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It's All About Posters

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Office for Professional Writing, Publishing, and Communication

Overview

- The value of posters
- What's new in poster design & delivery
- How to craft your message on the wall
- How to engage the audience off the wall

The Value of Posters

- They highlight what's happening in the field.
- They offer a preview of future papers.
- They summarize interesting work.
- Researcher and audience meet face to face.
- They can be printed and used in interviews.

Or this COVID version

How to Craft Your Message On the Wall

- Message – Purpose, Audience, Rule of 3
- Graphics
- Templates

Craft Your Poster's Message

- What is your purpose?
- Who is your intended audience?
- What are key takeaways?

Start with the graphics

- https://www.youtube.com/watch?v=LNu3-Cxxk1A

Try Using 3 columns

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Abstract#...

Clinical Outcomes Following Androgen Receptor Axis Therapies among Men with Prostate Cancer having Major Cardiovascular Diseases or Extreme Polypharmacy: A Population Based Study

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BACKGROUND

- Vulnerable elderly patients are under-represented in pivotal trials of oral hormonal therapy for prostate cancer(PCa) .
- The safety of Androgen Receptor Axis Therapies (ARAT) [Abiraterone Acetate (AA) and Enzalutamide (ENZ)] among men with major Cardiovascular Diseases (CVDs) or Extreme Polypharmacy (EPP) (≥10 concurrent medications) is unknown since patients with these conditions are often excluded from the clinical trials.

OBJECTIVES

To fill knowledge gaps about clinical outcomes following use of two oral hormonal therapies, AA and ENZ, among vulnerable patients.

METHODS

- This retrospective population-based study identified PCa patients from the linked Surveillance, Epidemiology and End Result(SEER)-Medicare files , this database covers about 28% of the US population from all racial/ethnic groups.
- The study cohort consisted of men diagnosed between 1/1/1991 and 12/31/2013 with primary PCa.
- The primary endpoint was 6-month overall mortality from the date of drug initiation.
- Major CVDs include acute myocardial infarction (AMI), atrial fibrillation (AFIB), congestive heart failure (CHF), stroke, and ischemic heart disease (IHD). All cause of death was noted as of December31,2015.
- Relative risk (RR) models using a modified Poisson regression method were performed

RESULTS

- Our study included 3,077 patients treated with AA only or AA as first ARAT and 1,143 patients treated with ENZ only or ENZ as first ARAT.
- The characteristics of the patients treated with AA and ENZ were similar. About 65% of patients treated with ARAT had a major CVDs while the proportion of patients with EPP was high (46% for AA and 44% for ENZ).
- The estimated 6-month mortality risk was higher for patients with existing CVDs after AA, ranging from a 27% increase in patients with IHD to 55% in patients with AMI. Mortality was higher for patients with all major CVDs who used ENZ.

Table 1. Patient Baseline Demographic and Disease Characteristics

		AA		ENZ	
		Post Chemotherapy (n=619)	No Chemotherapy(n=2,458)	Post Chemotherapy (n=277)	No Chemotherapy (n=866)
Age, n(%)	<75	318(51)	1086(44)	150(54)	407(47)
	≥75	301(49)	1372(56)	127(46)	459(53)
Polypharmacy*;medications, n(%)	<5	62(10)	403(16)	27(10)	184(21)
	5-9	207(33)	982(40)	106(38)	323(37)
	≥10	350(57)	1073(44)	144(52)	359(42)
CVDS, n(%)	AMI	27(4)	141(6)	14(5)	62(7)
	AFIB	106(17)	459(19)	39(14)	150(17)
	CHF	209(34)	775(32)	68(25)	257(30)
	Stroke	75(12)	332(14)	25(9)	121(14)
	IHD	368(60)	1379(56)	154(56)	482(56)
All cause of Death, n (%)	Dead	523(85)	1491(61)	211(76)	464(54)
	Alive	96(15)	967(39)	66(24)	402(46)

*Polypharmacy before 6 months of first treatment with AA and ENZ: <5 medications means 'No Polypharmacy'; 5-9 medications means 'Polypharmacy'; and ≥10 medications is' Extreme Polypharmacy'

Table 2.Relative Risk (RR) for 6-Month Mortality

	No CVD	AMI	AFIB	CHF	Stroke	IHD
AA	1.0	1.55(1.16-2.08)	1.40(1.14-1.73)	1.35(1.12-1.62)	1.30(1.03-1.63)	1.27(1.07-1.50)
ENZ	1.0	1.38(0.84-2.25)	1.53(1.09-2.16)	1.15(0.84-1.57)	1.22(0.82-1.80)	1.23(0.94-1.60)

CONCLUSIONS

- To our knowledge, this is the largest population-based study to provide outcomes data among patients with CVDs and EPP who may not be represented in many of the pivotal trials.
- The overall mortality of men with CVDs and EPP at 6 months treated with ARAT was elevated suggesting that these patients represent a vulnerable patient population.
- Further studies are needed to determine the clinical benefit of ARAT in men with advanced PCa and CVD/EPP with appropriate guidelines for management.

ACKNOWLDEGMENT

This study used the linked SEER-Medicare database. The interpretation and reporting of these data are the sole responsibility of the authors. The authors acknowledge the efforts of the National Cancer Institute; the Office of Research, Development and Information, CMS; Information Management Services (IMS), Inc.; and the SEER Program tumor registries in the creation of the SEER-Medicare database.

FUNDING

This project is funded in part by the Department of Health of PA (PA CURE Award SAP # 4100077067) and Cancer Center Support Grant :5P30CA056036 .

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Use graphics and headings to tell a story

Sidney Kimmel Cancer Center at Jefferson
NCI – designated

Mechanistic study of the tumor suppressor role of MITF uncovers actionable translation targeting strategy for prostate cancer

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Sidney Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA 19107, USA

Prostate Cancer Foundation
Curing Together.

BACKGROUND

Prostate cancer (PC) is the most frequently diagnosed non-cutaneous malignancy among men in the US[1]. Currently, the mechanisms of prostate tumor progression to a lethal resistant disease stage are not fully understood. We investigated transcription factors (TFs) to understand their role as potential molecular determinants that regulate cells transitioning to a more aggressive phenotype. By interrogating public available transcriptomic datasets and experimental models we have uncovered the potential role of Microftalmia transcription factor (MITF) in regulating the aggressiveness of PC cells.

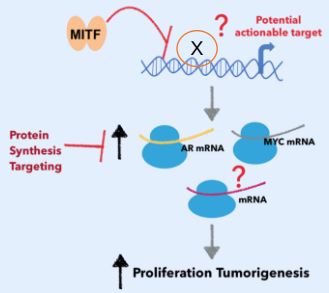
AIMS

- To decipher the molecular contribution of MITF-controlled mechanisms to lethal PC (LPC) focusing on its potential role on protein synthesis regulation in *in vitro* and *in vivo* experimental LPC models.
- To identify MITF target genes, potential biomarkers and therapeutic approaches to improve the clinical outcome.

METHODS

We use a combination of molecular and cell biology tools (RNASeq, ChIP-qRT-PCR, cell-based assays), comprehensive computational studies using patient datasets and aggressive PC cell models (data analysis) and translational studies in mice and preclinical samples, such as PDX and organoids.

CONCLUSIONS



MITF expression is significantly reduced in LPC and functionally impacts the proliferation and tumorigenicity of PC cells.
Our data indicate the existence of an interplay between MITF and the protein synthesis machinery that is deregulated in aggressive PC, and may represent an actionable signaling axis to treat lethal PC.

RESULTS (I)

MITF expression is significantly reduced in metastatic LPC

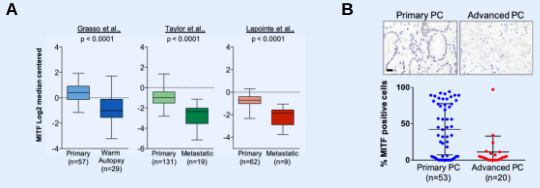


Figure 1. A) Expression of MITF mRNA in primary and advanced castration resistant PC (CRPC) samples from publicly available datasets[2-4]. **B)** Representative MITF immunohistochemistry and quantification in primary and advanced CRPC tumors.

MITF knockdown increases cell growth and tumor initiation capacity

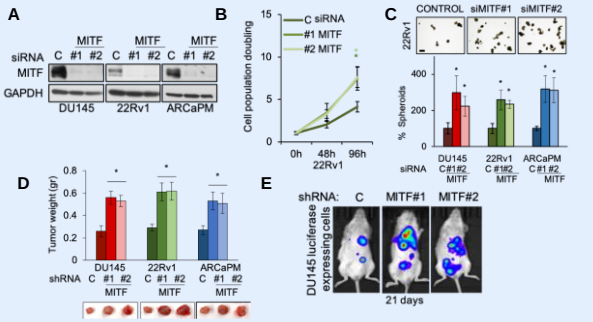


Figure 2. A) Immunoblot of MITF-depleted DU145, 22Rv1 and ARCaPM cells. **B)** Cell population doublings in MITF-depleted 22Rv1 cells. **C)** Representative tumor sphere formation and quantification of cells from (A). **D)** Tumor weight of mice injected with control and MITF-depleted PC cells. **E)** Representative image of tumor photon flux signals from mice intracardiacally injected with luciferase-tagged control and MITF-depleted cells. Bar = 100μm. * p<0.05

MITF regulates genes involved in protein metabolism

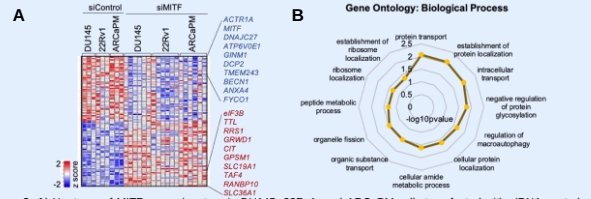


Figure 3. A) Heatmap of MITF gene signature in DU145, 22Rv1, and ARCaPM cells transfected with siRNA control or 2 siRNAs targeting MITF. Red and blue colors indicate high and low gene expression, respectively. **B)** Gene ontology analysis of MITF-regulated genes in PC cells shown in (A).

RESULTS (II)

MITF signature is downregulated in advanced PC patients

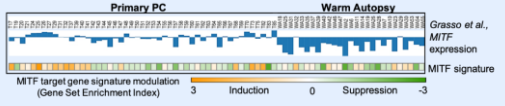


Figure 4. A) Modulation of MITF target gene signature determined by siRNA-mediated in vitro gene knockdown in primary and warm autopsy tumor tissues[2]. Orange and green colors indicate statistical significance (FDR) of induction and suppression of the target gene signatures, respectively (modified GSEA[5]).

MITF-depleted cells present higher levels of MYC and AR proteins

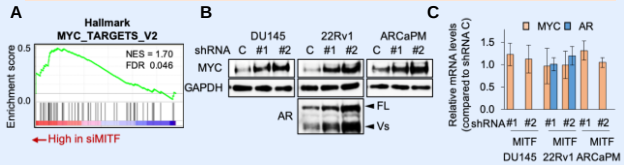


Figure 5. A) Modulation of MYC target gene signature in MITF depleted cells. NES, normalized enrichment score, FDR, false discovery rate. **B)** Immunoblot of MYC and AR in MITF –depleted cells. **C)** qRT-PCR of MYC and AR in cells from (B).

Targeting protein synthesis in low MITF-cells

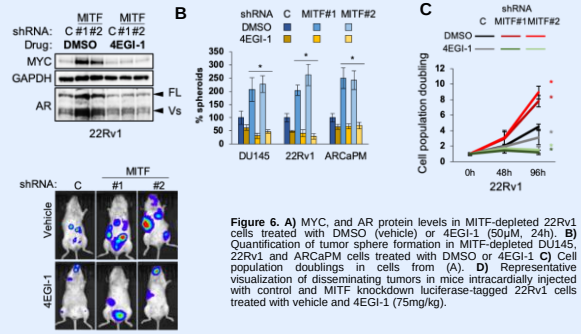


Figure 6. A) MYC, and AR protein levels in MITF-depleted 22Rv1 cells treated with DMSO (vehicle) or 4EGI-1 (50μM, 24h). **B)** Quantification of tumor sphere formation in MITF-depleted DU145, 22Rv1 and ARCaPM cells treated with DMSO or 4EGI-1 **C)** Cell population doublings in cells from (A). **D)** Representative visualization of disseminating tumors in mice intracardially injected with control and MITF knockdown luciferase-tagged 22Rv1 cells treated with vehicle and 4EGI-1 (75mg/kg).

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The authors declare no conflict of interest.

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Highlight the main point #betterposter

THE COSTS OF PREPARATION AND DELIVERY OF TD VACCINE TO 7-YEAR-OLD CHILDREN IN VIETNAM

*Hoang Van **Minh**[1]; Vu Quynh Mai[1]; Carl Schutte[2]*
[1]Hanoi University of Public Health, Hanoi, Vietnam;
[2]Genesis Analytics, Johannesburg, South Africa

INTRODUCTION

Since Vietnam has eliminated maternal and neonatal tetanus since 2005, the National EPI is likely to follow **WHO recommendations to cease delivery of TT vaccine and replace with a booster Td vaccine**. This study estimates the budget impact of future cessation of TT vaccination for women of childbearing age (CBAW) and introduction of Td vaccination for 7-year-olds using three delivery strategies.

METHODS

- Ingredients-based costing from a public health care provider perspective to estimate the budget impact:
  - Retrospective costing: to estimate the delivery cost of TT for CBAW and of Td for diphtheria outbreak control through campaigns in 2017.
  - Prospective costing of the replacement (2018-2025):
    - Complete cessation of TT vaccination for CBAW;
    - Routine implementation of Td vaccination for 7-year-old-children at health facilities, outreach sites and schools;
    - A 3-year-transition period where Td outbreak control campaigns still occur.
- Collected fiscal cost data from 73 sites: national level (1), regional (3), provincial (9), urban (10) and rural (13) districts, and urban (11) and rural (26) facilities.
- Costs were inflated by 3.5% and number of doses increased by 1% annually, tracking with population growth.

RESULTS

- Retrospective costing (2017) (Table 1):
  - **TT vaccination for CBAW: total US$2.1 million. Cost per dose delivered: $1.50-$3.90 depending on delivery strategy.**
  - **Td vaccination through campaigns: total $0.29 million. Cost per dose delivered: $3.50.**
- Prospective costing (2018-2025) (Figure 1):
  - Delivery of Td for 7-year-children: US$19.0 million via facilities, $24.7 million via facilities and outreach or $15.1 million via schools.
  - 3-year-transition for Td campaign: $0.49 million.
- Budget impact (2018-2025): TT for CBAW is expected to cost $22.2 million based on the retrospective costing. **Replacement of Td would mean a savings of $3.2-$7.1 million, with greatest savings achieved using school-based delivery** (Figure 2).

IMMUNIZATION ECONOMICS.ORG | HEA

IMMUNIZATION COSTING ACTION NETWORK (ICAN)

Replacing delivery of **TT to women of childbearing age** with delivery of **Td to 7-year-old children via schools** may generate **the greatest cost savings ($7.1 million)** in Vietnam.

immunizationeconomics.org/base/poster/hoang

Take a picture to learn more

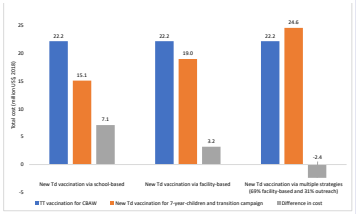
Findings will be available at
IMMUNIZATIONECONOMICS.ORG/ICAN

Table 1. Summary of fiscal unit costs and total fiscal costs for the current strategies of TT and Td vaccination in Vietnam, 2017

Current TT and Td Vaccination Strategies	Total doses	Average fiscal cost/dose (2017 US$)	Total average fiscal cost (2017 US$)
TT vaccination for CBAW	1,100,000		$2,071,366
Facility-based delivery	305,723	$1.80	$550,302
Facility-based delivery and outreach	137,354	$3.90	$535,680
School-based delivery	656,923	$1.50	$958,384
Td vaccination through campaigns	82,603	$3.50	$289,111

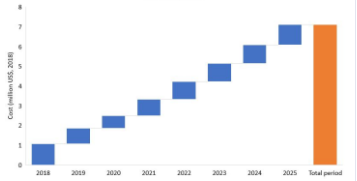
Note: Current TT vaccination for CBAW at schools is for 15-year-olds.

Figure 1. Total fiscal cost of replacing TT delivery to CBAW with Td delivery to 7-year-olds, 2018-2025



Note: Since data on the breakdown of doses delivered between facilities and outreach is not available, new Td vaccination via multiple strategies assumes 69% of doses are delivered at facilities and 31% via outreach, based on local staff expert opinion.

Figure 2. Total fiscal cost savings when replacing TT for CBAW by Td for 7-year-olds via school-based vaccination, 2018-2025



THINK WELL JSI

This work is supported by The Bill & Melinda Gates Foundation under the ICAN grant.

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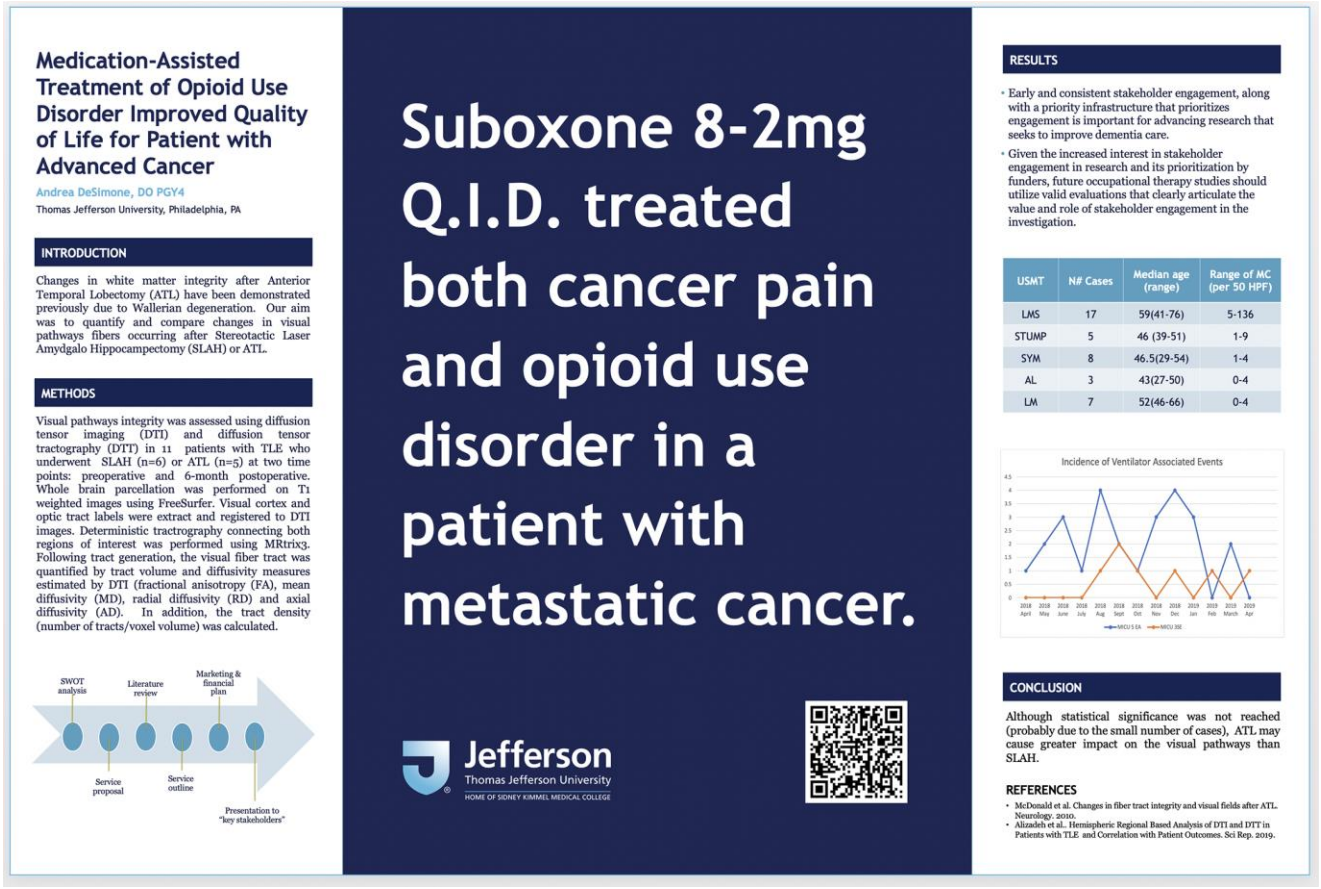

Medication-Assisted Treatment of Opioid Use Disorder Improved Quality of Life for Patient with Advanced Cancer

Andrea DeSimone, DO PGY4
Thomas Jefferson University, Philadelphia, PA

INTRODUCTION

Changes in white matter integrity after Anterior Temporal Lobectomy (ATL) have been demonstrated previously due to Wallerian degeneration. Our aim was to quantify and compare changes in visual pathways fibers occurring after Stereotactic Laser Amydgalo Hippocampectomy (SLAH) or ATL.

METHODS

Visual pathways integrity was assessed using diffusion tensor imaging (DTI) and diffusion tensor tractography (DTT) in 11 patients with TLE who underwent SLAH (n=6) or ATL (n=5) at two time points: preoperative and 6-month postoperative. Whole brain parcellation was performed on T1 weighted images using FreeSurfer. Visual cortex and optic tract labels were extract and registered to DTI images. Deterministic tractrography connecting both regions of interest was performed using MRtrix3. Following tract generation, the visual fiber tract was quantified by tract volume and diffusivity measures estimated by DTI (fractional anisotropy (FA), mean diffusivity (MD), radial diffusivity (RD) and axial diffusivity (AD). In addition, the tract density (number of tracts/voxel volume) was calculated.

Suboxone 8-2mg Q.I.D. treated both cancer pain and opioid use disorder in a patient with metastatic cancer.

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RESULTS

- Early and consistent stakeholder engagement, along with a priority infrastructure that prioritizes engagement is important for advancing research that seeks to improve dementia care.
- Given the increased interest in stakeholder engagement in research and its prioritization by funders, future occupational therapy studies should utilize valid evaluations that clearly articulate the value and role of stakeholder engagement in the investigation.

USMT	N# Cases	Median age (range)	Range of MC (per 50 HPF)
LMS	17	59(41-76)	5-136
STUMP	5	46 (39-51)	1-9
SYM	8	46.5(29-54)	1-4
AL	3	43(27-50)	0-4
LM	7	52(46-66)	0-4

CONCLUSION

Although statistical significance was not reached (probably due to the small number of cases), ATL may cause greater impact on the visual pathways than SLAH.

REFERENCES

- McDonald et al. Changes in fiber tract integrity and visual fields after ATL. Neurology. 2010.
- Alizadeh et al.. Hemispheric Regional Based Analysis of DTI and DTT in Patients with TLE and Correlation with Patient Outcomes. Sci Rep. 2019.

Let’s try it: 5-minute poster design

Use the template in the chat.

Nikita

Follow me on Twitter @nikitta_nk

INTRODUCTION

I was facilitating the class with Pam Walter

METHODS

Have had multiple poster presentations over the years

RESULTS

About 2-6 hours depending on whether I know the subject matter or not.

CONCLUSION

So much easier to create.

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Cancer Researcher, Epidemiologist, Rookie Biostatistician, Physician

TABLES & FIGURES

REFERENCES

Google
Youtube
Pam Walter

Templates

- Follow the conference guidelines for sizes & templates
- Check if they require landscape or portrait!
- Find Templates at http://creative.jefferson.edu/templates/research-poster/ OR better-poster-templates.com

- Avoid abstracts on posters unless guidelines require it

How to Engage the Audience Off the Wall

- Smile and be friendly
- Have contact info available
- Answer questions this way: BLUF & KISS

What are BLUF & KISS?

Bottom
Line
Up
Front

Keep
It
Short and
Simple

EXAMPLES of BLUF & KISS

Type of question	NOT THIS	THIS
BLUF	That's an interesting question. We took a path that we haven't explored before. Let me start with giving you a an explanation of how we decided to go this way.	We decided to use XYZ method because ABC didn't allow us to get as much data.
KISS	First, let me explain the statistical analysis we used to get this data and then I'll tell you why this was significant.	The data were significant, based on our modeling.

Deliverable

- Create a poster for your own research or contact Nikita for an assignment
- Submit it by 3/8/21 to Nikita or Pam
  - Fnu.Nikita@Jefferson.edu
  - Pamela.Walter@Jefferson.edu
- Receive 3 pts toward SciComm badge

Resources for building posters

- "Ten Simple Rules for a Good Poster Presentation." https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1876493/
- Mike Morrison https://twitter.com/mikemorrison
- Jefferson Research Poster Templates https://www.jefferson.edu/university/teaching-learning/graphics-medical-illustration.html
- For poster consultations: Pamela.Walter@Jefferson.edu


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