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| Analogies of Statistical Hypothesis Testing | | |
| Medical Diagnostics | **Test of Statistical Significance** | **Court Trial** |
| Every incoming patient has a disease until proved disease-free | Null Hypothesis | Every defendant is innocent until proved guilty |
| Order labs and gathering health info | data (information) collection | Investigation and evidence gathering |
| summarize clinical evidence | Information Aggregation: test Statistics | Summary of evidence exhibitions |
| Clinical standards | Statistical Decision Rules | Jury’s instruction: cross-examination |
| Diagnostic decision | Statistical Decision | Verdict |
| Claim a diseased patient to be disease-free | **Type I Error** | Conviction of innocent defendant |
| Claim a disease-free patient to be diseased | **Type II Error** | Acquittal of a criminal |