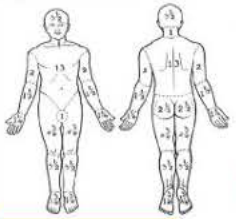
Painful Body Surface Area Variance between Pre-op and Post-op Lung Cancer Patients

Brianna Pendergrass, Keesha Powell-Roach, Prashant Singh, Yingwei Yao & Diana J. Wilkie
University of Florida College of Nursing

Introduction

- The focal point of this study relies on BSA.
- BSA (Body Surface Area) is the calculated surface area of the human body.
- Dozens of research studies use a a variation of this body image to locate the pain experienced by patients.
- Unlike other studies, changes in the BSA pain as well as pain intensity will be observed, specifically in thoracotomy (whole or fraction lung extraction surgery) patients.



Research Question

How does the BSA of pain change between pre and post thoracotomy surgery in lung cancer patients?

Problem Statement

It is unknown if the BSA of pain experienced in pre-op continues to post-op

Purpose Statement

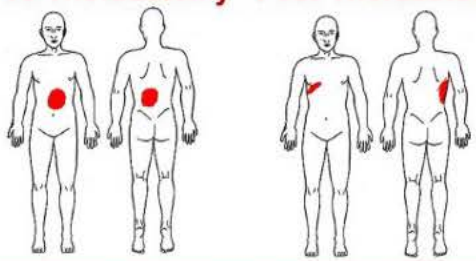
The purpose is to observe the variance in BSA over a pre and post op period

METHODS

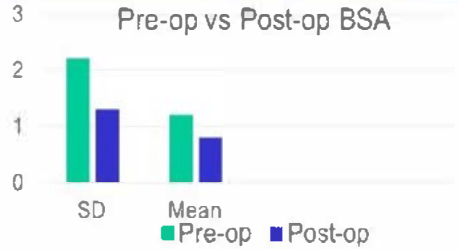
1. **Recruitment** — All Study participants are Turkish lung cancer patients undergoing a thoracotomy.
2. **Data Collection 1** — During pre-op, all patients will be given a BSA image and asked to mark all areas of pain on the image that corresponds to their own body
3. **Recruitment** — During post-op, all patients, once again, will be given a BSA image and asked to locate their pain in correspondence to their own body. .
4. **Data Analysis** — Using the BSA formula, the surface area of the pre and post thoracotomy pain will be computed and analyzed

RESULTS

Pre-Thoracotomy Post-Thoracotomy



Results cont.



There was a .4% BSA pain reduction between pre-op (1.2%) and post-op (.8%)

Day	AvgPI
PreOp	r=0.32 (p=.048)
PostOp Week 2	r=0.55 (p<.001)

Pre-op shows a weak correlation between PI and BSA, while Post-op shows a moderate correlation.

CONCLUSIONS

- Our sample clarified that BSA, as well as PI, should decrease during post surgery. However, a few patients experienced higher BSA pain during post surgery. The reason could be tied to Post-Thoracotomy Pain Syndrome, a direction for future research.
- AvgPI (pain intensity) and BSA showed correlations for pre and post thoracotomy surgery. This means a formula can be derived that will predict BSA percentage based on PI, or vice versa. Also, high PIs usually were accompanied by low BSAs

ACKNOWLEDGMENTS

- This research was made possible by Patient-Centered Outcomes Research Institute (PCORI) Award (IH-1304-6553) and Grant Numbers U54CA233396, U54CA233396, U54CA233444, R01CA207026, & U54CA233465 from the National Institutes of Health (NIH), National Cancer Institute (NCI). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NCI,

A CPACHE partnership between