Evidence does not speak for itself.

'Evidence-based' is the latest buzz word. But can it be trusted? **Sarah Russell** questions the evidence.

On Monday, Angela Lanfranchi used "evidence" to show a link between induced abortion and breast cancer (The Age, 17/02/03). On Thursday, Helen Keleher used the "best available evidence" to dispute this link (The Age, 20/02/03). Whose evidence do we believe? What is the "best evidence"?

'Evidence-based' is the latest buzz word, promising rational and objective ways to inform health care practitioners, policy makers and consumers. The use of evidence can also be quite misleading.

Scientific evidence on the link between induced abortion and breast cancer has become political. Different groups are using evidence to promote their political agendas. Although pro-choice and anti-abortion proponents analysed the *same data,* they have drawn quite different conclusions. How is it possible for scientific data to be manipulated in this way?

While evidence from academic studies may be used as a tool to make informed decisions about health care interventions, evidence may just as easily be misused for other purposes. It is therefore important to look at the quality of the evidence and how the evidence is used.

It is common for us to trust our health care experts to provide us with the best available evidence. Our GPs tell us about the evidence for taking a specific drug or undergoing a particular operation. We expect the research design to be rigorous and the interpretation of the evidence to be impartial and objective. This is not always the case.

To understand the significance of research findings, there also needs to be an awareness of different levels of evidence. The highest level of evidence involves studies that are based on randomised controlled trials. However, randomised controlled trials may not be applicable for real people who live in the real world. Many research studies require other levels of evidence.

The evidence to support an association between induced abortion and breast cancer is not based on randomised controlled trials. Although the evidence is far from conclusive, researchers who have found an association between induced abortion and breast cancer describe their research data as "rock solid". This is simply not true.

Lanfranchi states that she experiences "paternalistic censorship" when she tries to speak on the science supporting the abortion-breast cancer link. It seems more likely that she receives critical feedback based on the data (particularly the levels of evidence) and the way she has interpreted the data.

Few of us have the time, or indeed the expertise, to go back to the original data and see the flaws in the research design, the misrepresentation of the data and the over-simplification of the findings. If we did, we would see flaws are surprisingly common in many medical and public health studies, particularly those that seek to "prove" the usefulness of certain interventions.

Take for example a story about two eminent scientists disagreeing about the interpretation of scientific data. They

asked a third scientist to arbitrate. After a close scrutiny of the data, she declared that the method used to collect the data was wrong. In the end, the disagreement proved to be irrelevant. The pharmaceutical company who funded the research simply published a positive spin as evidence to promote their new drug.

This story, and the current debate about an association between induced abortion and breast cancer, indicate that evidence can be used as both a political tool and a marketing strategy. The current debate is another timely reminder that evidence never speaks for itself.