

SURG238: PRACTICAL INTRODUCTION TO CLINICAL RESEARCH

Last lecture

Agenda

1. Responding to revision requests
2. Visual abstract
3. Recap of the quarter

Manuscript submission process

1. Submit
2. Editorial decision
 - reject vs peer review
3. Peer review
 - reject vs minor revision vs major revision vs accept
4. Revise
5. Loop (steps 3 & 4) $\times n$
6. Publication vs new target journal

Request for revision

Dear

The Editors have reviewed your manuscript. Interest was expressed for reviewing the paper again if certain revisions were made in the manuscript. The reviewer suggestions are enclosed...

Your revision is due If you cannot meet this deadline, please contact the editorial office by replying to this email.

Reviewer #1

...

Reviewer #2

..

Reviewer #3

...

Overall advice

Submit revisions ASAP (well before deadline)

Have the right attitude

- Reviewers/editors volunteer their time to help improve your manuscript
- “We thank the reviewer for the excellent/insightful/thoughtful suggestion or careful review....”
- “We agree...”

Overall advice

Don't fight. Follow suggestions unless:

- Unequivocally “wrong” (e.g. statistical)
 - Cite statistical literature/textbooks
- Beyond study aim
 - “excellent suggestion...follow-up/future study...”
- Mis-interpretation of findings
 - “thank you... to clarify...”
- Already stated
 - “to be more explicit....”

Overall advice

Revising may take longer than writing original manuscript

Agree → Acknowledge → Adapt

Revision cover letter

Date

Dear Editors,

Re:

Title

We wish to submit our revision for the above-named manuscript.

We appreciate the opportunity to revise and resubmit the manuscript; we are grateful that the reviewers' suggestions have made the manuscript a better product. We adopted reviewers' many helpful recommendations, and replied in-line to individual suggestions of the reviewer. We hope we have addressed the suggestions to the reviewers' and your satisfaction.

Included in the resubmission are the following:

- The response to reviewers (below) with page number references to the in-text changes
- A copy of the edited manuscript that includes ~~deleted~~ and new text
- A copy of the edited manuscript without mark-ups

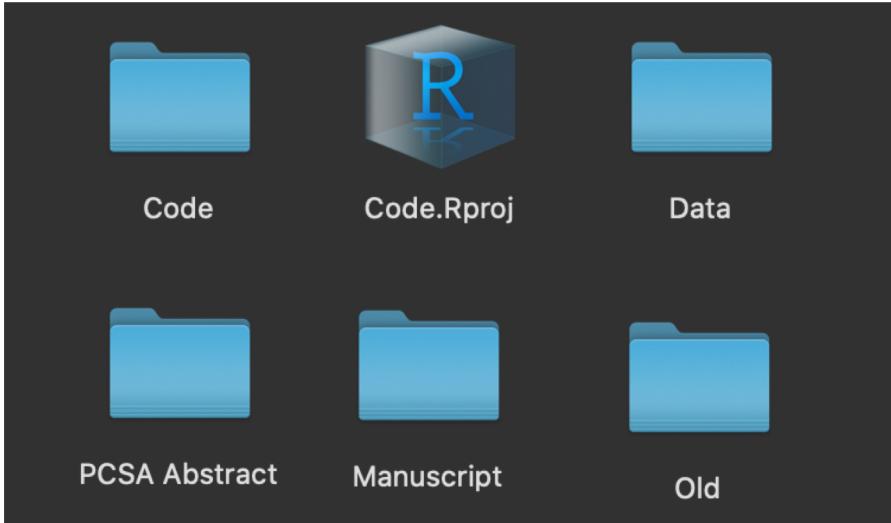
Please let us know if there is any further information you require. Thank you again for this opportunity.

Sincerely,

Your name & degree
PI name & degree

Example of revision requests

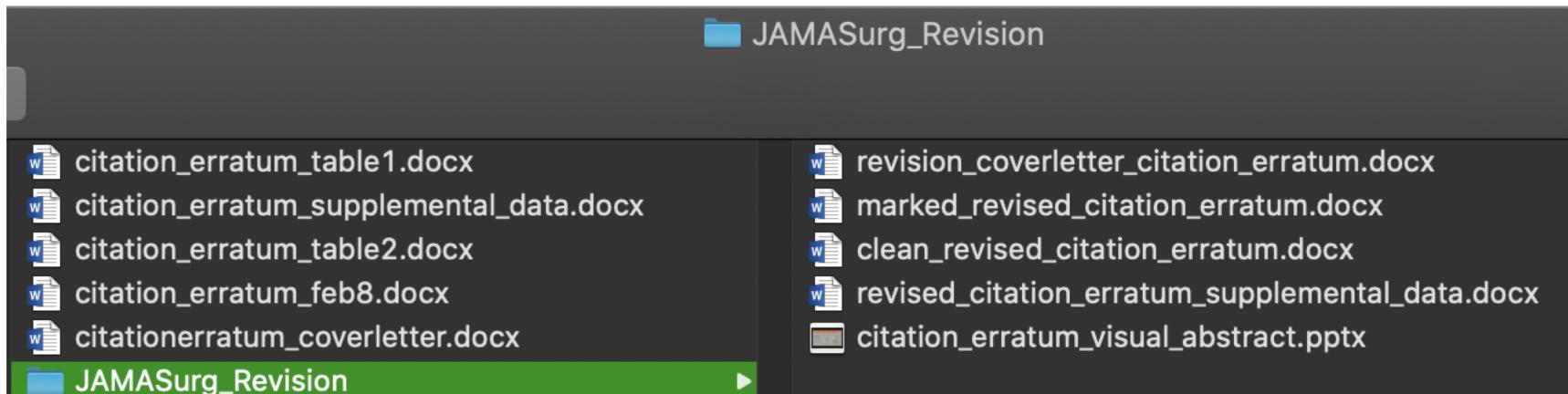
Reminder to keep ALL data, codes, files organized



```
#DATA ANALYSIS
# make sure ~10 citations per article (may have <10 if <10 refs total)
data<-data %>% group_by(title) %>% mutate(num_errors=sum(error==1))
data <- data %>% mutate_at(vars(c(cite_popularity,total_cite,first_last_selfcite)), as.numeric)
cat_vars=c( "journal", "early_period", "study_subspecialty", "study_domain", "cite_type", "error",
          "error_type", "fact_in_abstract", "major_english", "firstauth_morethan_md", "lastauth_morethan_md",
          "firstauth_trainee", "lastauth_trainee", "first_last_selfcite", "study_design_final", "num_errors")
cont_vars=c("tot_authors", "total_citing", "total_cite", "cite_popularity")
vars=c(cat_vars,cont_vars)

#REFERENCED ARTICLES
CreateTableOne(vars=vars,data=data,factorVars = cat_vars)
CreateTableOne(vars="error",data=data,factorVars = cat_vars,strata="cite_type")

#CITING ARTICLES
data2<-data %>% distinct(title, .keep_all = T)
#number of articles by no of errors
xtabs(~num_errors,data2)
data2$any_error<-ifelse(data2$num_errors==0,0,1)
```

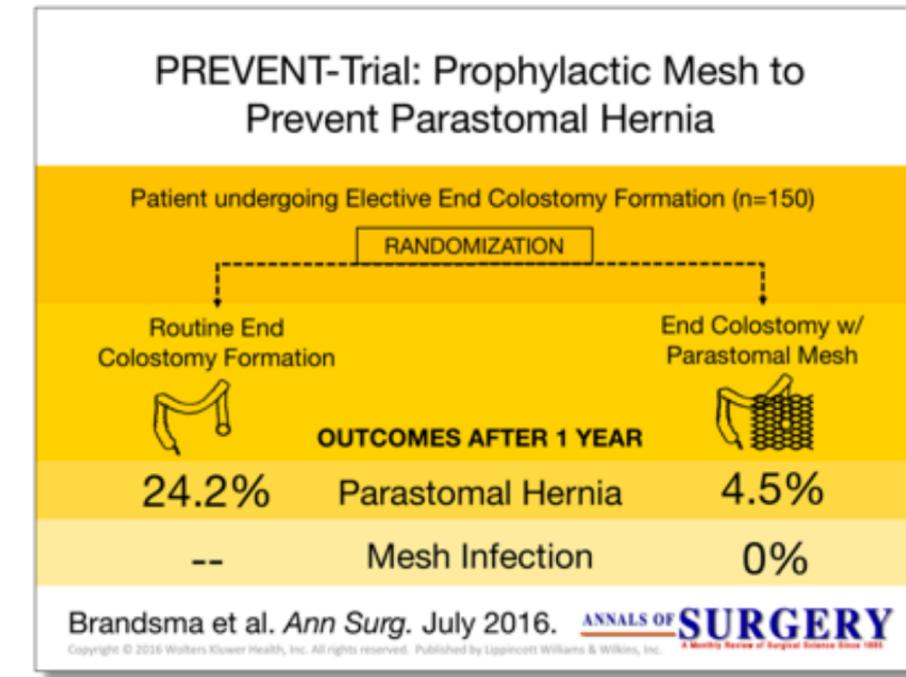
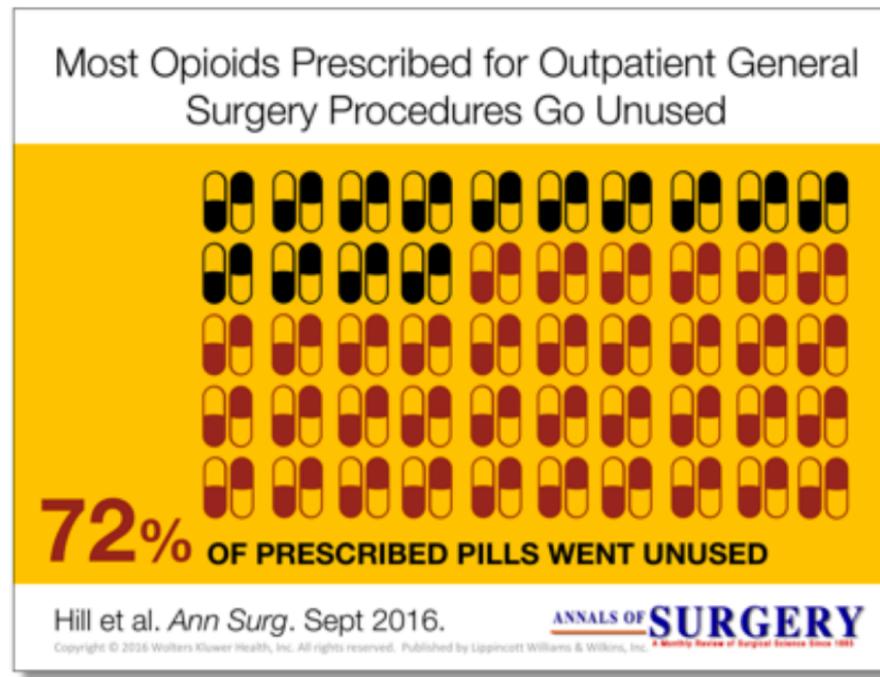


VISUAL ABSTRACT

- https://static1.squarespace.com/static/5854aaa044024321a353bb0d/t/5a527aa89140b76bbfb2028a/1515354827682/VisualAbstract_Primer_v4_1.pdf

WHAT IS A VISUAL ABSTRACT?

“A visual summary of the information contained in the abstract.”



Ibrahim, A.

https://static1.squarespace.com/static/5854aaa044024321a353bb0d/t/5a527aa89140b76bbfb2028a/1515354827682/VisualAbstract_Primer_v4_1.pdf

COMPONENTS OF AN EFFECTIVE VISUAL ABSTRACT

Summarize Key Question
Being Addressed

Impact of treating Iron Deficiency Anemia Before Major Abdominal Surgery

Summary of
Outcomes

Decreased Need for
Blood Transfusions



31% → 12%
(percent of patients)

Shorter Hospital
Length of Stay



9.7 → 7.0
(days)

Recovery of Hemoglobin
(Hb) post-discharge



+0.9 → +1.9
(Hb change at 4 weeks)

Author, Citation

Froessler et al. Ann Surg. July 2016

@AnnalsofSurgery | Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved. Published by Lippincott Williams & Wilkins, Inc.

ANNALS OF SURGERY
A Monthly Review of Surgical Science Since 1885

- State Outcome Comparison
- Visual Display of Outcome
- Data of Outcome (Units)
- Who Created the Visual Abstract (often the journal)

Ibrahim, A.

https://static1.squarespace.com/static/5854aaa044024321a353bb0d/t/5a527aa89140b76bbfb2028a/1515354827682/VisualAbstract_Primer_v4_1.pdf

Figure 1. Study Design. Prospective, Case-Control Crossover Study to Evaluate the Impact of Visual Abstracts on Twitter

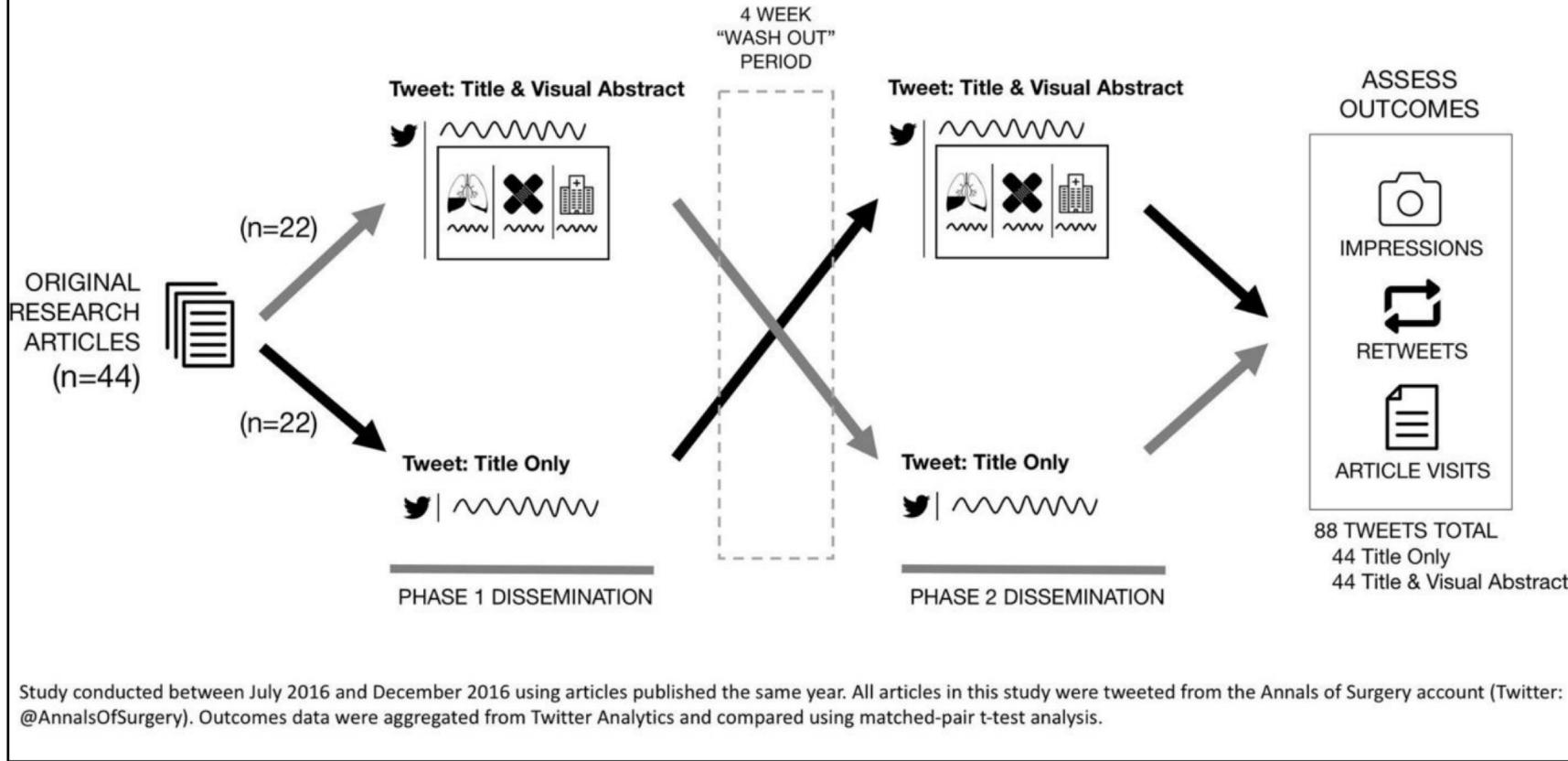


TABLE 1. Case-control Crossover Results: Title Alone Versus Title with Visual Abstract

Outcomes (Mean)	Title Alone (n = 44)	Title with Visual Abstract (n = 44)	Increase of Outcome with Visual Abstract	P*
Impressions	3073.3	23611.2	7.7 fold	<0.001
Retweets	11.0	92.1	8.4 fold	<0.001
Article visits	65.6	175.4	2.7 fold	<0.001

*Comparison of means using matched-pair *t* test analysis comparing 88 total tweets from 44 articles in the case-control crossover study.

Definitions: Impressions (number of times tweet is seen), Retweets (number of times a tweet is shared), article visits (number of times link to article was clicked from tweet).

My thoughts on the visual abstract

always submit a visual abstract

Make a twitter account

Know how to promote your/your colleague's work effectively

Recap of lecture 1

Publication = currency of academic medicine

Activity is not productivity: every research project should yield a peer-reviewed publication

Develop productive habits (don't multi-task, stay off phone/email while working)

Know how to structure an efficient research workflow

You need: time (make writing a habit), enthusiasm, skill, and the right team

Be super-organized

Recap of lecture 1: The efficient research workflow

- Come up with research idea
- Define research question. **Assemble team**
- Write IRB
- **While Waiting for IRB:** write manuscript (intro, methods, part of discussion), define analytic method, identify target journal, draft tables + figures
- Gain data access
- ~~- Define analytic method~~
- **While someone Analyzes,** come up with next research idea
- Review results
- Write manuscript: intro, methods, results, discussion, conclusion
- ~~- Define goal journal, pre-emptively plan for reviewer questions~~
- Submit

Recap of lecture 2: how to design a research Q

Strive to be a content expert

- know research landscape inside out
- know burning Qs vs beating a dead horse
- how? Ask. Read. Read. Read.

Ask a meaningful, actionable question that adds new knowledge & has potential to improve patient outcomes

Have a CRYSTAL-CLEAR (usually singular) hypothesis: “**We hypothesized...**”

These phrases should be in last paragraph of intro, verbatim

Have a CRYSTAL-CLEAR aim: “**We aimed to...**”

Recap of lecture 3: use Zotero

USE ZOTERO

Recap of lecture 4: P values: don't pay attention (too much)

- There is no actual cutoff for being “statistically significant”
- “statistically significant”= failure to reject the null. This is NOT accepting the null
 - No evidence that difference in groups was the same. NOT that groups were different
- Small p value does NOT mean large effect size
 - i.e. “Difference in mean systolic blood pressure (group 1: 140 vs group 2: 142) <0.001
 - 3 factors affect p value: effect size, sample size, spread of data

Recap of lecture 4: Look at the confidence intervals!

95% CI is NOT (95% probability true value is in this range),

95% CI is: after hypothetical repeats of experiments using the data, 95% of the time, true value will be within this range

Recap of lectures 5-6

Follow EQUATOR Network guidelines (e.g. STROBE)
when writing (submit checklist as supplement)

Be systematic in your writing

Keep your writing succinct: get your message across
in as few words as possible

Final thoughts: know your “why”

Academic medicine is rewarding: possibility of saving/improving many lives

Knowing “the game” (being super productive) will facilitate accomplishing this goal

We hope this course was a helpful introduction!