

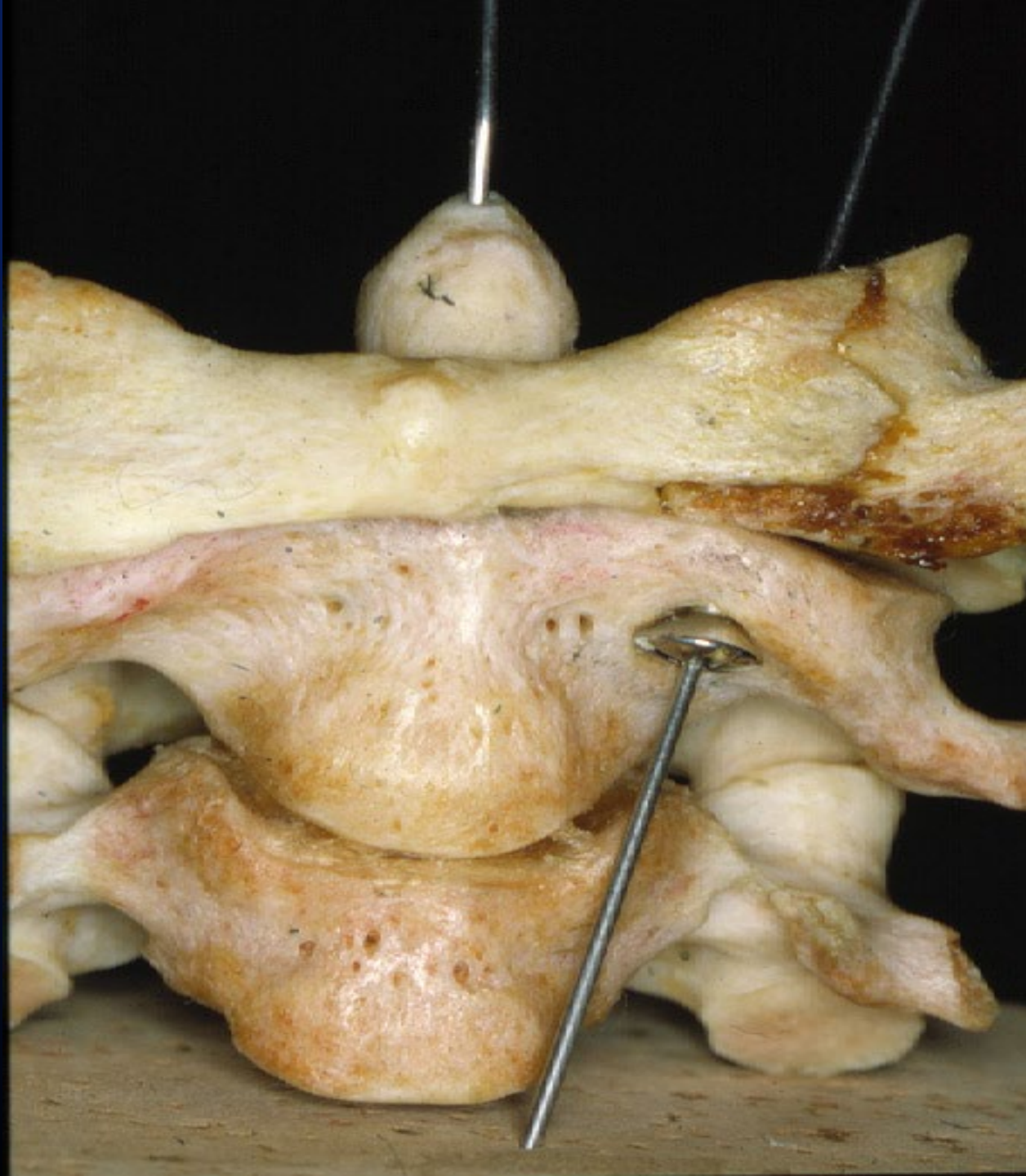
ERFAHRUNGEN MIT MEDICAL DECISION MAKING

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*Symposium: Klinische Entscheidungsunterstützung
Frankfurt am Main 06.12.2023*



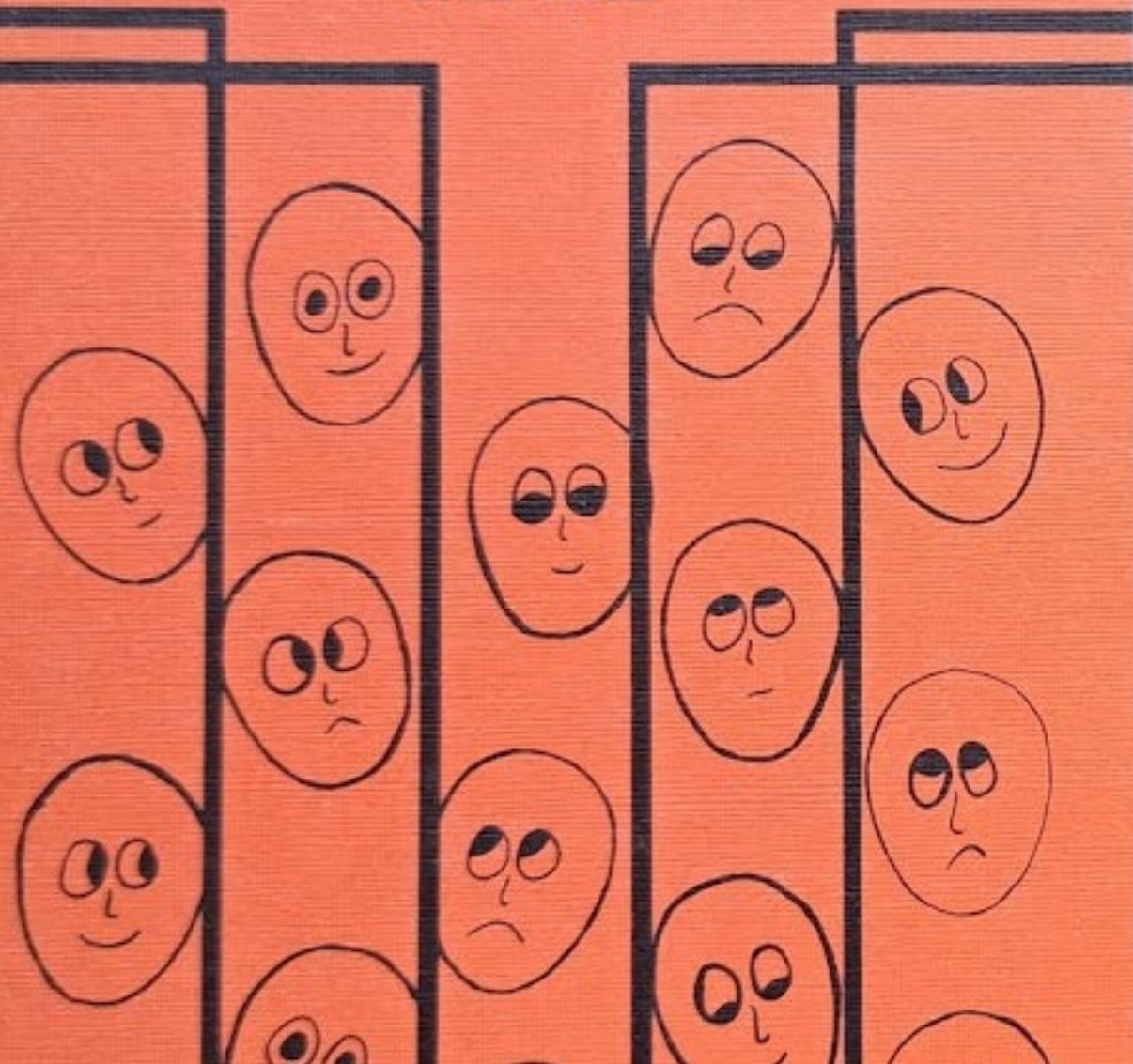
Rudolf Streli 1922-1987



THE A-Z FOR THOSE WHO MUST

James Calnan

FRCP FRCS



PAPERS
a practical guide

SPEAKING
AT MEDICAL
MEETINGS

James Calnan
Andras Barabas

a practical guide



LITTLE BLACK BOOK

Ideas for research come from three sources:

- Simple observation of everyday events, by far the most important;
- From reading books and journals and asking “Why?”, when a statement is made;
- Contrived events – “I wonder what would happen if. . . . ?”

- 1. Wie gehen wir mit der Realität um**
- 2. Was können Daten**
- 3. Was ist und wie entsteht Wissen**
- 4. Medical Decision Making**
- 5. PLUS**

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Wie geht man mit der Realität um (I)

All science, and all philosophy, are enlightened common sense. Karl Popper

Science is a method for producing incremental useful approximation to reality, not a path to absolute truth

Gavin Schmidt (edge.org)

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Wie geht man mit der Realität um (2)

Intellectual progress demands that we refuse to take things at face value, refuse to accept everything we have been told, refuse to assume that conventional wisdom must be right.

Science as Richard Feynman remarked, can be defined as “the belief in the ignorance of authority”.

Alfie Kohn

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Daten (I)

Statistische Betrachtung

Datentyp, Verteilung,

Schließende, beschreibende Statistik

Entscheidungsbaumanalysen, SPC

Clinimetrie

Validität, Reliabilität, Responsiveness,

MCID *Minimal clinical important Difference*

PASS *Patient Acceptable Symptom State*

SBC *Substantial Clinical Benefit*

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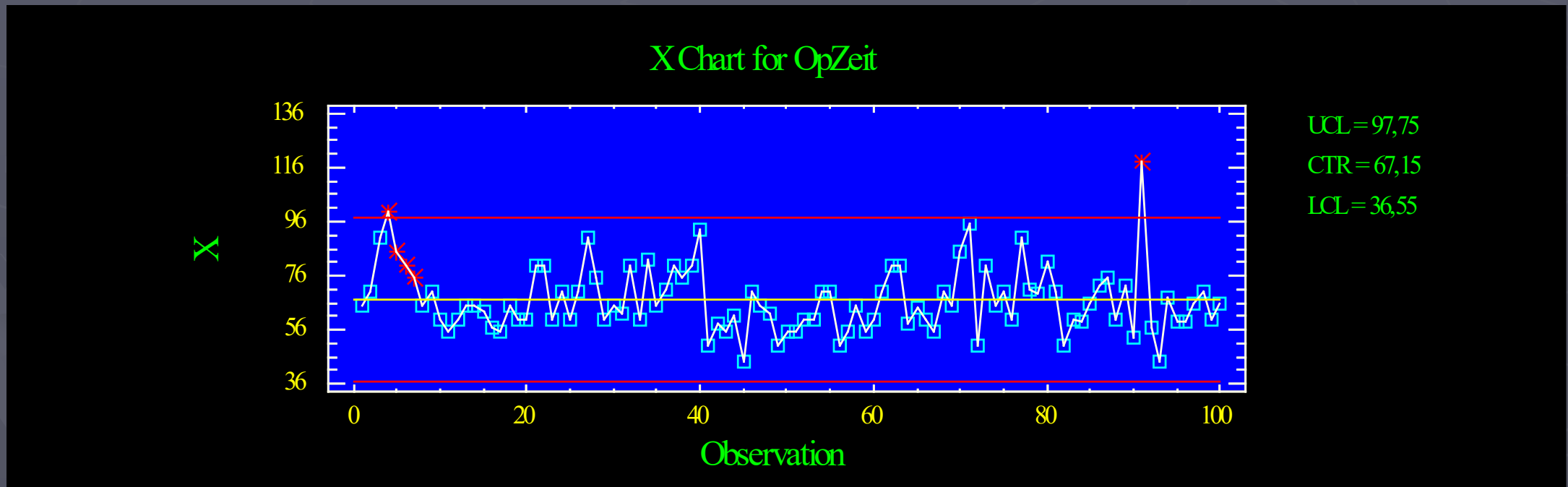
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*When you can
measure what
you are
speaking about
and express it
in numbers,
you know
something
about it;
Lord Kelvin*

Quality Improvement Study 1, 1: *Ist der Behandlungsprozess in statistischer* *Kontrolle?*

Variablen: Geschlecht, Alter, OP-Zeit



Sequence of activities in the intellectual pathway of cause - effect or process research

The Plans and Work

- 1 Choose a research hypothesis**
- 2 Choose a research structure**
- 3 Obtain the data**

The News

- 4 Organize the data into statistical structures**

Editorial appraisal of distinctions and credibility of the news

5 Decide about quantitative significance

6 Decide about stochastic significance

7 Check the scientific inference from research structure to desired architecture

Editorial judgements re consequences

8 Form conclusions about confirmatory decisions, explicatory hypotheses and policy decisions

Alvan R Feinstein 1985

Internal versus External Validity

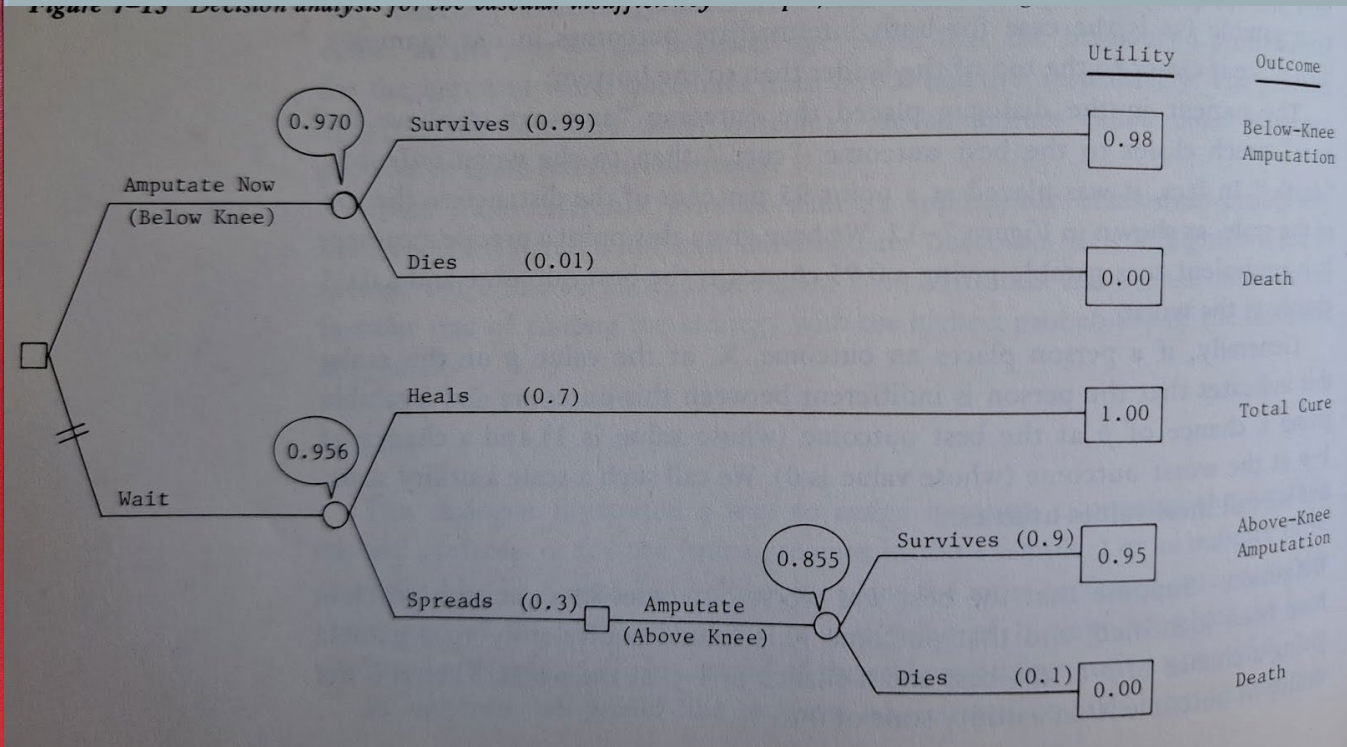
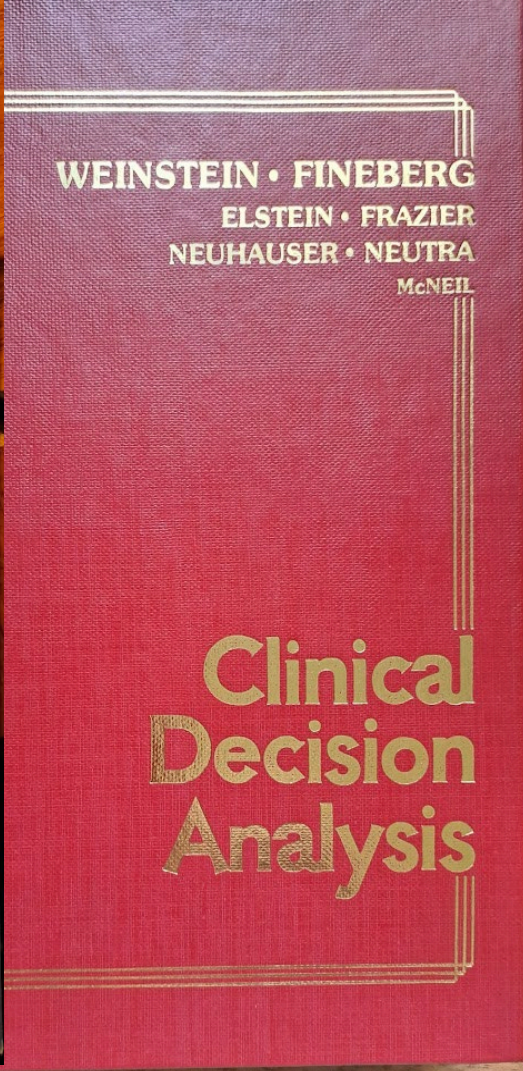
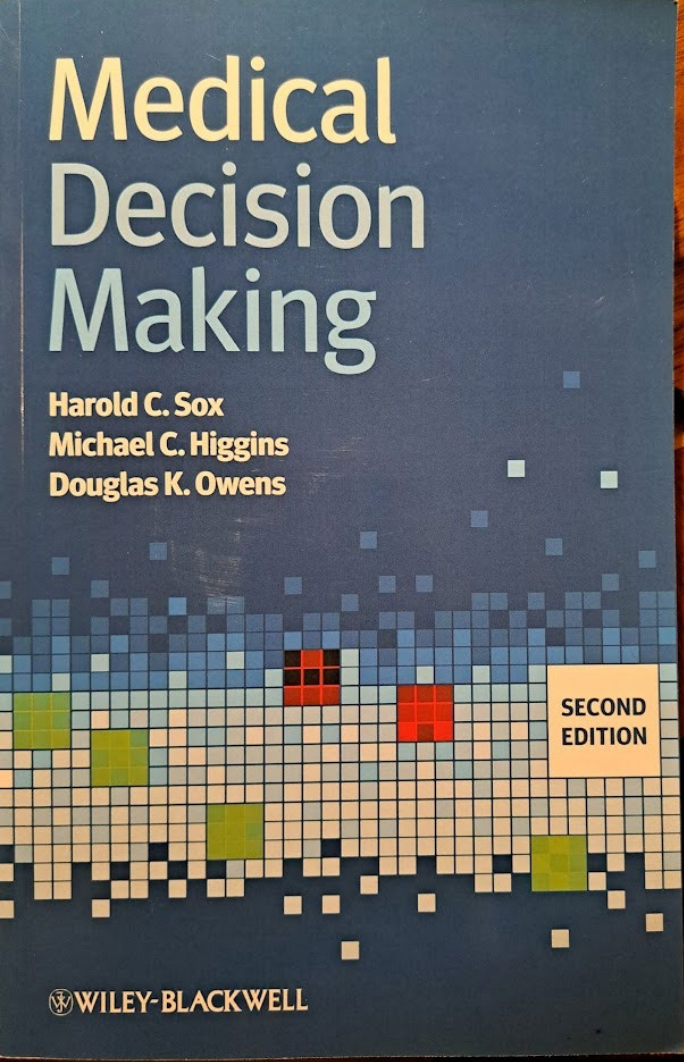
Internal validity examines whether the study design, conduct, and analysis answer the research questions without bias.

External validity examines whether the study findings can be generalized to other contexts.

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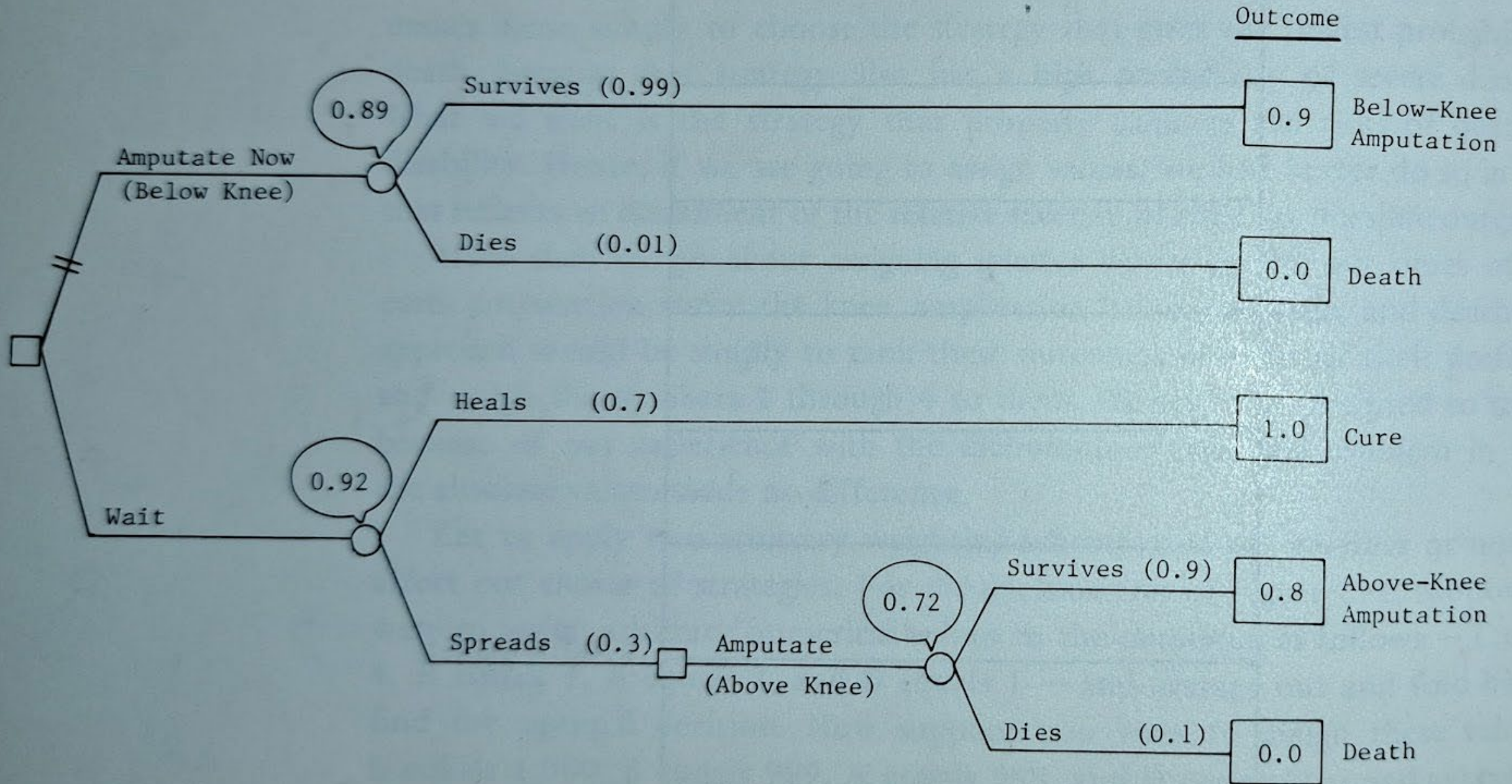
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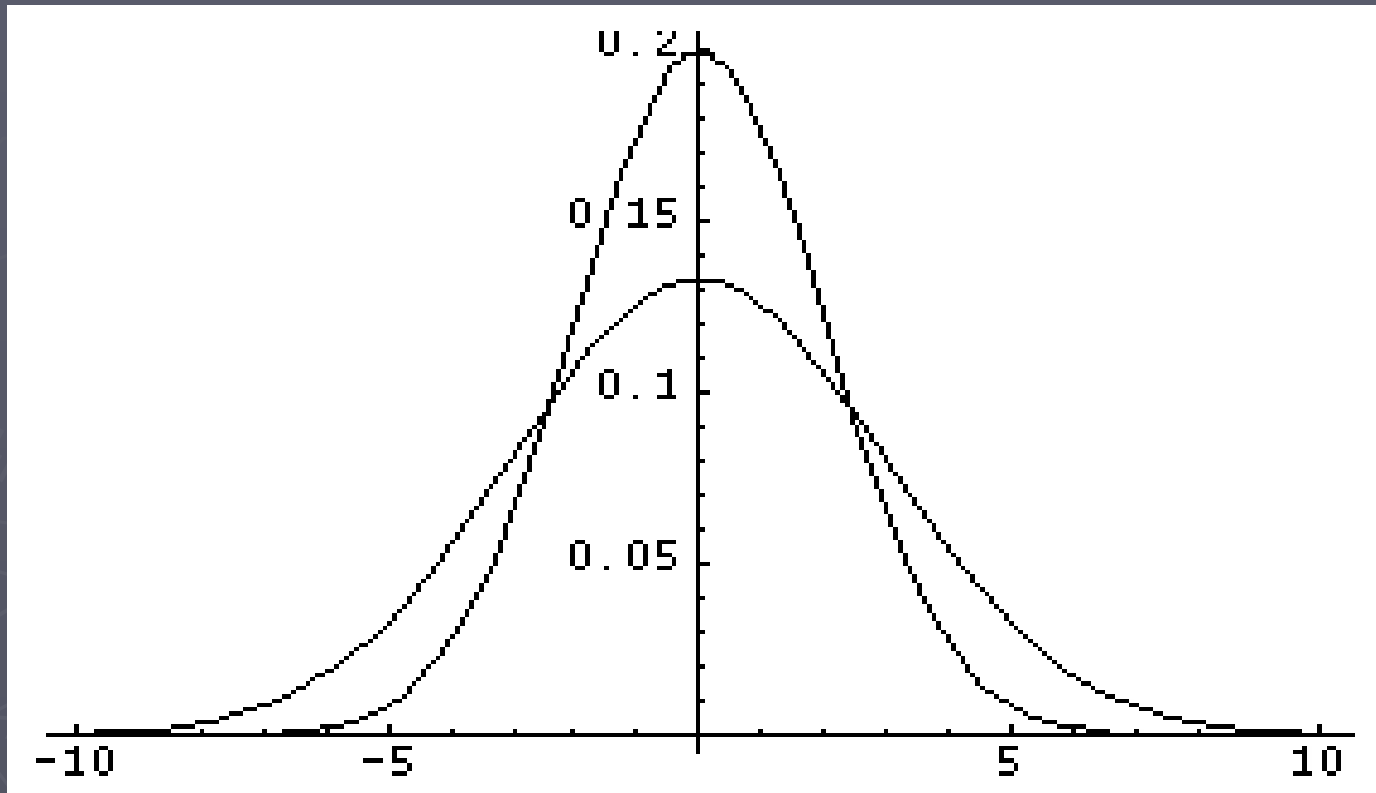


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Figure 7-9 Analysis of the vascular insufficiency example, using values of 0.8 for amputation above the knee and of 0.9 for amputation below the knee.



Comparison of two Treatments



Good Results

Bad Results

Factors in Medical Decision - Making

- ▶ *Judgement of the possible outcomes*
- ▶ *Judgement of the probabilities of these outcomes*
- ▶ *Utilities attached to these outcomes*
- ▶ ***Attitude toward risk of the doctor and the patient***
- ▶ *Degree of paternalism of the doctor / desire for autonomy on the part of the patient*
- ▶ ***Availability of facilities and their costs in the hospital***
- ▶ ***Nature of the clinicians reward system***

***The Challenges of Medical Practice Variations
Tavs Folmer Andersen and Gavin Mooney
Macmillian Press 1990***

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Plus

j

**Fragen sie sich bei allem ,was sie tun:
Was kann ich das nächste Mal besser oder anders machen.**

Führen Sie ein Tagebuch (little black book) ihrer Ideen

**Realisieren Sie Ihre Ideen mit dem Instrumentarium der
klinischen Forschung (Studie, Probe and Learn Process,
Patente, Qualitätsstudie, PDCA Zyklen, SPC)**

Warum

**Weil es unglaublich beglückend und befriedigend ist, wenn es
gelingt auf diese Weise eine Spur in der Medizin zu
hinterlassen**

