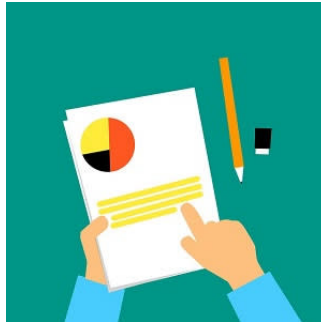


Incidental imaging findings: facilitating patients' risk comprehension



New research assessed differences in patient distress, risk perception, and treatment preferences for incidental renal findings with descriptive versus combined descriptive and numeric graphical risk information. The findings show that numeric graphical risk communication for patients about incidental renal lesions may facilitate accurate risk comprehension and support patients in informed decision making.

Incidental findings are a major byproduct of diagnostic imaging use. Although many incidental findings are of low risk, still their discovery commonly results in a cascade of additional testing and interventions for lesions that otherwise would not have harmed most patients. To understand and improve decision making around incidental imaging findings, patient perceptions and preferences must be studied.

Understanding how patients process these unexpected findings may drive more patient-centred approaches to counselling about incidental lesions. Previous studies in other clinical contexts have shown that to improve risk communication for patients, graphical representation of probabilities and simplified language should be used. Thus, these methods may also facilitate risk communication for incidental findings on imaging tests.

For this new study, researchers hypothesised a priori that patients would perceive risk inaccurately and with greater worry and also would favour surgical consultation more often without the availability of numeric and graphical risk information. They also hypothesised that patients' treatment preferences would be more in line with their baseline preferences for maximising versus minimising health interventions when patients received graphical risk information as a result of the improved comprehension of risk.

The researchers conducted a randomised survey study for adult patients about to undergo outpatient imaging studies at a large urban academic institution. Two survey arms contained either descriptive or a combination of descriptive and numeric graphical risk information about three hypothetical incidental renal findings at CT: 2-cm (low risk) and 5-cm (high risk) renal tumours and a 2-cm (low risk) renal artery aneurysm. The main outcomes were patient distress, perceived risk (qualitative and quantitative), treatment preference, and valuation of lesion discovery.

Of 374 patients, 299 participated (79.9% response rate). With inclusion of numeric and graphical, rather than only descriptive, risk information about disease progression for a 2-cm renal tumour, patients reported less worry (3.56 vs. 4.12 on a 5-point scale; $p < 0.001$) and favoured surgical consultation less often (29.3% vs. 46.9%; $p = 0.003$). The proportion choosing surgical consultation for the 2-cm renal tumour decreased to a similar level as for the renal artery aneurysm with numeric risk information (29.3% [95% CI, 21.7–36.8%] and 27.9% [95% CI, 20.5–35.3%], respectively).

The results also showed patients overestimated the absolute risk of adverse events regardless of risk information type, but significantly more so when given descriptive information only, and valued the discovery of lesions regardless of risk information type (range, 4.41–4.81 on a 5-point scale).

This study shows "reduction in patient distress, risk overestimation, and preference for surgical evaluation may be possible when patients received specific numeric and graphical risk information instead of only qualitative risk descriptors," the authors point out. "These findings may warrant prospective study of the effect of radiologists' risk communication and management recommendations on patient decision making, given how commonly incidental lesions are encountered."

Limitations of this study include the single-centre data, despite the large urban setting and patients referred from multiple different areas of the city. Also, the use of hypothetical scenarios may mean that patients' decisions on a self-reported questionnaire may vary from actual decisions regarding findings on imaging tests.

Source: [American Journal of Roentgenology](#)

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