

Integration of Gamma Knife and Linac-Based Techniques for Intracranial and Extracranial Radiosurgery at Sunway Cancer Centre

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PURPOSE

Since 2017, Sunway Cancer Centre has integrated the Leksell Gamma Knife Icon™ and advanced Linac-based systems to enhance intracranial and extracranial radiosurgery. This study evaluates their clinical effectiveness and lesion-specific benefits.

STUDY DESIGN

- Survey conducted among resident and visiting oncologists at Sunway Cancer Centre
- Data Collection: Online questionnaire (Google Forms)
- Key Areas Assessed:



Effectiveness of Gamma Knife compared to Linac-based techniques



Observation of side effects in patients



Primary clinical benefits



Tumor response rates

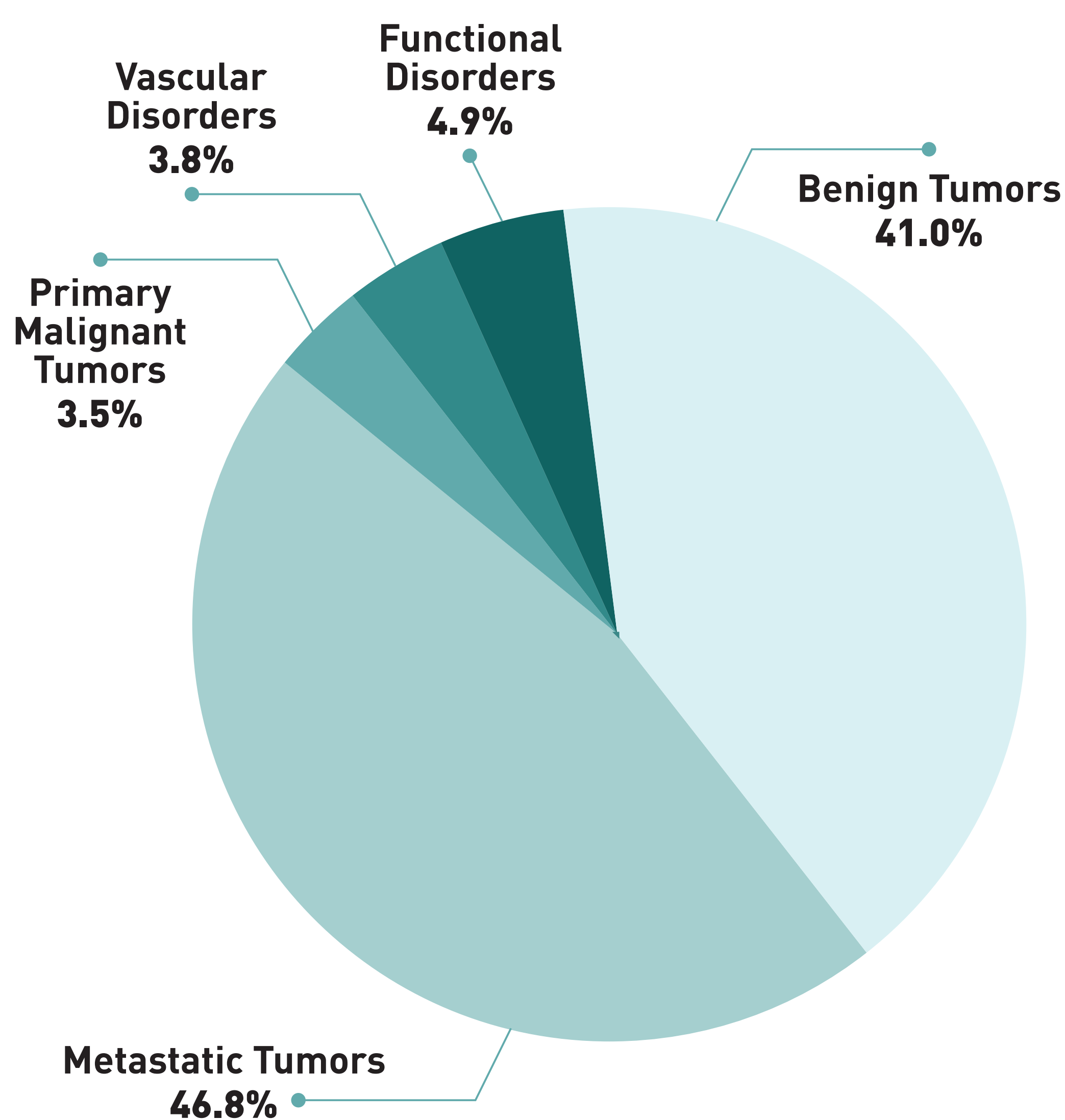


Customization and precision of treatment plans



Recommendations for adopting Gamma Knife techniques

CASE DISTRIBUTION

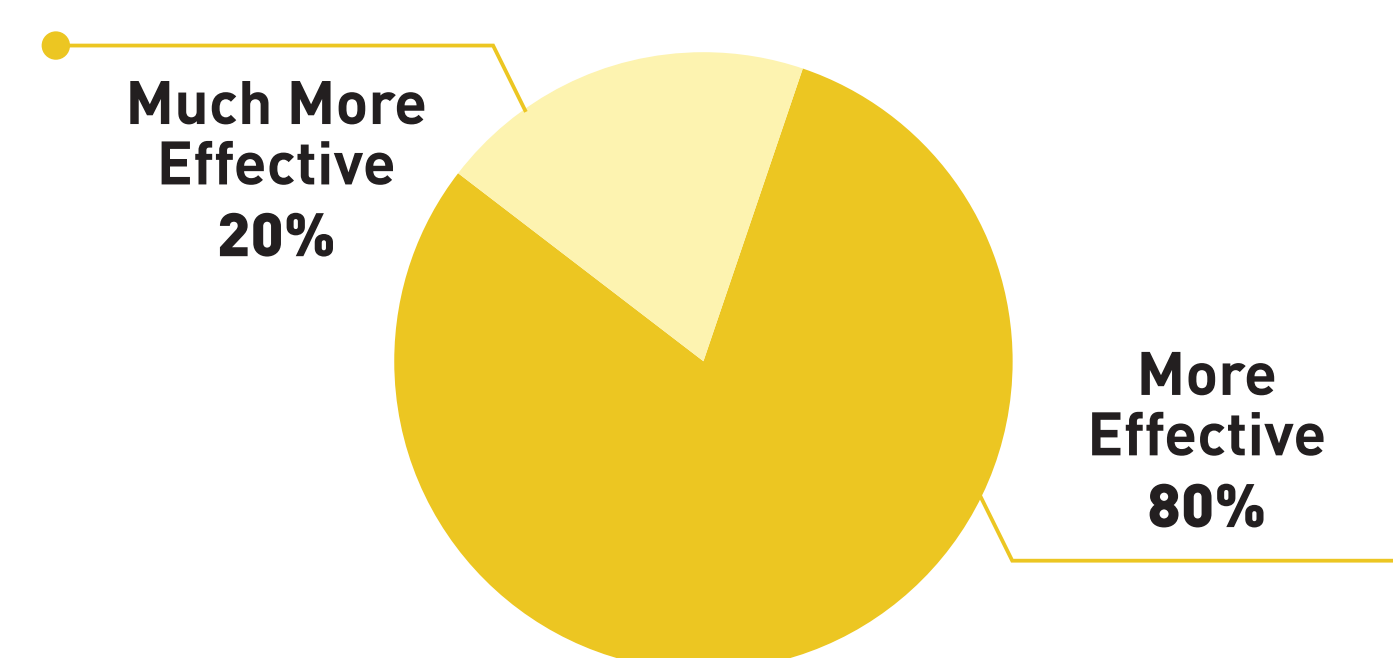


Metastatic and benign tumors formed the majority of cases treated, highlighting the need for tailored approaches.

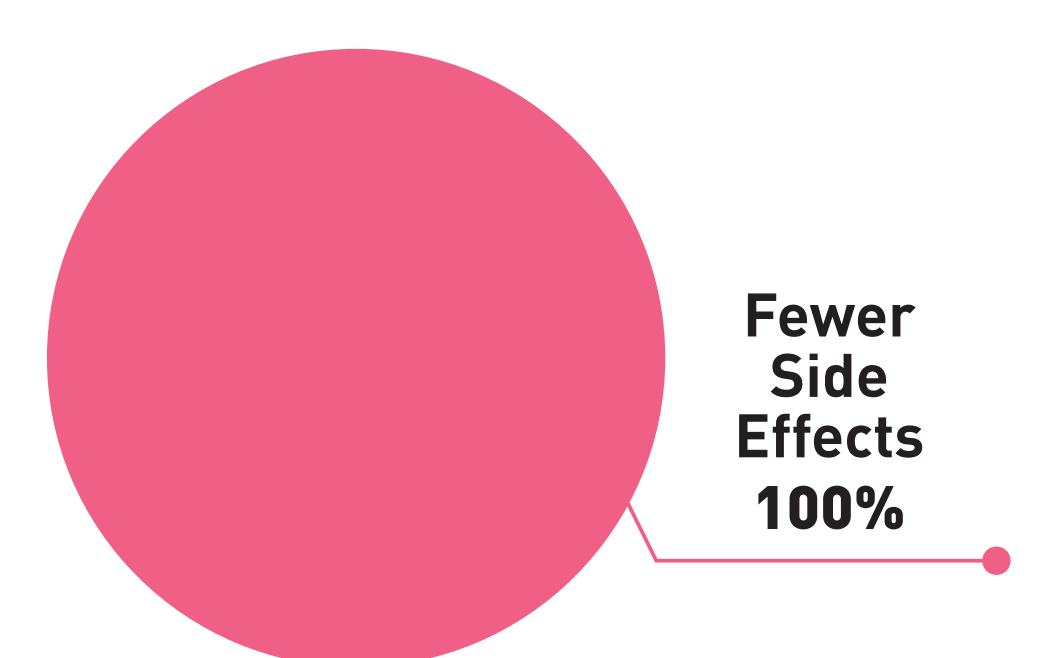
RESULTS

8 Clinical Oncologists from 3 private hospitals completed the survey, highlighting the following findings:

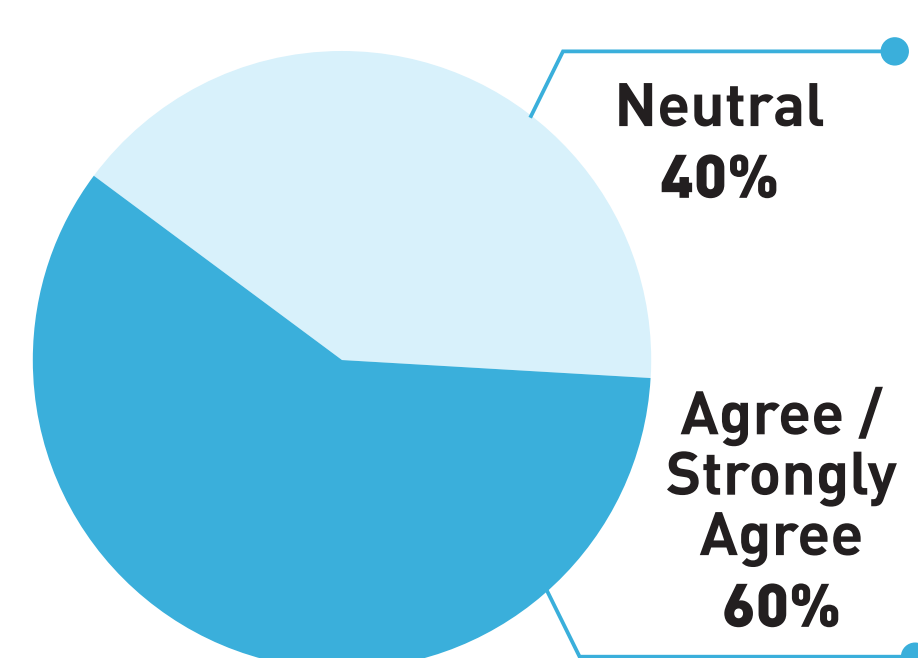
EFFECTIVENESS



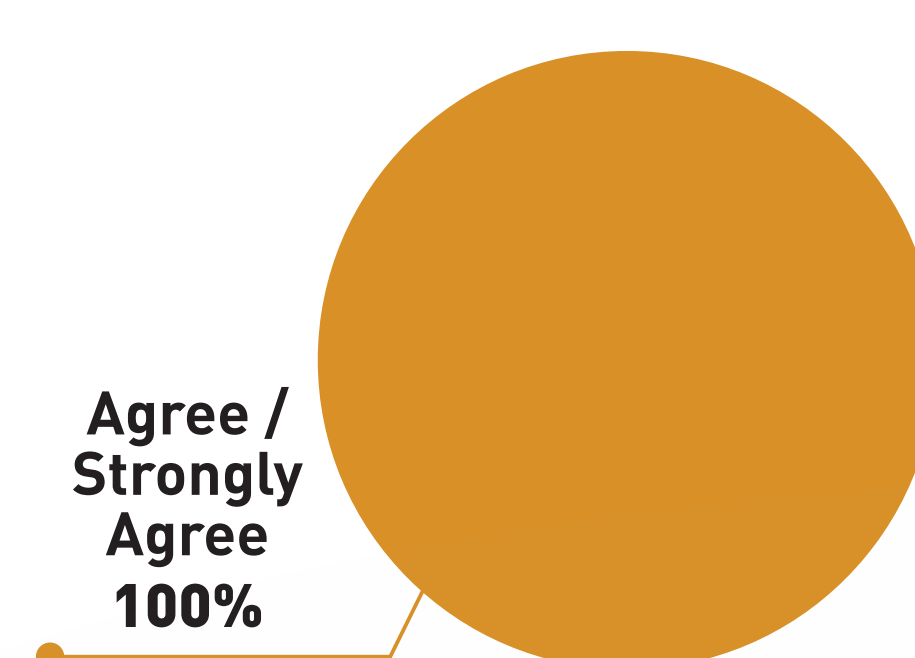
SIDE EFFECTS



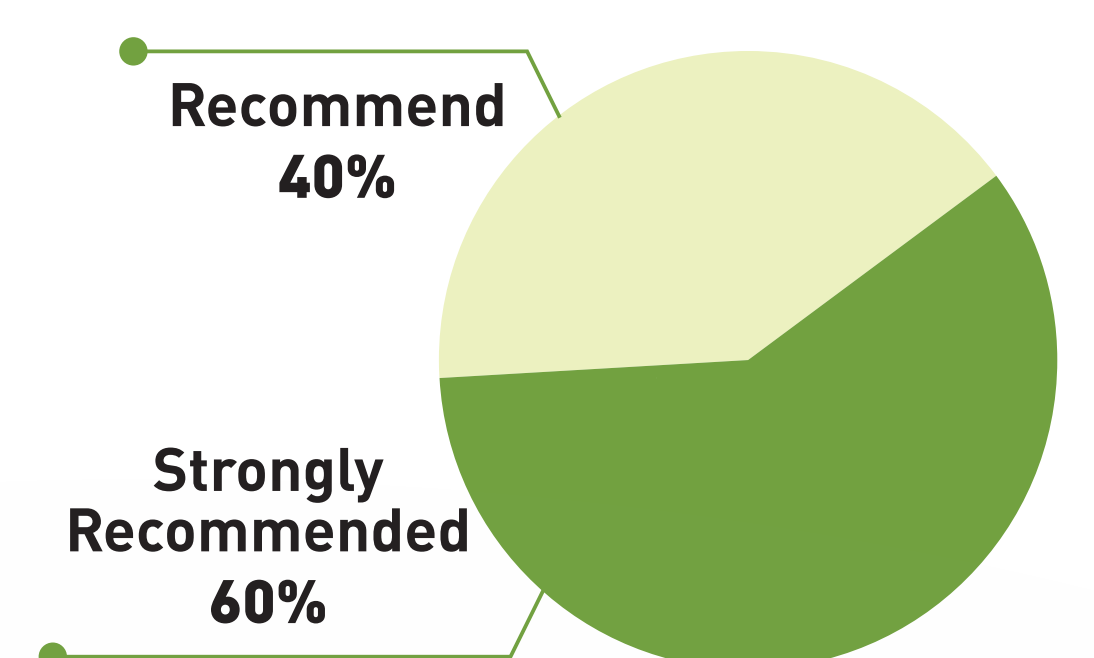
TUMOR RESPONSE RATES



CUSTOMIZATION AND PRECISION



RECOMMENDATION



CONCLUSION

- **Gamma Knife is the preferred choice** for intracranial radiosurgery, offering superior precision and fewer side effects.
- **In parallel, Linacs have been repurposed for SBRT**, targeting extracranial lesions with flexible dosing. This optimizes technology use, ensuring **precision, safety, and individualized care** at Sunway Cancer Centre.

Acknowledgements

The author thanks all Clinical Oncologists who participated in the survey.

