

Reduce patient anxiety & stress  
during breast exams  
to improve patient comfort:  
SensorySuite



Serge MULLER, PhD  
Valérie THEVENOT

BreastCare Chief Engineer  
BreastCare Global Marketing



GE imagination at work

# Many women still avoid mammograms



Mammography exams are perceived as uncomfortable, unnerving, and intimidating.

One-fourth of all women avoid mammograms out of worry or fear.<sup>1</sup>

Less than 70% of American women aged 40 and older have had a mammogram in the last two years.<sup>2</sup>

<sup>1</sup> Aro et al., Breast Cancer Research & Treatment 2001, 70:145-153

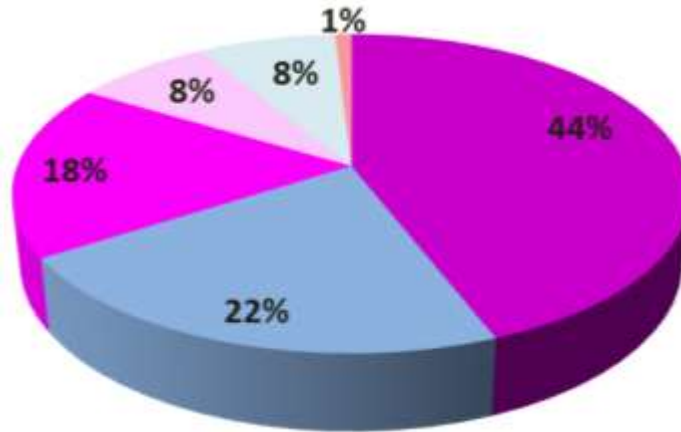
<sup>2</sup> According to the Centers for Disease Control and Prevention

**Worry of fear  
impacts attendance  
to breast screening**



GE imagination at work

# Reasons for not attending screening



- pain of mammography
- concern about radiation
- better not to think about cancer
- fear of cancer being found
- shyness
- fear of operation

1 Aro et al., Breast Cancer Research & Treatment 2001, 70:145-153

Worry of fear represents 21% of non-attendance.

Pain of mammography represent 44% of worries of fear.

**Fear of pain is the leading cause of mammography screening non-attendance.**

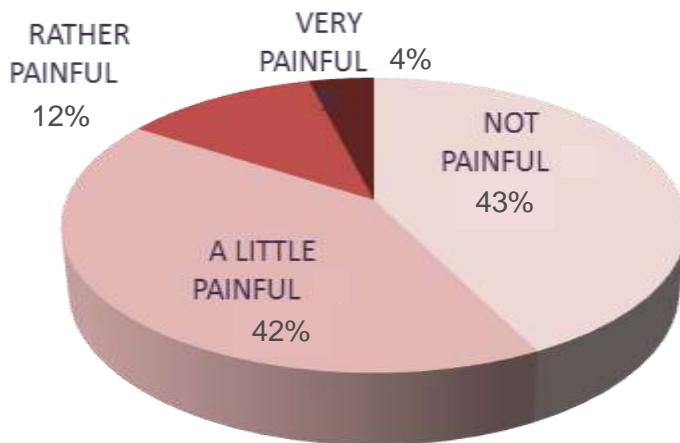


GE imagination at work

# Mammography and perceived pain



Mullai et al., ASCO 2009



Drossaert et al., J Med Screen 2002, 9:168-175.

“58% women reported unpleasant mammogram experience, causing pain and bruising”.

“1 out of 6 women refused to get further mammograms based on their painful experience”.

“58% of women considered the mammography exam to be painful at some degree”.

**Perceived pain is a concern for most women attending screening mammography.**

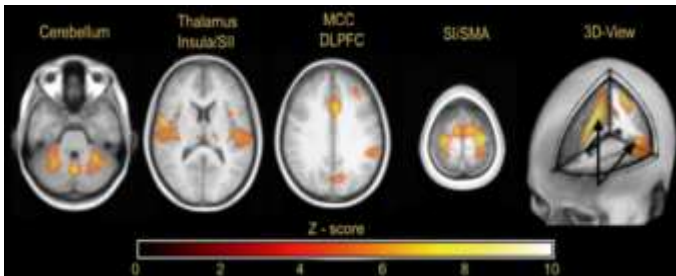


GE imagination at work

# Acute pain



Acute pain is a powerful and adaptive mechanism, a symptom of alarm essential for survival.



Godinho et al., Eur J Pain 2012, 16:748-759

There is no pain center.  
Pain is a complex psycho-physiological process.

**Acute pain may be perceived as undesirable, but is essential for survival**

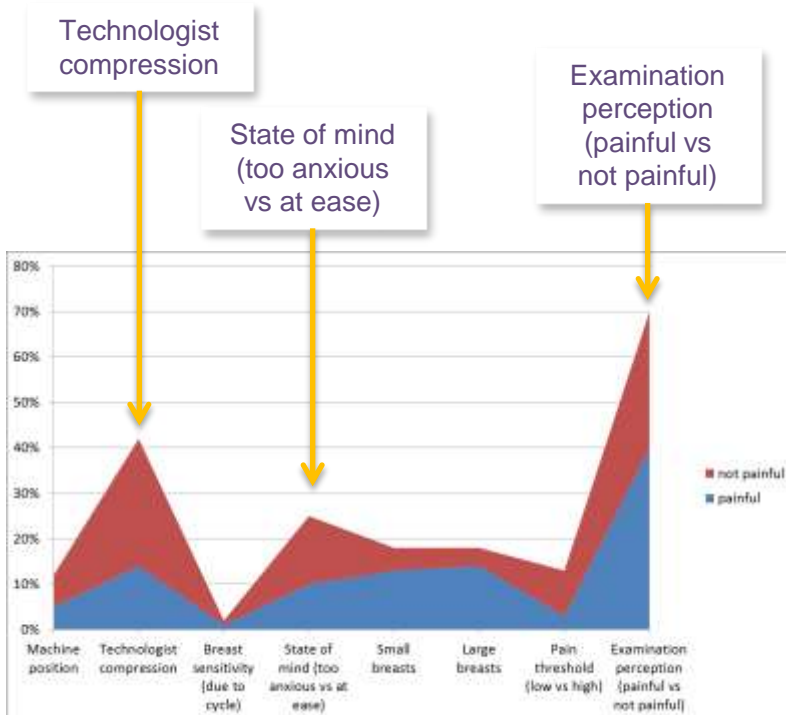


GE imagination at work



# Mammography and perceived pain

Study performed within the Dutch Breast Cancer Screening Program on 2334 women.



Drossaert et al., J Med Screen 2002, 9:168-175

“Some women attributed their pain to unnecessary harsh treatment by the technician”.

“Efforts to make women feel at ease during screening might not only decrease anxiety but also pain”.

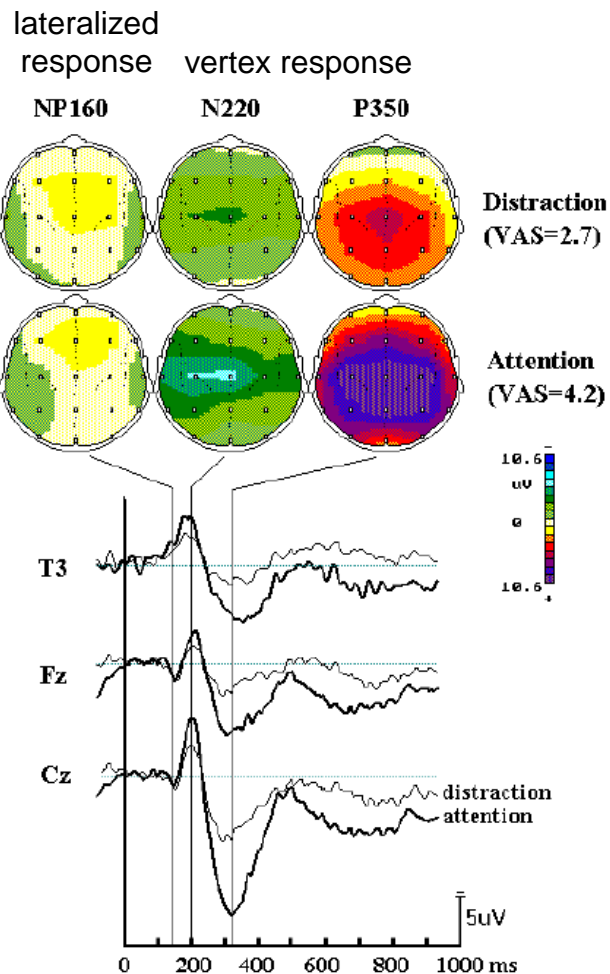
“Women who were more afraid of breast cancer were more likely to experience pain”.

**Sensitive technologists, efforts to make women feel at ease, and breast cancer awareness may reduce discomfort during screening mammogram.**



GE imagination at work

# Impact of distraction on pain perception



Garcia-Larrea et al., Neuroreport 1997, 8:3785-3789

“Brain responses to laser stimuli were obtained in 15 subjects under attentive & distractive conditions”.

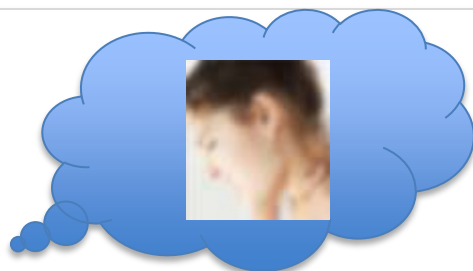
“Although stimulus intensity was kept constant, it was perceived as significantly higher when subjects attended the stimulation”.

**Distraction of the patient may reduce perceived pain.**



GE imagination at work

# Impact of pain on pain perception



Stomper et al., Arch Intern Med 1988, 148:521–524

Rutter et al., BMJ 1992, 305:443–445.

Aro et al., Eur J Cancer 1996, 32:1674–1679

“Several studies have shown that anticipation of pain is an important predictor of actual pain during mammography”.



Bruyningckx et al., Soc Sci Med 1999, 49:933–941

Drossaert et al., J Med Screen 2002, 9:168-175

“Pain leads to increased anxiety about having the next mammogram, whereas increased anxiety seems to cause increased pain.”.

**Reducing patient’s anxiety  
may reduce perceived pain.**



GE imagination at work



# Impact of communication on pain



Miller et al., Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD002942

“Giving women information about the procedure prior to the mammogram may reduce pain and discomfort”.

Information is key to improve patient’s comfort:

- Breast cancer awareness
- Inform at home
- Inform in the facility
- Inform in the exam room

**More information may reduce pain and discomfort**



GE imagination at work

# Effect of sense immersion on pain



© Audioundwerbung | Dreamstime.com

<http://blog.vcopious.com/2011/06/immersion-in-virtual-reality-eases-pain/>



Visual  
experience



Olfactory  
experience



Sound  
experience

<http://www.reuters.com/article/2011/06/14/us-pain-reality-idUSTRE75D0F020110614>

“Distracting patients by immersing them in a virtual world, sometimes by using a video game, appears to help reduce pain — even in elderly patients who aren’t used to such exposure”.

“Stimulating several senses at once can help reduce discomfort and relieve pain”.

**Soliciting several senses  
at the same time  
may reduce the discomfort  
and relieve the pain**



GE imagination at work

# Take mammography to a whole new place.



imagination at work

« Scientific communication designed for IBDC 2013 – Not to be distributed or used for commercial purpose ».



# SensorySuite



imagination at work

« Scientific communication designed for IBDC 2013 – Not to be distributed or used for commercial purpose ».

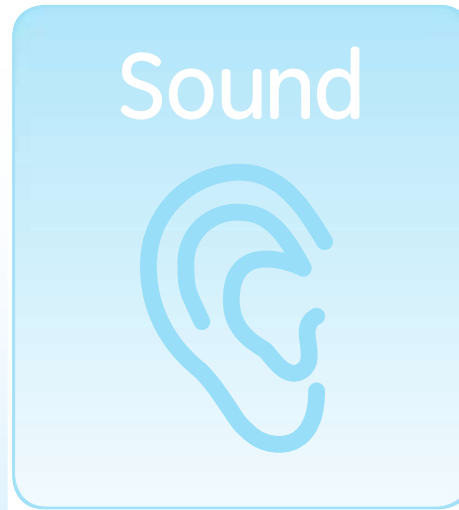
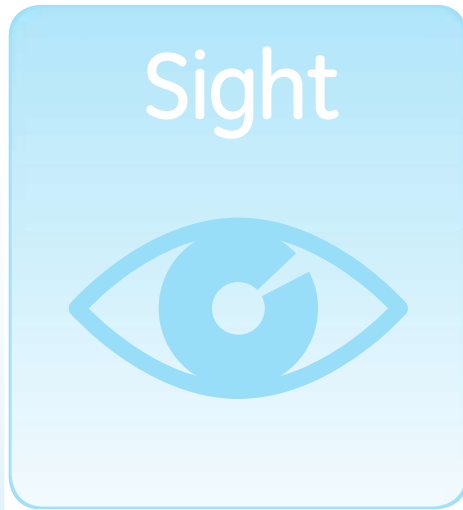
# Centered around your patient.

✿ By focusing on the woman, we've re-invented the experience...and addressed many of the reasons why women avoid mammography.





# Surrounding your patient senses.



SensorySuite stimulates three of a woman's senses simultaneously to help distract from anxiety and make the experience less intimidating.

Stimulating several senses at once can help reduce discomfort and relieve pain\*

(\* Source Reuters, June 2011

<http://www.reuters.com/article/2011/06/14/us-pain-reality-idUSTRE75D0F020110614>

# Mammography for the mind.

## SensorySuite

- ✿ An all-encompassing interactive experience.
- ✿ Designed to stimulate a woman's senses to distract her from the perceived discomfort, pain, and anxiety of a mammogram.
- ✿ Designed for you... to control the experience you want to offer your patients.



\* SensorySuite configuration may vary depending on your facility's product selection.

# Stand out.

## SensorySuite can help you:

- ❧ Improve the experience for your patients.
- ❧ Promote the high level of patient care you provide.
- ❧ Differentiate your healthcare facility from others in your area.
- ❧ Increase patient compliance with screening mammography.



# More than an exam. An experience

- ✿ SensorySuite gives control to each patient to choose the environment ambiance she prefers for her mammogram.
- ✿ Choices include 3 ambiances: Garden, Seaside, Waterfall.



Taking mammography to a whole new place.

# In the exam suite.

✿ Using the in-room tablet PC remote control, your patient chooses the ambiance she finds most relaxing.





Taking mammography to a whole new place.

# In the exam suite.

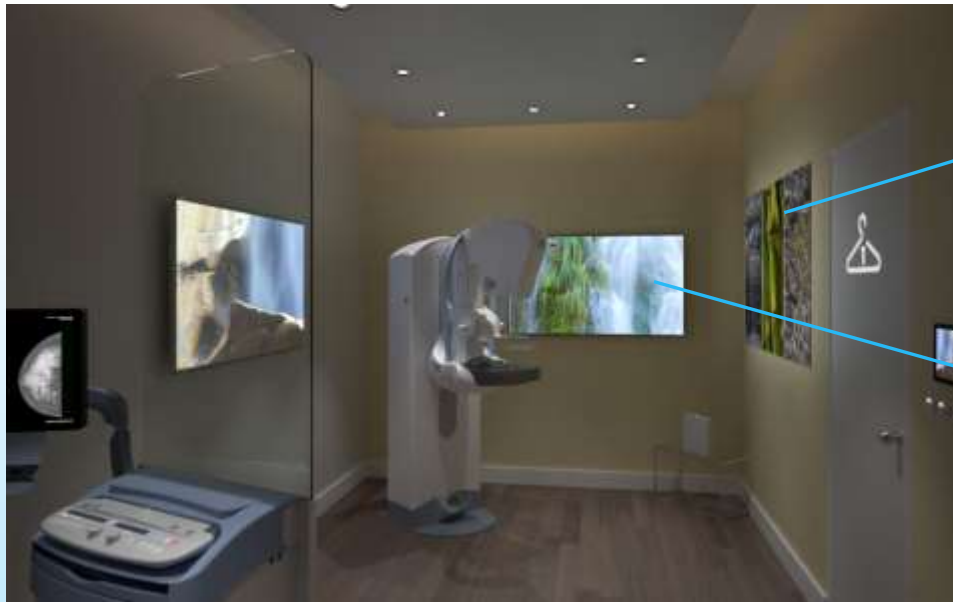


## Scent

A scent diffuser gently infuses the air with SensorySuite's light, calming fragrance.

Taking mammography to a whole new place.

# In the exam suite.



## Sight

Decorative wall panels in a choice of 3 ambiances and two sizes add to the mood for the selected ambiance.

A flat-screen monitor displays a slide show of photos of the selected ambiance.

Taking mammography to a whole new place.

# In the exam suite.



## Sight & Sound

A flat-screen monitor displays soothing video and relaxing ambient sounds of the selected environment.

Taking mammography to a whole new place.

# In the waiting room.



## Sight

The woman visualizes the SensorySuite experience on a tablet PC.

## Sight

Decorative wall panels show the Seaside, Garden, and/or Waterfall ambiances to help set the mood.



Taking mammography to a whole new place.

# In the waiting room.



## Scent

The woman chooses a Seaside, Garden, or Waterfall bookmark with an accompanying bracelet infused with the corresponding scent



Taking mammography to a whole new place.

# At home.

- ✿ The SensorySuite experience starts when a woman chooses your facility for her mammogram.
- ✿ Interactive online presentation that you can post on your facility's website to explain and promote your SensorySuite exam\*.



\* Availability may be limited in certain countries and regions.

Taking mammography to a whole new place.

# In your community.

## Marketing tool kit\*:

- ✿ Letter to referring physicians
- ✿ Fact sheet and press release for local PR efforts
- ✿ Patient reminder card
- ✿ Pictures and short video
- ✿ Interactive patient presentation for your facility's web page



*\*Availability may be limited in certain countries and regions. In the U.S., materials are available for download on GE's get creative website.*

Taking mammography to a whole new place.

# In your community.

## A comprehensive SensorySuite marketing tool kit\*

- ✿ Advertise and promote your SensorySuite solution to women and referring physicians in your area.



\* Availability may be limited in certain countries and regions.

SensorySuite.  
Take mammography to a whole new place.



imagination at work

« Scientific communication designed for IBDC 2013 – Not to be distributed or used for commercial purpose ».