HBI solutions

MORTALITY RISK
Using Advanced Machine Learning Techniques

In order to address the enormous expenditures and unmet needs of patients approaching the end of life, HBI Solutions prospectively validated a tool to predict the all-cause 1-year mortality of patients aged 65 and older.

$150 billion
Medicare costs per year

Healthcare experts estimate that 1/4 of all Medicare costs goes to treating patients in their last year of life.

$21,799
per patient

Average cost for high-risk patients in last year of life in the US.

Patients burdened with high-risk diseases are likely to die with high attendant costs.
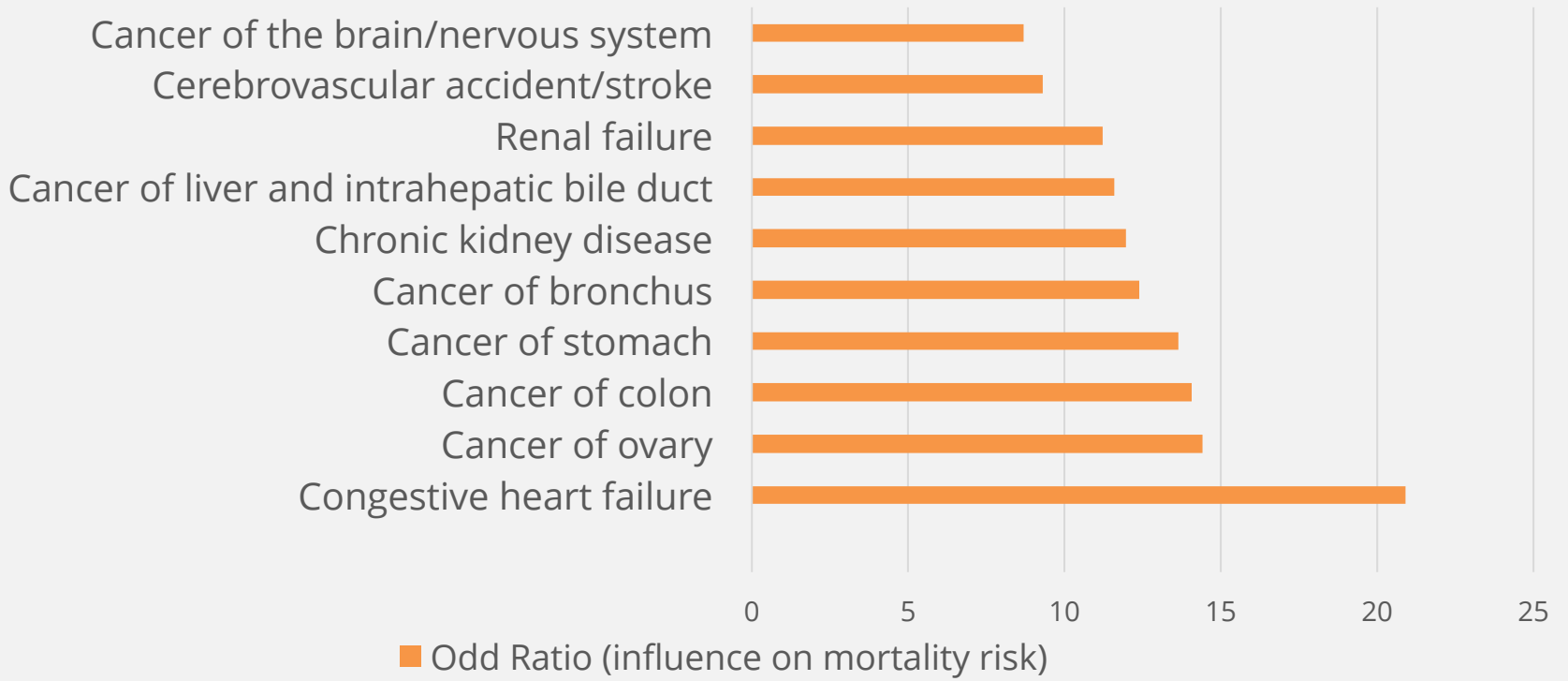
THE STUDY

POPULATION

125,896 Individuals
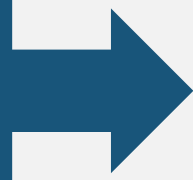
14,680 features from multiple data sources.

99 independent risk factors for mortality identified.

Top 10 Influential Diagnoses

Diagnosis	Odd Ratio
Cancer of the brain/nervous system	~9
Cerebrovascular accident/stroke	~9
Renal failure	~11
Cancer of liver and intrahepatic bile duct	~11
Chronic kidney disease	~12
Cancer of bronchus	~12
Cancer of stomach	~14
Cancer of colon	~14
Cancer of ovary	~14
Congestive heart failure	~21

◼ Odd Ratio (influence on mortality risk)

THE RESULTS

HBI's 1-year mortality model outperforms other models that are derived from limited number of risk factors or data sources.

C-STATISTIC
(Predictive power of risk model)

0.91

This model enables care givers to identify patients/members for timely and meaningful discussions for palliative care and end-of-life preferences.

WHERE CAN I LEARN MORE?

Whether you're a provider, a payer or a potential partner, contact HBI Solutions to learn how you can gain the power to predict and the power to act.

HBI solutions

www.hbisolutions.com