

Making a Compelling PowerPoint Presentation for Scientific Papers & Posters

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Learning Goals:

- Turn research into a clear story
- Avoid “paper-on-slides” presentations
- Design slides that support your spoken explanation
- Presenting figures, methods, and results clearly
- Workshop preparation



The Core Problem



- Papers are designed to be read
- Posters are designed to be browsed
- Presentations are designed to be heard and followed in real time
- Translating a paper or poster into a presentation requires planning.

A presentation is not a paper with animations

Avoid copying:

- Abstract structure
- Full paragraphs
- Dense methods
- Every result
- Every limitation



Your audience cannot rewind you

In a live presentation, audiences need:

- Clear signposting
- One idea at a time
- Visual guidance
- Repetition of key messages
- Time to interpret figures



Start with the audience

Ask:

- Who is listening?
- What do they already know?
- What do they need explained?
- What should they remember?

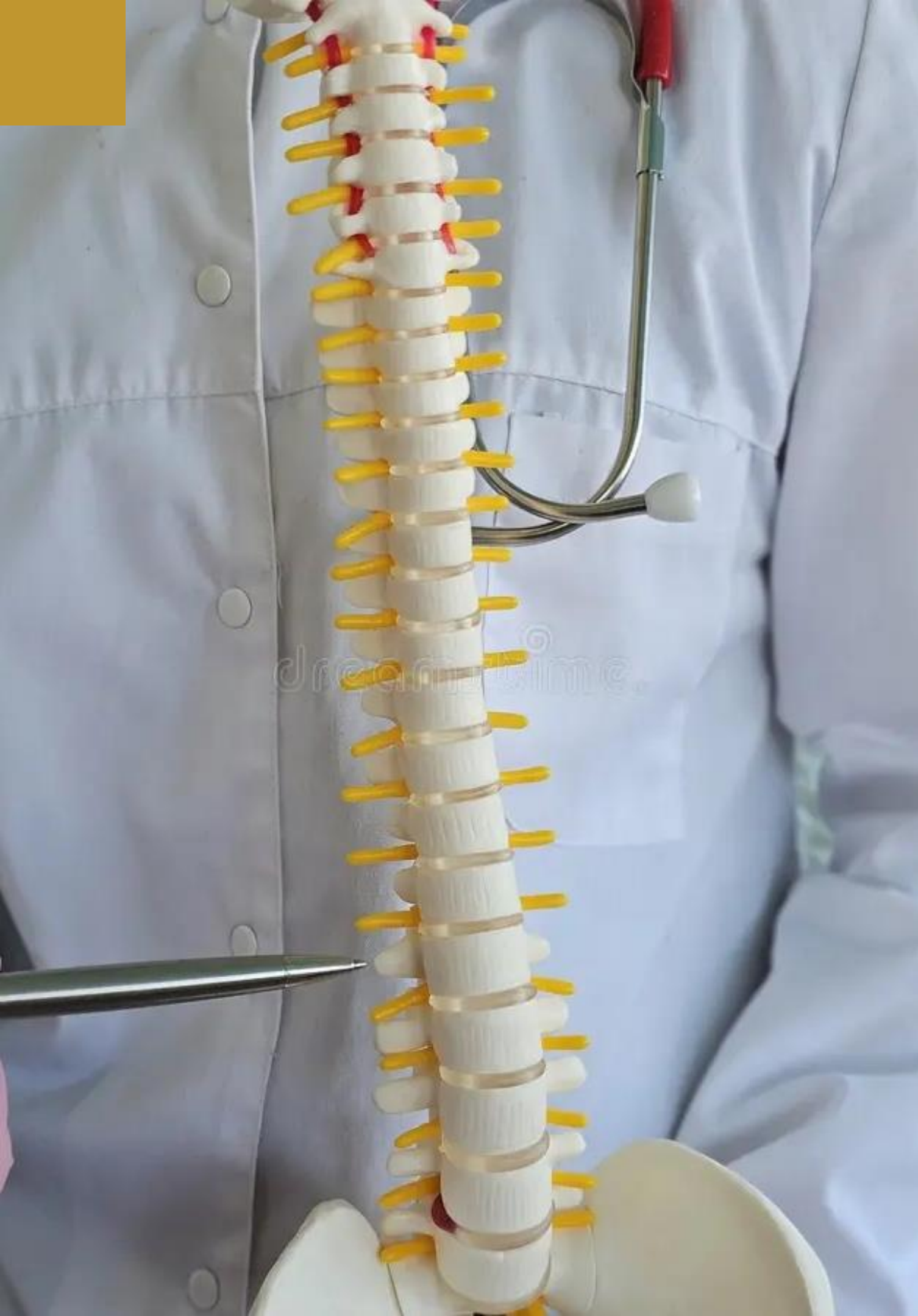


Start with the “so what?”



Before building any slides, you need to be able to finish this sentence:

“This work matters because _____.”



The Research Story Spine

1. Problem: What issue does this work respond to?

1. **Gap:** What is missing, unclear, or not working?

1. **Approach:** What did you do?

1. **Finding:** What did you learn?

1. **Meaning:** Why does it matter?

From paper structure to presentation structure

Paper:

Background > Methods > Results > Discussion

Presentation:

Why care? > What was missing? > What did we do?
> What did we learn? > Why does it matter?



Slide titles should make claims



Weak:

“Results”

“Background”

Better:

“Participants reported higher confidence after the intervention”

“Current rehab pathways miss a key transition point”

Use titles as a 'Story Test'

- If someone reads only your slide titles, they should be able to comprehend the basic argument or position of your presentation.





One slide,
one job

Each slide should do one main thing:

- Introduce the problem
- Explain a concept
- Show a method
- Interpret a result
- Explain an implication

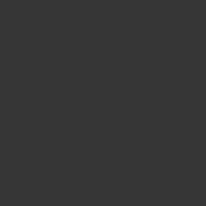
The slide is not the script

Slides should support what you say, not replace it.

Instead, put the detail in:

- Speaker notes
- Handouts
- Backup slides
- The paper / poster itself





Text: reduce, then reduce again

Replace paragraphs with:

- Claim-style titles
- Short phrases
- Labels
- Emphasis words
- Spoken explanation

Visual hierarchy: guiding attention

Use:

- Size
- Contrast
- Placement
- Spacing
- Progressive reveal





Graphs need interpretation

Do not just show the graph.

Tell the audience:

- What they are looking at
- What comparison matters
- What patterns to notice
- What it means

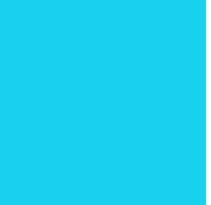


Figure titles should state the takeaway

Weak:

“Figure 2. Primary outcome by group”

Better:

“The intervention group improved more quickly over 12 weeks”

Tables usually need translation

Instead of showing a full table:

- Highlight the key row
- Pull out 1-3 numbers
- Convert to a simple visual
- Move details to backup



Methods slides: enough, not everything

Include what the audience needs to trust the result:

- Who / what was studied?
- What was compared?
- What was measured?
- Why the method fits the question



Results slides: findings before detail

Suggested order:

1. Takeaway title
2. Simple visual
3. Highlighted pattern
4. Brief interpretation





Discussion slides: Meaning over repetition

Do not restate every result. Explain:

- What changed?
- Why does it matter?
- Who can use this?
- What remains uncertain?

Posters need a verbal pathway too

A poster presentation is not “reading the poster”. It needs a short guided route:

- Hook
- Question
- Key result
- Implication



Common presentation mistakes

- Too much text
- Too many results
- Methods overload
- Unclear audience
- Weak slide titles
- Figures without explanation
- Ending without a takeaway message





The workshop challenge

You will build a short research story from your own work:

- One core message
- A 3-slide structure
- One drafted anchor slide

Key takeaway



A compelling scientific presentation is not a simplified paper.

It is a guided research story designed for a specific audience.



Questions?