



Morbidity & Mortality Associated with Opioid Monotherapy Compared to Multimodal Pharmacotherapy in Non-Small Cell Lung Cancer Pain

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INTRO

- NSCLC is the most common primary pulmonary malignancy with over 25% of patients surviving 5 years or longer
- WHO three step ladder for management of cancer related pain recommends non-opiates and opiates, in addition to adjuvant therapies such as anticonvulsants and SNRIs for neuropathic pain to effectively manage cancer pain
- The aim of this study is to compare patient outcomes in patients with NSCLC who were treated with opiate monotherapy versus multimodal therapy for the management of their cancer pain

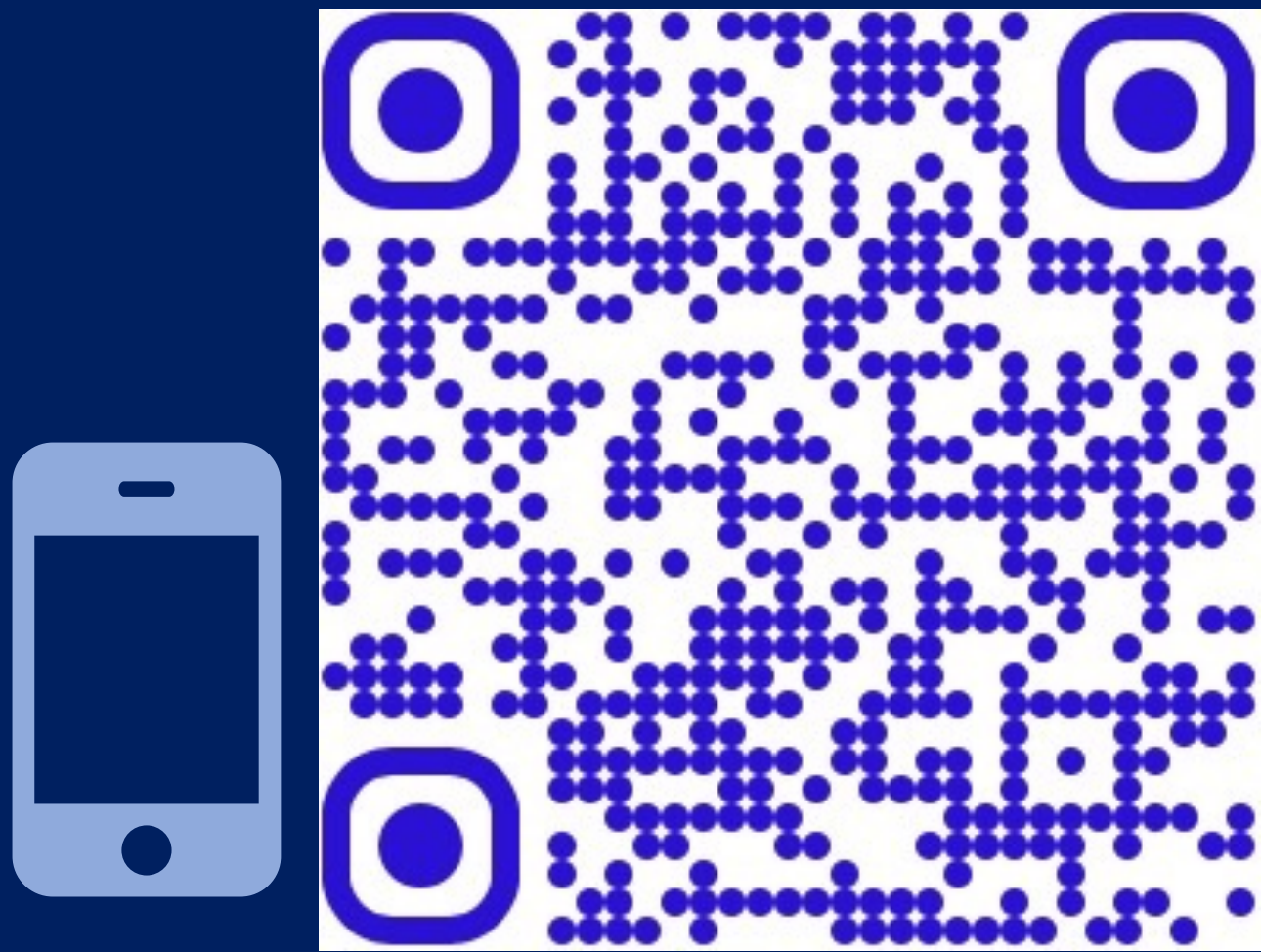
METHODS

- Propensity score matched case-control study using TriNetX - a federated open-source database housing de-identified patient data
- Query: Incidence of pneumonia and 1-year mortality in NSCLC patients diagnosed with cancer related pain on chronic opioid monotherapy vs. multimodal therapy
- Chronic Opioid Monotherapy: 10 instances of opioid analgesics in the period after the diagnosis of NSCLC and neoplasm related pain with no concurrent use of gabapentin, pregabalin, tricyclic antidepressants, or duloxetine

RESULTS

- Cohorts: 8023 patients each; Mean age approximately 60 years; Approximately 72% had radiation in both; Metastatic disease rate of 43-44% in both
- One Year Mortality Risk Analysis - Patients receiving opioid monotherapy vs multimodal therapy (Gross: 4,173 vs. 3,100; 52.0% vs 38.6%, p<0.0001); RR of 1.346 [95% CI: (1.3,1.394)]
- One Year Incidence of Pneumonia Analysis - Patients receiving opioid monotherapy vs multimodal therapy (Gross: 1,429 vs 1,713; 17.81% vs 21.35%, p< 0.0001); RR of 0.834 [95% CI (0.783,0.888)]

The 1-year mortality risk for patients on opioid monotherapy compared to multimodal therapy for the management of their NSCLC related pain was 1.35x higher - when matched for metastatic disease, radiation/chemotherapy, with equivalent opioid (MME) utilization.



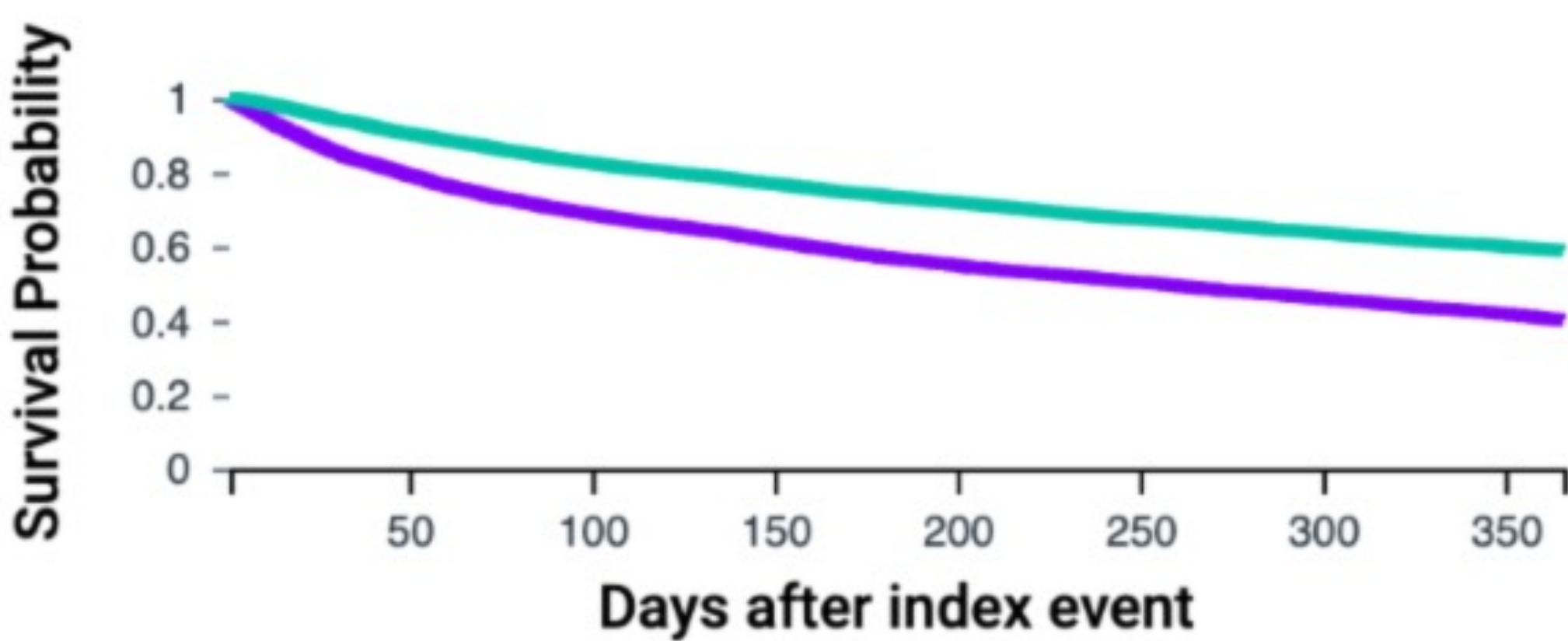
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Cohort		Cohort Statistics		
		Patients in Cohort	Patients with Outcome	Risk
1	NonSC LUNG CANCER MONO >10	8,023	4,173	52.013%
2	NonSC LUNG CANCER MULTIMODAL >...	8,023	3,100	38.639%

Risk Difference		Risk Ratio		Odds Ratio			
Risk Difference	95 % CI	z	p	Risk Ratio	95 % CI	Odds Ratio	95 % CI
13.374%	(11.847%,14.901%)	17.016	< 0.0001	1.346	(1.3,1.394)	1.721	(1.617,1.833)

Measures of Association for 1 year Mortality Risk

Kaplan-Meier Survival Curve



Cohort		Cohort Statistics		
		Patients in Cohort	Patients with Outcome	Risk
1	NonSC LUNG CANCER MONO >10	8,023	1,429	17.811%
2	NonSC LUNG CANCER MULTIMODAL >...	8,023	1,713	21.351%

Risk Difference		Risk Ratio		Odds Ratio			
Risk Difference	95 % CI	z	p	Risk Ratio	95 % CI	Odds Ratio	95 % CI
-3.54%	(-4.767%,-2.313%)	-5.65	< 0.0001	0.834	(0.783,0.888)	0.798	(0.738,0.863)

Measures of Association for Pneumonia

References

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