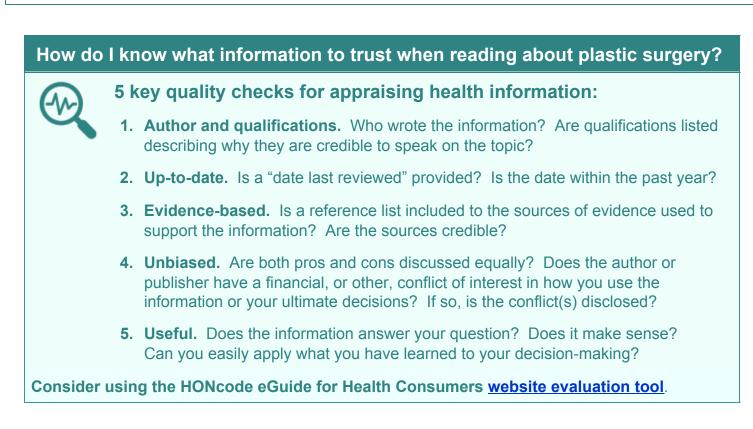
- Know what is expected of me in decision-making
- Know what information to trust about plastic surgery
- Verify my surgeon is board-certified or eligible by the American Board of Plastic Surgery

# Why is it important for me to actively participate in decision-making?

**My plastic surgeon cannot read my mind to know what I do and do not want.** Actively participating in decision-making means I need to know and clearly communicate with my plastic surgery care team:

- my specific concerns and goals for the result I want to achieve
- my values based on what risks and benefits matter most to me

Making sure my plastic surgeon and I have a clear understanding of my goals, values, and preferences can **reduce my risk of being unhappy with my surgical results**.





 Use the American Board of Plastic Surgery (ABPS) website <u>surgeon search tool</u> to verify board certification status

• Review <u>FAQs</u> about board certification

A **board-eligible** plastic surgeon has successfully completed the required training in plastic surgery (residency) and has an approved application by the ABPS to enter the board-certification process.

#### How should this inform your decision-making?

- Surgeon technique and judgement can increase or decrease your risk of complications.
- If your surgeon is <u>not</u> board-certified or board-eligible by the American Board of Plastic Surgery, he or she may <u>not</u> have completed the pre-requisite training needed to safely perform plastic surgery.

# Is plastic surgery right for me?

- Understand the general risks of surgery
- Consider factors that increase my risk of surgery and how I can reduce my risks

All surgery has important risks to consider. Some risks are general to surgery and others are specific to the type of surgery. The information presented in this patient decision aid does not include all possible risks, but rather the risks considered essential for all patients to understand before undergoing primary breast augmentation surgery.

## General risks of surgery

include anesthesia risks, deep vein thrombosis (DVT) and pulmonary embolism (PE).

Risk factors	<ul> <li>Smoking, or having a history of smoking, increases your general risk of surgery.</li> <li>Carefully review your medical and social history with your plastic surgery care team to identify and address any potential risk factors that may impact the safety of your surgery and your ultimate cosmetic result.</li> </ul>		
- Learn more about common risk factors, signs and symptoms, and how to prevent deep vein thrombosis (DVT) and pulmonary embolism (PE).			

# Should I have breast augmentation surgery?

- Clarify my cosmetic concerns, goals, and preferences
- Set realistic expectations for breast augmentation surgery and implants
- Identify the decisions, options, and what matters most to me when weighing the pros & cons

# Why am I considering breast augmentation surgery?

Work through the following questions to clarify your cosmetic breast concerns, goals, and preferences.

# What are my <u>cosmetic breast concerns</u>? Check ☑ all that apply to you.

My breasts are:

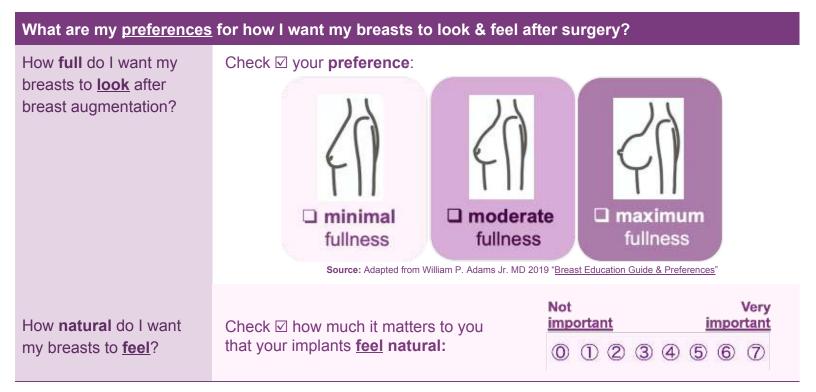
- Too small
- □ Not proportionate with my body
- Deflated after pregnancy or breastfeeding
- Uneven

- Not as firm as when I was younger
- □ Not as **full** as when I was younger
- Other cosmetic breast concern or concerns (please specify): \_\_\_\_\_\_

# What goals do I hope to achieve with primary breast augmentation? Check ☑ all that apply to you.

- Have a more balanced figure
- □ Increase the size of my breasts
- □ Make my breasts more symmetrical
- Restore volume:
  - Lost with aging
  - After weight loss
  - □ After pregnancy or breastfeeding

- Feel more:
  - Attractive
  - Confident naked
  - Feminine
  - Confident in how clothes fit
- □ Other (please specify):



It may be helpful to review before-and-after photos to get a general idea of what you do
 and do not like. Look for a before-and-after gallery on your plastic surgeon's website or ask their office. Choose photos of results with a similar body type to you.

I have a photo example of what I want my breasts to look like after surgery: Q Yes Q No

What do I need to know when deciding if breast augmentation surgery is right for me? Check ☑ items that you feel are most important to your decision-making process.

#### General risks of breast augmentation surgery include:

Bleeding, hematoma (a collection of blood), and infection		
<ul> <li>May require additional surgery (reoperation)</li> <li>Reoperations have additional risks. There are certain situations that require implants to be removed but not replaced.</li> <li>Complications following surgery may not be covered by your health insurance.</li> </ul>		
How to reduce your risk	<ul> <li>Follow your plastic surgeon's pre- and postoperative instructions and activity restrictions.</li> <li>Identify and address with your plastic surgery care team any risk factors specific to your medical history and lifestyle.</li> </ul>	
Change in nipple sensation including increased, decreased, or complete loss of sensation		
Potential consequences         • Nipple sensation changes may be temporary or permanent.		

#### **U** There are known and unknown risks of breast implants.

A **known, or true, risk** is defined and supported by scientific evidence of causation. A key example is *breast-implant associated anaplastic large cell lymphoma (BIA-ALCL)* with textured implants.

An **unknown**, **or poorly understood**, **risk** is **not** supported by scientific evidence of causation, but may still be a consideration for some patients. These risks **may or may not** be defined. For example, a wide spectrum of *systemic symptoms* have been reported by some women with both saline and silicone, smooth and textured surfaced breast implants. The true relationship between breast implants and these systemic symptoms has yet to be scientifically defined.

Current research shows that silicone gel breast implants **do not** increase your risk of *autoimmune illnesses* nor *connective tissue diseases*. However, breast implant manufacturers are required to list them as possible risks in the directions for use of breast implants.

#### Breast implants are not lifetime devices

It is likely you will need additional surgery related to your implants at some point in your lifetime.

Continue to follow-up with your plastic surgeon as recommended for **implant monitoring and maintenance** and if you experience any implant-related issues or concerns.

Expect future out-of-pocket expenses	<ul> <li>Health insurance plans likely will not cover any expenses related to your breast implants, including for any complications.</li> <li>Available financial assistance programs include implant manufacturer warranties and surgeon-specific cosmetic complication insurance.</li> </ul>
Long-term considerations	<ul> <li>Breast implants may impact breast cancer surveillance.</li> <li>Continue routine screening as recommended by your doctor.</li> </ul>

Reoperations for implant maintenance is expected and is not a complication.

#### What implants can and cannot do.

Implants increase breast size and expand the breast envelope. Minimal breast ptosis (drooping or sagging) can often be corrected with implants, but implants will **not** correct significant skin laxity or severe ptosis. There may be alternative or combination procedures for you to consider.

- A breast lift (mastopexy) may be appropriate to consider to reshape or lift the breasts.
- While not interchangeable with breast implants because the results are less predictable, **fat grafting** may be a reasonable alternative or addition to implants to add breast volume.
- Not having surgery is an option. Padded bras and inserts can be used to give the appearance of larger breasts without surgery.

Alternative or combination procedures have different or additional risks to consider beyond what is presented in this decision aid.

#### **Your cosmetic result is directly related to your anatomy.**

Understanding the limitations of your specific breast and chest wall characteristics is a key component of good preoperative planning and can help you to set realistic expectations.

Asymmetry	<ul> <li>100% of women have differences between their breasts (such as in size, nipple position, inframammary fold position, or chest wall anatomy).</li> <li>These differences will <b>not</b> be corrected, and breasts will never match.</li> </ul>
Cosmetic dissatisfaction	<ul> <li>You can expect that your results will change over time as your body changes, for example with pregnancy, weight change, and normal aging.</li> <li>Satisfaction with your implants may change over time and is not a complication.</li> </ul>

Implant style decisions For each option, check 🗹 if you have a preference.				
Decision #1: Implant <u>fill</u>				
Options:	Silicone     Saline			
FDA-approved for:	Women ages 22 and older Women ages 18 and older			
Key <u>risk</u> of implant rupture or deflation	Risk of "silent" rupture, meaning you and your surgeon will likely not be able to tell the implant is ruptured just by looking at or feeling the implant.	u and Saline implants will deflate partially or to tell completely if ruptured, so you will know		
Why is this important?	<ul> <li>Additional monitoring is needed with imaging tests, such as MRI or ultrasound, periodically over the lifetime of the implant.</li> <li>The cost of imaging tests will most likely be out-of-pocket.</li> </ul>			
There is more than	Silicone options	Saline options		
Implant style options vary by manufacturer.	<ul> <li>There are a range of silicone gel types and styles that range in cohesivity, or consistency, of the implant that vary by manufacturer.</li> <li>Less cohesive silicone gel implants feel more natural; the implant to the behavior of a natural breast.</li> <li>Highly cohesive, form-stable, implants maintain their shape.</li> <li>Sientra Mentor Allergan Mentor</li> </ul>			
why is this important?	<ul> <li>Different implants have different risks. Implant manufacturers use different terms to describe their portfolio of implant styles and different methods for collection and reporting of risk data. Specific risk probabilities are not listed in this decision aid because available data does not allow for direct comparison of different implants and their risks across manufacturers.</li> <li>Review current FDA: Labeling for Approved Breast Implants to learn more.</li> </ul>			
Key <u>benefit</u>	Discuss with your plastic surgeon which implant fill option will best meet your desired preference for how you want your breasts to <b>feel</b> .			
Decision #2: Implant s	hape			
Options:	Anatomic	Round		
Key <u>risk</u> of implant rotation or				
displacement	<ul> <li>Anatomic implants are textured to reduce this risk.</li> </ul>	<ul> <li>will not be able to tell any difference.</li> <li>There is a possibility for round implants to become <u>displaced</u> or flipped in relation to the pocket.</li> </ul>		
Why is this important?	If a breast implant rotates or becomes dis			
Key <u>benefit</u>	become noticeably asymmetric and may require surgical correction. Discuss with your plastic surgeon which implant shape option will best meet your desired preference for how <b>full</b> you want your breasts to <b>look</b> .			

Decision #3: Implant <u>shell</u>				
Options:	Textured	Smooth		
Key <u>risk</u> of breast implant associated anaplastic large cell lymphoma (BIA-ALCL)	<ul> <li>All <u>textured</u> implants have an association with ALCL.</li> <li>There is an increased risk with high degree of texturing and lower risk with lower degree of texturing.</li> <li>Macrotextured devices carried the highest risk and are now no longer available.</li> </ul>	<ul> <li>No known risk of BIA-ALCL with smooth implants</li> </ul>		
Why is this important?	<ul> <li>80% of BIA-ALCL cases present with an enlargement of one or both breasts, called a seroma. Other (less common) symptoms are breast lumps, hardness of the breast, pain, and skin rash on the breast.</li> <li>All patients diagnosed promptly have been cured; however, more advanced cases</li> </ul>			
	and patient deaths have occurred.			
	<ul> <li>Treatment typically involves removing the implant and surrounding scar capsule, but may include other therapies such as chemotherapy or radiation.</li> </ul>			
	<ul> <li>Continue to follow-up with your plastic surgeon for the lifetime of the implant.</li> </ul>			
	<ul> <li>Review the <u>FDA: Questions and Answers about Breast Implant-Associated</u> <u>Anaplastic Large Cell Lymphoma (BIA-ALCL)</u> for more information.</li> </ul>			
Key <u>benefit</u>	This decision is related to Decision #2: Implant <u>shape</u> . Discuss with your plastic surgeon your desired preference for how <b>full</b> you want your breasts to <b>look</b> and whether textured or smooth implants are right for you.			

How do I choose the right size?		
Sizing methods	During your consultation, the plastic surgeon will take measurements of your breasts and chest. Using a variety of methods, the plastic surgeon can help guide you to select the right size implant for you.	
Key <u>risk</u> of reoperation for cosmetic reasons	<ul> <li>Reoperations for cosmetic reasons include implant style or size change.</li> <li>Reoperations carry additional risks.</li> <li>Reduce this risk by carefully selecting with your plastic surgeon an implant size, projection, and style that fits with your body and your goals.</li> </ul>	

Advisory of increased risks with oversized implants. Risk of cervical spine changes, back/neck pain.

Learn more about the <u>risks and complications of breast implants</u>. This resource from the FDA includes a glossary of risks and photo examples of capsular contracture and saline implant deflation as well as links to additional information and resources about breast implants.

Notes and additional quality information resources:

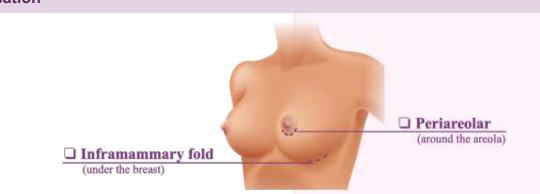
#### Decision #1: Incision location\*

# **Options:**

\*Your plastic surgeon may discuss other incision locations than the 2 options described here if appropriate for you, such as transaxillary (through the armpit).

# Key <u>risk</u> of capsular contracture

Why is this important?

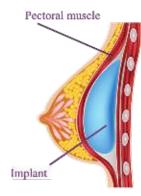


# **Decreased risk** of capsular contracture with **inframammary fold incision**

**Increased risk** of capsular contracture with **periareolar incision** 

- Capsular contracture can lead to hardening of the affected breast, pain, and an unnatural appearance; may require additional surgery depending on severity.
- Signs and symptoms of capsular contracture may mimic other issues, such as implant displacement, BIA-ALCL, or ptosis. Reducing the risk of capsular contracture can help to avoid confusion or unnecessary alarm about other risks.

# Decision #2: Placement plane (pocket selection)



# **Options:**

# Key <u>risk</u> of capsular contracture

Implant texturing may reduce this risk

#### Key <u>risks</u> of seeing or feeling the implant in a way that is not cosmetically desirable and implant wrinkling or rippling

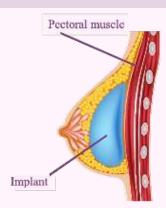
Why is this important?

Subpectoral (under the chest muscle)
 Decreased risk of capsular contracture

There is no difference in risk of capsular contracture with textured or smooth implants when placed subpectoral

#### **Breast animation deformity** may occur with subpectoral placement. The degree of implant distortion depends on the thickness and position of your chest muscle and the amount of muscle coverage of the implant.

- Subpectoral placement may not be possible if you are a bodybuilder.
- Discuss your lifestyle and activity level with your plastic surgeon.



Subglandular (over the chest muscle) May have increased risk of capsular contracture

Using textured implants may help reduce the risk of capsular contracture when placing implants subglandular

## Your skin and breast tissue

**characteristics** impact the likelihood of seeing or feeling the implant in a way that is not cosmetically desirable, including implant wrinkling or rippling.

- This risk may be increased if you have thin skin or breast tissue.
- Discuss how your skin, breast and chest anatomy will impact your ultimate result with your surgeon.

Wha	at else do I need to prepa	re for decision-making?	
Find	out how well this decision aid	d helped you learn the key fac	ts. Check ⊠ the best answer.
1.	The risk of breast implant asso	ciated anaplastic large cell lymp Generation Smooth implants	ohoma (BIA-ALCL) is associated with:
2.	Unless I experience a complication my breast implants during my		d to have another surgery related to
	True	False	I am not sure
3.	My plastic surgeon and I may plastic surgeon and I may plastic.	not be able to tell if implants	rupture just by looking at or feeling my
	□ Saline □ Silicone	Both saline and silicon	e 📮 I am not sure
4.	<ul> <li>(Check ☑ all that apply)</li> <li>□ Image screening tests for</li> <li>□ Reoperation(s), one or m</li> <li>□ There are no further expension</li> </ul>	implant monitoring, such as MF ore repeat surgery related to my	/ breast implants ugmentation surgery, everything
5.		breast implants and a wide spec ants has yet to be scientifically d	ctrum of systemic symptoms reported by lefined.
	True	False	I am not sure
6.	My board-certified plastic surgare symmetric after surgery.	eon can correct any asymmetry	I have with implants so that my breasts
	True	False	I am not sure
7.	Capsular contracture is a risk of	of breast augmentation that can	lead to what?
	I am not sure		
8.	If implants rupture, my plas	tic surgeon and I <u>will</u> be able to Both saline and silicon	tell by looking at or feeling my breasts. e I am not sure
9.		breasts? (Check ☑ all that app .ift them   □ Make them a dif	
1.	Textured implants, 2. False, 3.		Check your answers for the key facts: sts and reoperations, 5. True, 6. False,

Textured implants, 2. False, 3. Silicone, 4. Image screening tests and reoperations, 5. True, 6. False,
 Textured implants, 2. False, 3. Silicone, 4. Image screening tests and reoperations, 5. True, 6. False,
 Hardening of the affected breast, pain, and an unnatural appearance; commonly requires surgery,
 Saline, 9. Make them larger.

# What questions should I ask my plastic surgeon?

Consultation guide

	Key risks and considerations Check ☑ what risks matter most to you	Notes
Am I a good candidate for	General risks of surgery: Anesthesia risks DVT/PE	
plastic surgery?	Do I have any specific risk factors in my medical or social history?	
Is breast augmentation the right decision to	General risks of breast augmentation surgery:Image: BleedingImage: HematomaImage: Image:	
address my cosmetic concerns?	<ul> <li>Should I consider any alternative or combination procedures to best address my cosmetic breast concerns?</li> <li>If so, what different or additional risks do I need to know?</li> </ul>	
Which implants	<ul> <li>How will my specific breast and chest wall anatomy and tissue characteristics impact my cosmetic result?</li> <li>Patient-dependent risks and tradeoffs: <ul> <li>Asymmetry (preexisting [persistent] or new)</li> <li>Ability to see or feel the implant in a way that is not cosmetically desirable</li> <li>Implant wrinkling or rippling</li> </ul> </li> </ul>	
will best help me to achieve my goals?	<ul> <li>Implant styles vary by manufacturer, and different implants have different risks &amp; benefits</li> <li>Implant-dependent risks and tradeoffs: <ul> <li>Implant rupture or deflation</li> <li>BIA-ALCL</li> <li>Capsular contracture</li> <li>Implant rotation or displacement</li> </ul> </li> <li>Is my activity level a concern? (such as body-building)</li> </ul>	
What size is right for me?	Decision-dependent risks and tradeoffs:	
Are my goals realistic?	What results can I reasonably expect? Decision-dependent risks and tradeoffs: Cosmetic dissatisfaction Reoperation for cosmetic style exchange	
How likely are complications?Complications are surgeon-specific. This icon array tool surgeon talk about risks that matter most to you.		can help you and your plastic

# What are my next steps?

#### • Am I clear about what is expected of me and about what matters most to me?

#### Before scheduling surgery

#### 1. Am I clear about what to expect before, the day of, and immediately after surgery?

- Postoperative expectations (e.g., pain) and restrictions (e.g., exercise)
- After surgery, you will be given a **Device Identification Card** that contains your implants unique identifier number. It is important to keep this card for your records because if you experience any issues with your implants this information should be shared with your health care provider and the implant manufacturer.
- □ I have received pre- and postoperative instructions from my plastic surgeon

#### 2. What are my financial responsibilities, both now and in the future?

What am I responsible for <u>now</u> ?	Quote for cost of surgery		
What will I, or could I, be responsible for in the <u>future</u> ?	<ul> <li>Expected out-of-pocket costs associated with implant surveillance (silicone) and maintenance (all implants)</li> <li>Possible out-of-pocket costs if I experience a complication following surgery</li> </ul>		
What <u>financial assistance</u> is available?	<ul> <li>Implant manufacturer warranty</li> <li>Cosmetic complication insurance</li> </ul>		

#### 3. Find out how comfortable you feel about deciding.

1.	Do you know the benefits and risks of each option?	Yes D	No
2.	Are you clear about which benefits and risks matter most to you?		
3.	Do you have enough support and advice to make a choice?		
4.	Do you feel sure about the best choice for you?		

(The SURE Test © O'Connor & Légaré, 2008)

- If you answered 'No' to <u>any</u> of these, you are not ready to make a decision. Consider the following suggested activities to try based on your specific decision-making needs and discuss with your plastic surgery care team.
  - Need more information? Review the additional quality information resources linked throughout this decision aid, and ask your plastic surgery care team for additional resources specific to your informational needs:
  - Unsure what matters most to you? Work through this decision aid again with your plastic surgery care team, a trusted friend, family member, or significant other.
  - Need more support? List your support concerns and discuss with your plastic surgery care team:
- If you answered 'Yes' to <u>all</u> of these, you are ready to make a decision.

Confirm your decision				
□ I have decided to <b>proceed</b> with primary breast augmentation surgery with the following specifications:				
Fill:Shape:Shell:SiliconeRoundSmoothTraditional salineAnatomicTexturedStructured salineFractional salineStructured			Manufacturer:SientraIdeal ImplantAllerganMentorStyle #:	
Placement: ☐ Subpectoral ☐ Subglandular	Incision location:		CC CC	Other specification (if applicable):
I have decided to decline primary breast augmentation surgery.				

#### Considering your decisions selected above, please answer the following questions:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. I feel I have made an informed choice.					
2. My decision shows what is important to me.					
3. I expect to stick with my decision.					<b>O</b>
4. I am satisfied with my decision.					
	(Effective D	ecision Subscale of	of the Decisional Conflict S	Scale © AM O'Conno	or, 1993, revised 2005)

#### Patient Acknowledgement of Informed Consent

- I confirm my decision and voluntarily give my consent to undergo **primary breast augmentation surgery** with the specifications detailed on this form.
- I authorize \_\_\_\_\_\_ and assistants to perform the procedure.
- I understand and accept the possibility of unforeseen circumstances that require other procedures not described on this form. I voluntarily give my consent and authorize my surgeon and assistants to perform such procedures as deemed necessary based on the professional medical judgement of my surgeon to save my life or to prevent serious harm to my health.
- I confirm my acceptance and voluntarily consent to be photographed or recorded before, during, and after surgery for the purposes of medical documentation.
- I authorize the release of my protected health information for the purposes of medical device registration and registry reporting.
- I actively participated in a shared decision-making informed consent process with my plastic surgeon and plastic surgery care team as demonstrated in this decision aid and informed consent workbook.

PATIENT SIGNATURE

PATIENT PRINTED NAME

DATE

## Surgeon Acknowledgement of Informed Consent

I confirm my agreement with the decision detailed above and agree to perform the procedure as authorized.

Content last reviewed: 2020-08-16. Review/update policy: Annually.

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Disclosures:	<sup>a</sup> No disclosures; <sup>b</sup> Sientra Post Approval Study Clinical Investigator Since 2012; <sup>c</sup> Educator Sientra, business advisory board realself, Allergan collaboration; <sup>d</sup> Medical Director Motiva Breast Implant Clinical Trial; <sup>e</sup> Consultant Allergan, Establishment Labs, Hans Biomed Clinical investigator Motiva US FDA Clinical trials			
Funding supported by:	The Aesthetic Society.			

**Developer contact information** For any questions or concerns about the content or development of this patient decision aid, please contact the author directly at <u>chelsea.hagopian@alumni.emory.edu</u>.

# Development and design<sup>+</sup>

- Hagopian CO, Hagopian TM, Wolfswinkel EM, Ades TB, Stevens WG. Development and preliminary evaluation of a patient decision aid to replace traditional informed consent documents for primary breast augmentation surgery [unpublished manuscript; not yet submitted for peer-review].
- <sup>†</sup>An overview of the development process and design with recommendations is included as an appendix for convenience of review.

# Content informed by

- Hagopian CO, Ades TB, Hagopian TM, Wolfswinkel EM, Stevens WG. Attitudes, beliefs, and practices of aesthetic plastic surgeons regarding informed consent. *Aesthet Surg J*. 2020;40(4):437-447.
- Hagopian CO, Hagopian TM, Wolfswinkel EM, Ades TB, Stevens WG. An expert consensus study for informed consent in primary breast augmentation surgery [accepted 2020-08-13 for publication in *Aesthet Surg J*].
- Hagopian CO, Hagopian TM, Wolfswinkel EM, Ades TB, Stevens WG. Behaviors and perspectives of women considering primary breast augmentation surgery relevant to decision-making and informed consent [unpublished manuscript; not yet submitted for peer-review].
- Breast Device Collaborative Community (BDCC). Jamee Cook, Raylene Hollrah, Mindy Haws MD, Lisa Schlager, Pat McGuire MD, Andrea Pusic MD, Madris Tomes, Debra Johnson MD, William P. Adams Jr. MD, Rosalyn d'Incelli, Kourtney Cavallio, Raina Dauria, Robert Hamas MD. Implant Checklist Submitted FDA 10-2019, 2-1-2020. This checklist was used to cross-check the PDA for content comprehensiveness. BDCC functions to bring together stakeholders with diverse perspectives to address challenges and concerns surrounding breast implants and related topics for the FDA.

#### Additional content contributors

The following contributors are board-certified plastic surgeons who participated in a follow-up survey of active members of the American Society for Aesthetic Plastic Surgery (ASAPS) exploring current practices for confirming patient comprehension before primary implant-based breast augmentation surgery conducted to further inform the content of this decision aid. Additional survey participants chose to remain anonymous. Benjamin Van Raalte, MD; David J. Levens, MD; Robert Grant, MD; Brian J Lee, MD; Elsa Raskin, MD; Scott Greenberg, MD; William Bull, MD; Jubert Sanches, MD; Melinda Haws, MD; Diane Colgan, MD; Winston Santos, MD; Robert Zubowski, MD; Paul Weiss, MD; Kent V Hasen, MD;

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American Board of Plastic Surgery (ABPS) verify certification surgeon search tool (<u>https://www.abplasticsurgery.org/public/verify-certification/VerifyCert?section=SurgeonSearch</u>)

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Centers for Disease Control and Prevention (CDC) What is Venous Thromboembolism? (<u>https://www.cdc.gov/ncbddd/dvt/facts.html</u>)

## Should I have breast augmentation surgery?

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# What are my implant options?

#### Links

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U.S. Food and Drug Administration (FDA) Questions and Answers about Breast Implant-Associated Anaplastic Large Cell Lymphoma (BIA-ALCL)

(<u>https://www.fda.gov/medical-devices/breast-implants/questions-and-answers-about-breast-implant-associated-anaplastic-large-cell-lymphoma-bia-alcl</u>)

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# What are my surgical approach options?

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#### Incision location: Inframammary fold or periareolar?

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Presentations and testimony of patients and representatives from patient advocacy groups on information they wish they knew before undergoing breast augmentation surgery with implants and believe all women considering this surgery should know during the March 25-26 2019 Food and Drug Administration (FDA) public advisory committee meeting of the General and Plastic Surgery Devices Panel of the Medical Devices Advisory Committee:

(<u>https://www.fda.gov/advisory-committees/advisory-committee-calendar/march-25-26-2019-general-and-plastic-surgery-devices-panel-medical-devices-advisory-committee</u>)

# What questions should I ask my plastic surgeon?

[Linked content] Icon array tool links to <u>http://clinician.iconarray.com</u>. Risk Science Center and Center for Bioethics and Social Sciences in Medicine, University of Michigan. Accessed 2020-01-08.

## What are my next steps?

#### [Scales]

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# Appendix

Table. Overview of PDA development process

Preliminary work	<ul> <li>(1) A needs assessment to define best practice of informed consent in the context of elective aesthetic procedures, explore decisional needs of relevant patients and clinicians, draft a working causal and program theory, and identify a leverage point for improvement; and</li> <li>(2) Design of a 4-phase development process model for creating PDAs that</li> </ul>
	meet certification standards defined by the IPDAS Collaboration and the NQF to replace traditional ICDs for elective aesthetic procedures.
	Overarching theoretical, conceptual, and operational guidance drew from complexity science, quality improvement, knowledge translation and evidence-based practice. Additional theory and conceptual models inform each phase of the development process model.
Prototype development	Guided by the development process model: <i>Phase 1</i> : <b>Expert consensus</b> of active members of The Aesthetic Society, board-certified plastic surgeons who specialize in aesthetic (cosmetic) plastic surgery [relevant clinical experts], using a modified Delphi process, a recognized method of establishing professional consensus, to define a core set of informed consent information considered essential for all patients to understand when considering primary breast augmentation surgery with implants [index decision].
	<i>Phase 2</i> : <b>Consumer crowdsourcing</b> survey to learn the information behavior, e-health literacy skills, and knowledge gaps of adult (age 18+) females actively considering the index decision [target audience], and to define the level of detail needed to inform decision-making.
	<i>Phase 3</i> : <b>Drafting of PDA prototype</b> . Initial drafting of the PDA was done following the first Delphi round. The PDA was refined with each iterative cycle of the development process. Final drafting of the PDA prototype followed the consumer crowdsourcing survey. Phases (1) and (2) helped to specify a search strategy for selecting evidence to further inform the final content of the PDA.
	<ul> <li>Phase 4: Preliminary evaluation (alpha testing) for (1) Expert medical review,</li> <li>(2) acceptability of (a) the PDA prototype to relevant medical experts and to relevant patient experts* [Breast implant patient advocates, have previously faced the index decision] and (b) the development process to relevant medical experts, (3) quality of the PDA prototype, and (4) fidelity of the development process.</li> </ul>
Next steps	Beta (field) testing:
	Acceptability to primary end-users (clinicians involved in counseling patients on the index decision and patients actively considering the index decision), both clinicians internal and external to development process Effectiveness (decision quality, informed consent process)
	Comparative effectiveness evaluation: PDA compared to usual care (traditional ICD)
	aid IDDAS International Patient Decision Aid Standards, NOE National Quality Former, ICD

PDA, patient decision aid. IPDAS, International Patient Decision Aid Standards. NQF, National Quality Forum. ICD, informed consent document. \*Proposed.

Element	Comments	Recommendations	
Structure	<ul> <li>Each section [content block] is guided by an overarching question contextualized to the decisional timeline and includes:</li> <li>the relevant decision or decisions necessary to consider;</li> <li>the essential information needed to make a decision;</li> <li>details about why the information is important or how it should specifically inform the patients' decision-making</li> </ul>	If prototype is acceptable to end-users (plastic surgeons and patients), consider spreading to additional elective aesthetic procedures with the ultimate goal being a database containing procedure-specific content blocks. Apply the strategy of mass customization for building educational informed consent modules tailored to the specific needs of the individual patient, e.g., considering primary breast augmentation and liposuction.	
Format	PDF, can be viewed digitally or as a printed document	<ul> <li>Scaling-up to an interactive, web-based platform with:</li> <li>Foundational content providing the general structure of the PDA (e.g., How to prepare for decision-making, Is plastic surgery right for me, etc.)</li> <li>Procedure-specific content blocks interactive, defined as allows for user input, (both patient and practice-specific)</li> <li>Modifiable to populate relevant procedure-specific content when the procedure content block is selected, and interactive to allow for patient and practice-specific input.</li> <li>Consider changing color coding to make all foundational content a single anchor color and procedure-specific content different colors, e.g., primary breast augmentation [purple], liposuction [blue]</li> </ul>	
Mode of delivery	Designed to integrate into routine clinical practice as a replacement to traditional informed consent documents Pre-encounter (prepare for decision-making) and during consultation and informed consent process (facilitate shared decision-making	A permanent link for where this PDA can be accessed will be included once knownwill submit to Ottawa Inventory; consider housing it on The Aesthetic Society Smart Beauty Guide website. Sustainability considerations: integrate with EHR platforms for real-time documentation of progressive patient learning and informed consent	

Table. Overview of PDA design with recommendations

PDA, patient decision aid. EHR, electronic health record.