

Stage Bias

Stage bias refers to a systematic distortion in study results that occurs when comparing outcomes between groups with **different stages of disease**, especially in cancer or chronic illness research.

It typically arises when:

- One group is diagnosed **earlier** (e.g., due to screening) and appears to have **better outcomes**, not because the treatment is more effective, but because the disease is detected at an **earlier, less advanced stage**.
- Comparisons are made without adjusting for **disease stage at diagnosis**, leading to **confounding**.

Example

Patients undergoing regular screening may be diagnosed at an earlier stage and seem to live longer, even if their actual **time of death is unchanged**. This can **overestimate** the benefits of screening or early intervention.

Related Concepts

- [Lead Time Bias](#)
- [Length Time Bias](#)
- [Confounding](#)

Relevance

Understanding stage bias is essential for the correct interpretation of:

- Screening program effectiveness
- Survival statistics
- Comparisons between treated and untreated groups

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