

EP15.05: Nursing Management of KRAS G12C Inhibitor Toxicities in Thoracic Malignancy: A Canadian Perspective

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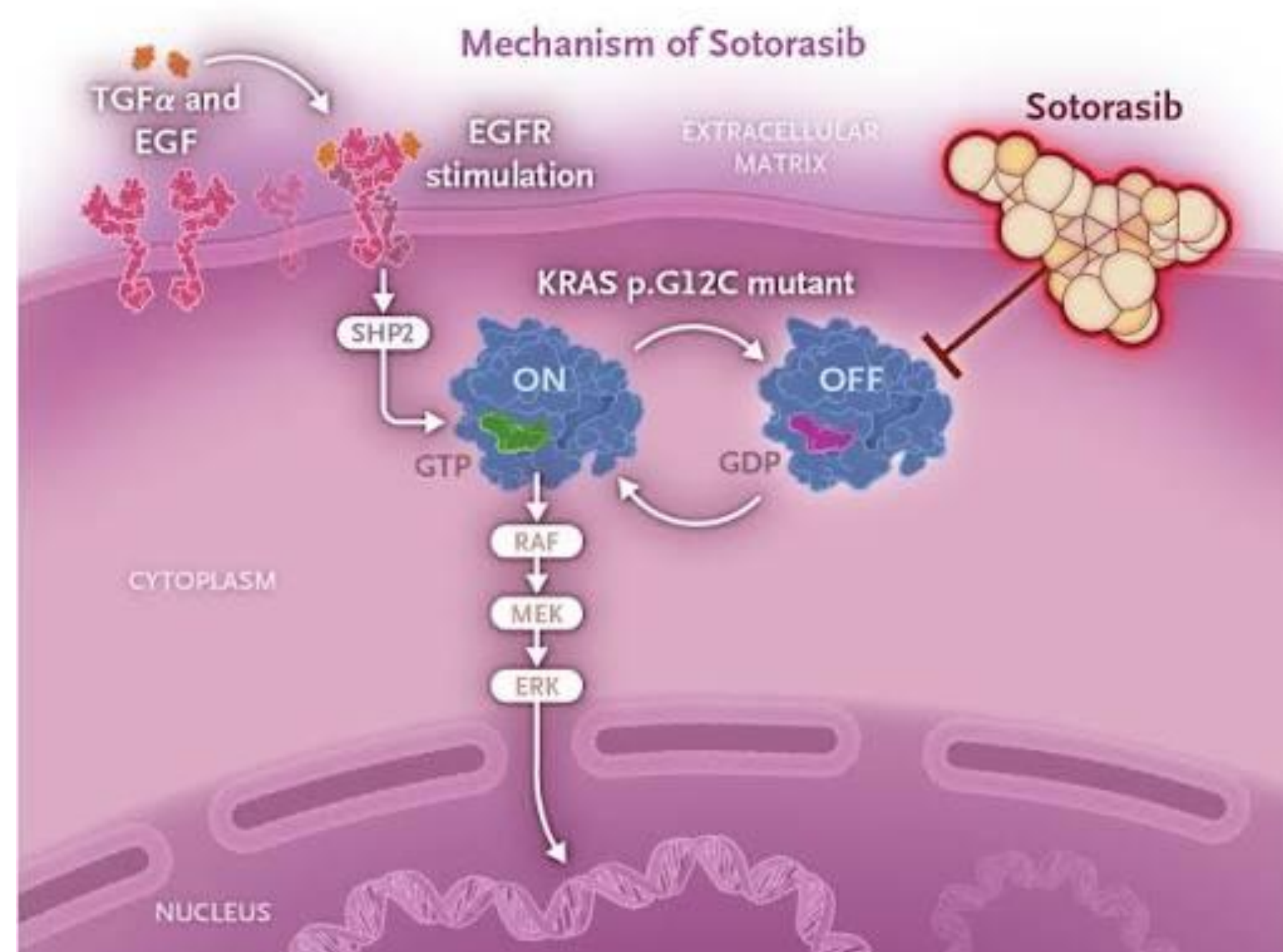
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INTRODUCTION

KRAS G12C (Kirsten Rat Sarcoma Glycine-to-Cysteine mutation at codon 12) is the most common targetable mutation in non-small cell lung cancer, that was previously considered as an “undruggable” driver mutation.

Unlike familiar oral targeted kinase inhibitors that target cell-surface receptors, KRAS G12C inhibitors act on intracellular pathways, producing a distinct adverse event profile.

Poor recognition and management of the adverse event could cause unnecessary dose interruptions, compromising treatment efficacy.



METHODS

This was based on direct clinical nursing experience with KRAS G12C inhibitors at a Canadian cancer centre.

Observed toxicity patterns were cross-referenced with published clinical trial data and guidelines.

These findings were integrated into real-world nursing practice to identify, monitor, and manage adverse events.

DISCUSSION AND CONCLUSION

Actionable Take Away Message

Oncology nurses play a central role in safely delivering KRAS G12C inhibitor therapy.

Empowering nurses through evidence-based education is essential for identifying and managing the unique toxicities of this drug class.

Future Direction for Research

As KRAS G12C inhibitors expand beyond non-small cell lung cancer to broader solid tumour indications, proactive, evidence-based, and standardized nursing management will be key to optimize treatment delivery and patient outcome.

REFERENCES & ACKNOWLEDGEMENTS

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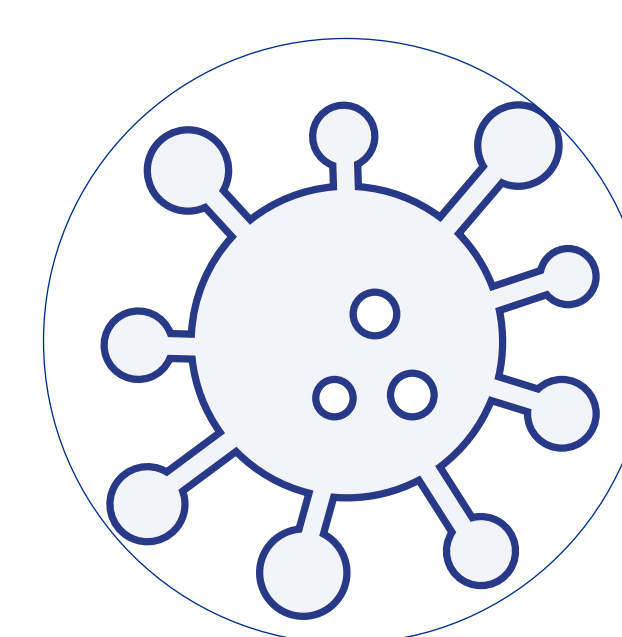
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RESULTS

Through clinical experience supported by literature, three class-defining adverse events of clinical significance were identified.



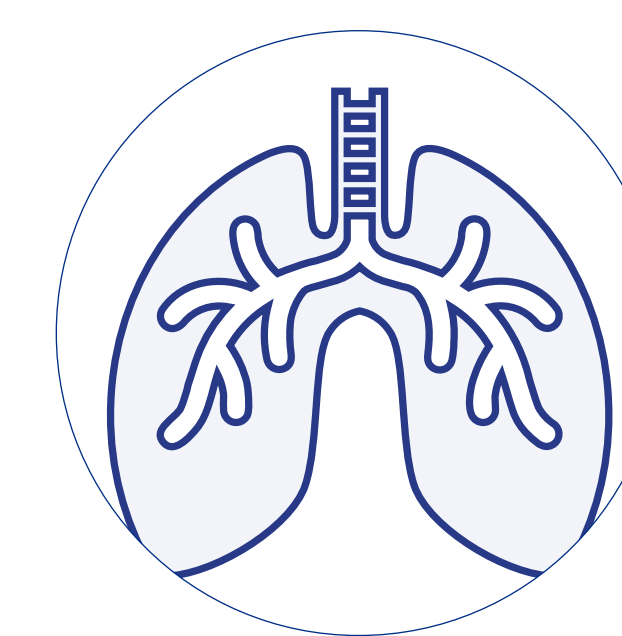
Immune-Mediated Hepatotoxicity

- Distinct from typical drug-induced liver injury
- Requires different monitoring and treatment management



Gastrointestinal Toxicities

- Impacts adherence, nutritional status, and quality of life
- Often underreported which can escalate quickly



Interstitial Lung Disease/Pneumonitis

- Rare but the overlapping respiratory symptoms in non-small cell lung cancer can obscure detection
- Life-threatening if left untreated

Dose interruptions/reductions from poorly managed adverse events can diminish progression-free survival.

Next-generation drugs, such as divarasib, olomorasib, and calderasib, show improved safety profile over first-generation drugs, such as sotorasib, and adagrasib.

Incorporating proactive hepatic surveillance, structured gastrointestinal management, systemic respiratory assessment, and specialized patient and caregiver education is essential in maintaining dose intensity and treatment continuity.

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