

Interpretative Overconfidence

'Interpretative overconfidence' occurs when researchers express excessive certainty about the meaning or implications of their findings, going beyond what the data objectively support.

Common manifestations

- Drawing **causal conclusions** from **correlational or observational data**
- Presenting **model outputs** (e.g., risk scores, AUCs, SHAP values) as **clinically actionable** without external validation
- Ignoring limitations or uncertainty in measurement, sampling, or context
- Overstating the generalizability or novelty of results

Example in clinical research

Claiming that a machine learning model can **prevent disease** simply because it predicts risk with high accuracy on retrospective data.

Consequences

- Misguides clinical decision-making
- Inflates perceived scientific progress
- Erodes public and professional trust in medical research

'In summary:' interpretative overconfidence distorts the relationship between evidence and conclusion, leading to potentially misleading or unjustified claims.

From:
<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:
https://neurosurgerywiki.com/wiki/doku.php?id=interpretative_overconfidence

Last update: **2025/06/15 11:09**

