

# Overview of Statistical Analysis

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## 1 Why should you care about statistical analysis?

A study's results are useless if the wrong data analysis test is used Allam (2017)<sup>1</sup> found that only 24.5% of studies performed for MD doctoral dissertations at the National Cancer Institute (NCI) used improper data tests<sup>1</sup>

- Most of results were misinterpreted (82.3%)<sup>1</sup>
- Misuse of statistical terminology (77.4%)<sup>1</sup>

## 2 Comparing Tests

### 2.1 T-Test

#### T-Test

- Determines difference from in mean values between 2 groups

## 2.2 Mann-Whitney U Test

See [Mann-Whitney U Test](#)

- Difference in Rank sum
  - Does not need to be normally distributed
  - 2x independent groups
1. Allam RM, Noaman MK, Moneer MM, Elattar IA. Assessment of Statistical Methodologies and Pitfalls of Dissertations Carried Out at National Cancer Institute, Cairo University. *Asian Pacific journal of cancer prevention: APJCP*. 2017;18(1):231-237. doi:[10.22034/APJCP.2017.18.1.231](#)