



# Types of Medical Articles

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graph TD; A[Type of study] --> B[Primary]; A --> C[Secondary];
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Type of study

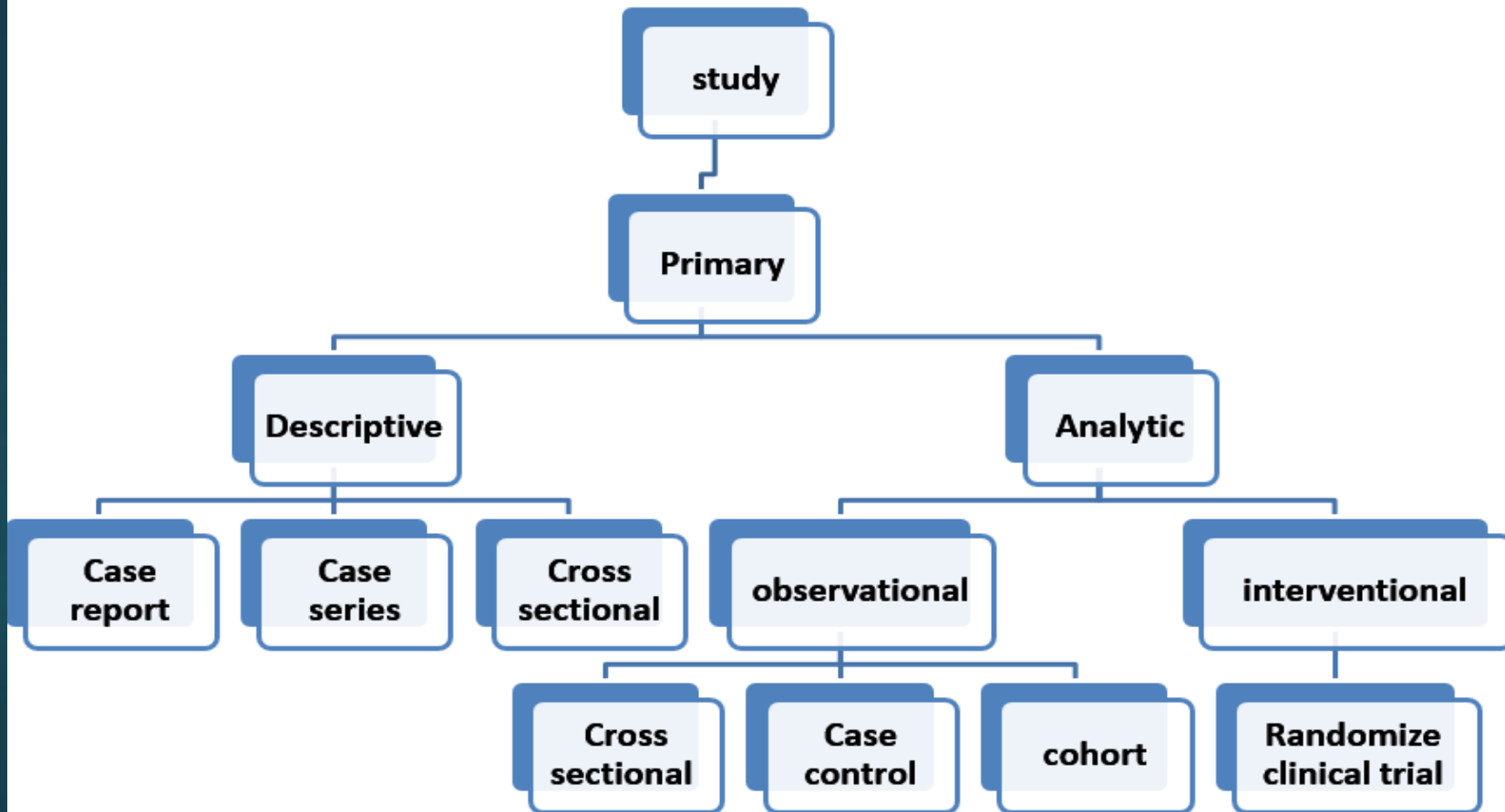
Primary

Secondary

# Primary study

- ▶ This is an empirical **study** in which we **directly make measurements** about the objects of interest, whether by **surveys, experiments, case studies** etc.
- ▶ Original research
- ▶ **Study units**: human, animal, sample, cases, cells, etc.

# Type of Studies



# Secondary Studies

- ▶ A secondary study **does not** generate any data from **direct measurements**
- ▶ instead it analyses a set of **primary studies** and usually **seeks to aggregate the results** from these in order to **provide stronger forms of evidence** about a particular phenomenon.
- ▶ **Study unit:** primary studies
- ▶ Systematic Review
- ▶ Narrative Review

# systematic review

- ▶ A **systematic review** is a literature review **focused on a research question** that tries to identify, appraise, select and synthesize **all high quality research evidence** relevant to that question.
- ▶ A systematic review aims to provide an **exhaustive summary** of literature relevant to a research question.
- ▶ Attempts to **collate all empirical evidence** that fits pre-specified eligibility criteria in order to answer a specific research question

# Types of Medical articles

- ▶ **Original Article**
- ▶ **Reviews (Overviews)**
  - ▶ **Narrative reviews**
  - ▶ **Systematic reviews & Meta-analyses**
- ▶ **Case Reports**
- ▶ **Editorial**
- ▶ **Short Communication**
- ▶ **Letter to The Editor**

# Titles for reviews should be:

- ▶ Short
- ▶ Catchy
- ▶ humorous (if possible)



# Narrative Reviews

- ▶ Narrative reviews are usually written to:
  - ▶ address new developments
  - ▶ summarize recent literature
- ▶ Who should write a narrative review?
  - ▶ Narrative reviews are an expert opinion that is an extension of current thinking and not a definitive evaluation of the literature


# Narrative reviews have sometimes been criticized as “old fashioned”

- ▶ Do not need to specify:
  - ▶ Search strategy
  - ▶ Inclusion and exclusion criteria of studies
  - ▶ How the quality of citations was assessed.
  - ▶ **Bias**

# Case Report

# Topics that may be reported in case reports

- ▶ Clinical conditions that have not been described before
- ▶ Unusual and unreported presentations of known clinical conditions
- ▶ Unexpected beneficial responses to a treatment
- ▶ Previously unreported adverse reactions to a treatment
- ▶ Errors in diagnosis as a result of use of incorrect tests or presentation with unusual symptoms
- ▶ New uses of a diagnostic tool or use of novel diagnostic tools
- ▶ Phenotypes associated with a newly found gene

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- ❑ The **main purpose** of a case report is to **educate clinicians about the clinical features, investigation, and/or the treatment of patients with unusual problems.**
  - ❑ In reporting observations by clinicians, case reports may also **generate hypotheses** that lead to new research studies.

# Frederick Treves reported on "The Elephant Man"



*Fig. 1. Facial asymmetry at the age of 12 or 13 years.*



*Fig. 2. The Quasimodo's tumor disfiguring and distorting the right side of the face, head and neck.*

# Format for the case report

- ▶ Title:
  - ▶ Short
  - ▶ Descriptive
  - ▶ Eye catching
- ▶ Introduction
  - ▶ The first paragraph discusses why the cases is unusual.
  - ▶ The report may begin simply with the case description.
- ▶ Case description
  - ▶ Present the relevant data, including medical history, physical findings, results of tests and procedures, and treatment received.
  - ▶ Confidentiality must be absolute
  - ▶ A photograph or other illustration may be useful
  - ▶ Why the particular management was chosen

# Format the case report (cont')

## ▶ Discussion

- ▶ Explain how and why decisions were made
- ▶ What lesson is to be learnt
- ▶ The discussion should be useful and not overlong
- ▶ The aim should be to refine and define the message for the reader

## ▶ References

- ▶ The case report is not intended to be a state-of-the-art literature review.
- ▶ Reference other work only when necessary to make a specific point

## ▶ Acknowledgements



# Case Report Size

- ▶ The case report should not be too long
- ▶ Most journals restrict the size of case reports:
  - ▶ Gut restricts reports to 1500 words, 15 references, one table and two figures
  - ▶ the **Journal of Pediatric Gastroenterology** restricts reports to 8 manuscript pages including any figures, tables, and references
  - ▶ The **New England Journal of Medicine** publishes different types of case reports. One to three cases of a condition can be described in a brief report with a **maximum of 2000 words**, but clinical problem-solving reports are larger with a maximum of 2500 words and 20 references.

# Acute Unilateral Vision Loss Due to Optic Neuropathy in a Patient with Systemic Lupus Erythematosus

## Background

Systemic lupus erythematosus (SLE) is a complex inflammatory disease with an average prevalence of about 50 case per 100 000 individuals [1]. Ocular manifestations of SLE were first described in 1929 by Semon and Wolff; incidences are not infrequent, occurring in up to one-third of patients [2,3]. The thrombotic and inflammatory nature of the disease can affect almost every anatomical structure of the eye. Symptoms range from dry eyes as seen in keratoconjunctivitis sicca post-transplantation, also known as secondary Sjogren's Syndrome, to complete vision loss in diseases that affect the retina and optic nerve. Optic nerve disease, represented by optic neuritis and ischemic optic neuropathy (anterior and posterior) are rare, but more severe, vision-threatening manifestations that affect only 1% of SLE patients [4]. In this report, we describe a patient with SLE who presented with optic neuropathy, and we review the literature associated with clinical and serologic diagnosis as well as acute and chronic management.

## Case Report

A 44-year-old African-American female with what was reported to be stable SLE, end stage renal disease secondary to lupus nephritis, and a failed renal transplant, developed photophobia and fatigue followed by 4 days of painless, acute vision loss in the right eye. She denied headache, skin rash, joint pains, chest pain, or any other constitutional symptoms.

Physical examination revealed no skin rash, normal cardiac and lung auscultation, and a normal abdominal examination. Neurological examination revealed normal strength and sensation in the upper and lower extremities and cranial nerves I and III-XI were grossly intact. Ophthalmologic examination revealed that she was unable to perceive light (NLP) with the




**Figure 1.** Funduscopy examination of a patient with optic neuropathy demonstrating an edematous, pale optic disc.

and 1+ retinal venous tortuosity (Figure 1). There were no vitreous cells and no papillary or retinal hemorrhages. The examination of left eye, including the optic disc and retinal vasculature, was normal. Differential diagnosis included acute ischemic optic neuropathy, viral neuroretinitis, compressive neoplasm or abscess, and toxic drug effect.

Computerized tomography (CT) scan of the head showed no neoplastic masses or signs of acute infection/brain abscess. CT scan of the orbits showed no compressive lesion of the optic nerve. There were no clinical or historical signs of systemic infection and infectious laboratory workup was overall negative. Drug screening and serum electrolytes were within normal limits. Inflammatory laboratory testing revealed elevated titers of several inflammatory markers consistent with a SLE

# Case Report vs Case Series

- ▶ A group or series of case reports involving patients who were given similar treatment. Reports of case series usually contain detailed **information about the individual patients**. This includes demographic information (for example, age, gender, ethnic origin) and information on diagnosis, treatment, response to treatment, and follow-up after treatment.(NCI Dictionary of Cancer Terms)
- ▶ The case series is one of **a group of descriptive studies** that by their very nature **do not test the hypothesis of treatment efficacy**. That is, a case series is not the appropriate design to determine whether a treatment works or not.
- ▶ (Grimes DA, Schulz KF. Descriptive studies: what they can and cannot do. Lancet 2002;359:145–9)

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- ▶ a group of patients with similar diagnoses or undergoing the same procedure followed over time. The case series may be used in several settings:
    - ▶ Initial reports of a new diagnosis or innovative treatment.
    - ▶ Single physician or hospital reports of outcomes.
    - ▶ Multi-institutional registry.
  - ▶ The size of a case series can range from two or three cases to hundreds or even thousands.

# Editorial

- ▶ Rely on your experience
- ▶ Allow you to express your opinion.
- ▶ Not too many *beginning writers* have the chance to write and publish editorials.

*JAMA Pediatrics*

**Association Between Screen Media Use and Academic Performance Among Children and Adolescents: A Systematic Review and Meta-analysis**

Mireia Adelantado-Renau, MSc; Diego Moliner-Urdiales, PhD; Iván Caverro-Redondo, PhD; et al

**Editorial: Disentangling the Association of Screen Time With Developmental Outcomes and Well-Being** ; Janis Whitlock, PhD, MPH; Philipp K. Masur, PhD

*JAMA Cardiology*

**Statin Use in Primary Prevention of Atherosclerotic Cardiovascular Disease According to 5 Major Guidelines for Sensitivity, Specificity, and Number Needed to Treat**

Martin Bødtker Mortensen, MD, PhD; Børge Grønne Nordestgaard, MD, DMSc

*JAMA Psychiatry*

**Association of Antidepressant Use With Adverse Health Outcomes: A Systematic Umbrella Review**

Elena Dragioti, PhD; Marco Solmi, MD, PhD; Angela Favaro, MD, PhD; et al

**Editorial: Selective Serotonin Reuptake Inhibitor Use in Pregnancy—Associated With but Not Causative of Autism in Offspring** ; José M. Flores, MPH, MD, PhD; Victor J. Avila-Quintero, MD; Michael H. Bloch, MD, MS

# Some Types of Editorial

- ▶ Editorial Salesmanship
  - ▶ Discuss why they chose to publish a lot about a specific topic and occupy the pages.
- ▶ The Editor's Opinion
  - ▶ Writing about a new and important topic (hot topic)
- ▶ Editorial Comment Regarding a Published Study
- ▶ Sharing Special Insight

# Structure of an Editorial (1)

- ▶ Present the problem
  - ▶ Tell your reader the issue you are addressing in the first sentence of the first paragraph
- ▶ Offer evidence to support your opinion.
  - ▶ Select the references carefully, to avoid allowing your editorial to become a review article.
- ▶ Offer personal insight
- ▶ Offer counterevidence
  - ▶ Present the other side of the issue in an unbiased and respectful manner, and then say why you are not convinced.



# Structure of an Editorial(2)

- ▶ Provide a summary and conclusion.
  - ▶ In single closing paragraph describe your conclusion
  - ▶ Perhaps include the implications of your conclusion to practice or to society.
- ▶ Cite references
  - ▶ Include a few

February 27, 2018

# Early Warning Systems for Hospitalized Pediatric Patients

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» [Author Affiliations](#) | [Article Information](#)

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Physicians and other health care practitioners have been hopeful that computerized early warning systems (using data elements gleaned from the hospital's electronic medical record, bedside vital signs, or both, in conjunction with enhanced education, monitoring, and response) would aid in identifying patients at risk of clinical deterioration prior to bedside recognition by clinicians.<sup>1</sup> The ultimate goal for early warning systems is a rapid clinical response to the patient's newly identified needs with demonstrable improvements in both the processes of care and patient outcomes. An early warning system is necessary because clinicians are limited in their abilities to absorb, process, apply diagnostic testing, and implement therapeutic plans with all the big data inherent in the current inpatient setting.

# Letter to **The** Editor

- ▶ Letters to the editor are a wonderful vehicle for the aspiring medical writer.
- ▶ Author should not be a distinguished professor
- ▶ No original research study is needed
- ▶ A reasonable chance of publication

# Structure Of The Letter To The Editor

- ▶ Identify the paper.
  - ▶ In the first sentence, cite the paper that is the subject of your comments. This becomes your Reference 1.
- ▶ State why you are writing.
  - ▶ State your agreement, disagreement, concern, or other reason for writing.
- ▶ Give evidence.
  - ▶ The evidence may be from the literature or from personal experience. Literature-based evidence is better.
- ▶ Provide a summary statement
  - ▶ Conclude by tying all the above together.
- ▶ Cite references.
  - ▶ Often a letter to the editor will have a few reference citations, but not too many.
  - ▶ [..\china.pdf](#)
  - ▶ [..\letter.pdf](#)

# Short Communication



- ▶ Presentation of a study as a letter is rather similar to writing an extended abstract.
- ▶ Three clear divisions
  - ▶ Introduction and objectives of the study
  - ▶ A section stating the methods, analysis, and results
  - ▶ Conclusion.
- ▶ An abstract is unnecessary.

# Presentation of a concise report as a short communication

- ▶ Introduce the topic
  - ▶ Briefly explain rationale and objectives of study
- ▶ Present methods and results
  - ▶ Reference methods as much as possible
  - ▶ Include only essential data
  - ▶ If possible present data in a table and/or figure
- ▶ Present conclusions
  - ▶ Emphasize only one or a few major conclusions
  - ▶ Avoid extrapolating too far from data
  - ▶ Highlight caveats and strengths of the study
  - ▶ Suggest future studies that are still required in this area
- ▶ Avoid repetition of data or conclusions





# Critical Appraisal tools



# The science of 'trashing' a paper

