



## ASX Small & Mid-Cap Conference

Mike McCormick, CEO

5 September 2019



**be kind to  
KIDNEYS**

# Company snapshot

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- Osprey Medical is focused on transforming the standard of care for chronic kidney disease (CKD) patients
- Valuable and innovative product portfolio with **FDA-cleared, TGA-cleared** and **CE-Marked** products
- DyeVert™ is the **only device with an FDA cleared claim for contrast dye reduction** without compromised image quality for patients undergoing angiography procedures
- Approx. 30% of all angiography patients are at risk of contrast induced acute kidney injury (CI-AKI), a frequent and dangerous complication for patients and expensive for hospitals to manage
- **US\$1.65 billion total addressable market** – minimal penetration to date



## Our Mission

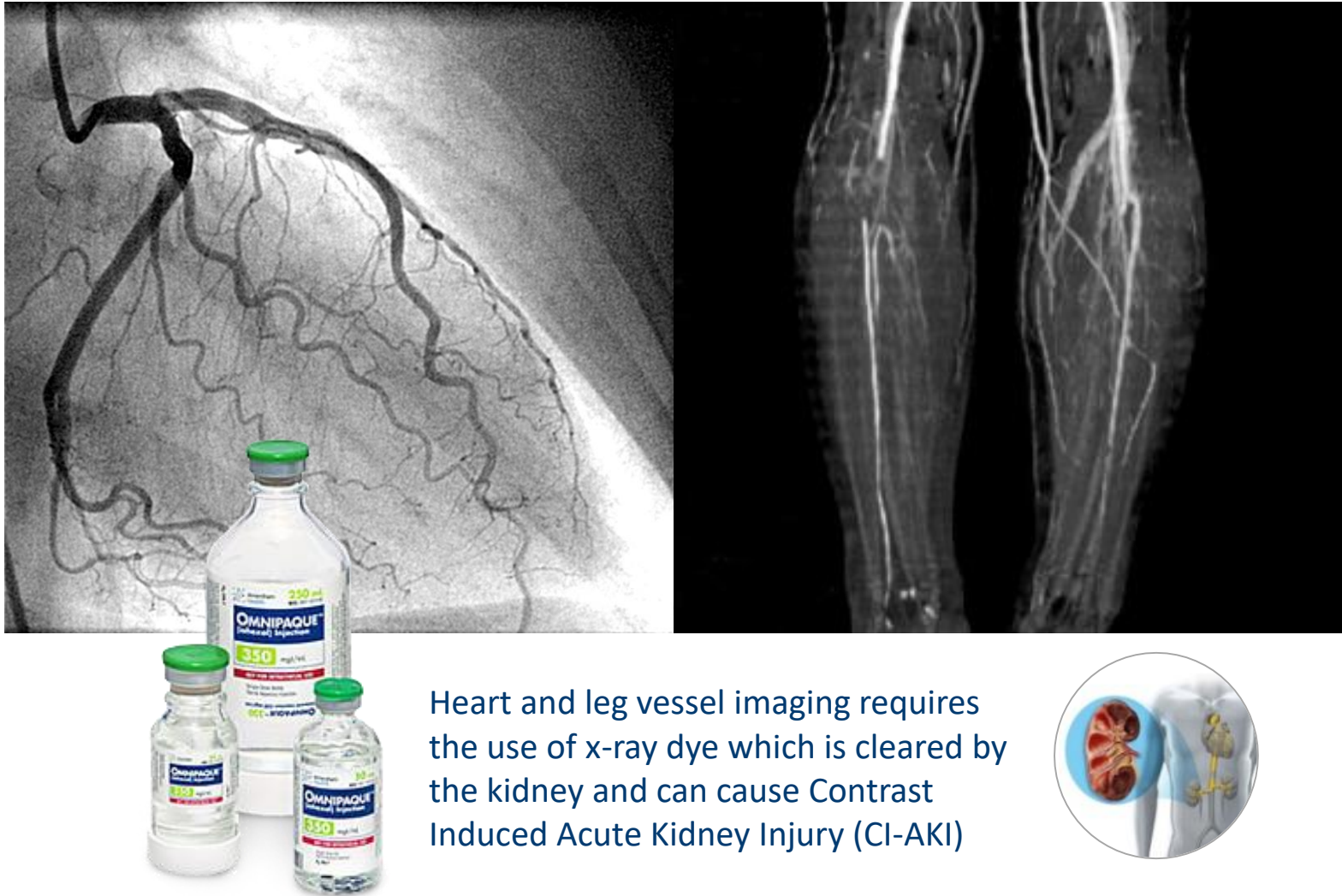
To improve outcomes in chronic kidney disease (CKD) patients, by reducing contrast induced acute kidney injury, and lowering hospital costs



## Our Vision

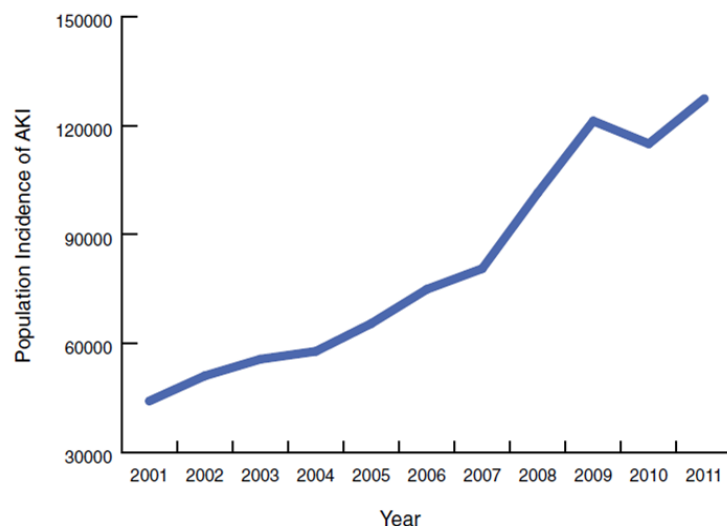
To make angiography safer for CKD patients

# Problem – Protecting Kidneys From Dye

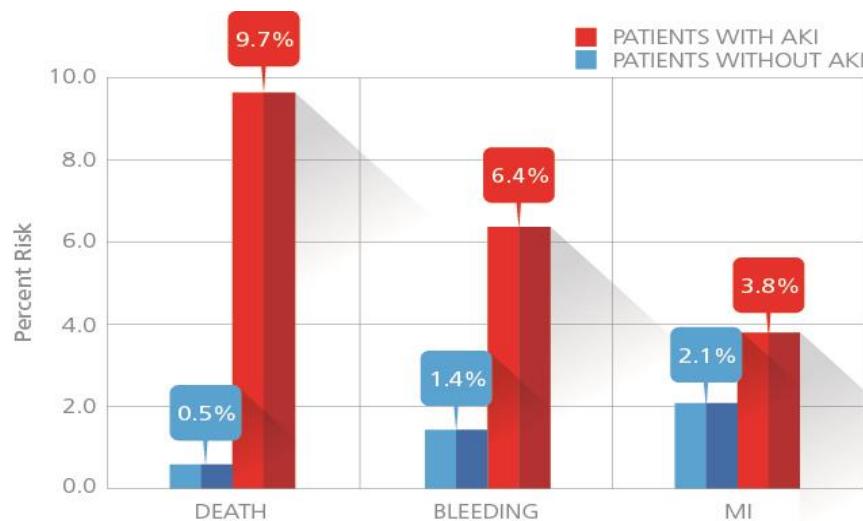


# Patient Impact From CI-AKI

CI-AKI is a growing problem associated with poor patient outcomes after coronary angiography or intervention



AKI incidence: population incidence of acute kidney injury among cardiac cath. and PCI patients in the United States from 2001 to 2011. AKI indicates acute kidney injury. Brown J et al. *J Am Heart Assoc.* 2016;5:e002739.



Tsai TT, Patel UD, Chang TI et al. Contemporary Incidence, Predictors, and Outcomes of Acute Kidney Injury in Patients Undergoing Percutaneous Coronary Interventions: Insights from the NCDR Cath-PCI Registry. *J Am Coll Cardiol Interv* 2014;7:1-9.

# Physician Consensus Position on CI-AKI

## Practice guidelines from cardiovascular societies for reduction of CI-AKI<sup>1-3</sup>

### Class 1 Level B recommendation for CI-AKI reduction:

1. Patients should be assessed for risk of CI-AKI before PCI
2. Patients undergoing cardiac angiography should receive adequate hydration
3. In patients with CKD (eGFR <60 mL/min), the volume of contrast media should be monitored in real time and minimized as low as clinically possible



1 Levine GN, et al. ACCF/AHA/SCAI – Guideline for Percutaneous Coronary Intervention. A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines and the Society for Cardiovascular Angiography and Interventions. *Circulation*. 2011; 124:e574-e651.

2 Nallamothu, BK, et al. ACC/AHA/SCAI/AMA-Convended PCPI/NCQA 2013 Performance Measures for Adults Undergoing PCI: A report of the ACC/AHA Task Force on Performance Measures, the SCAI and AMA-Convended Physician Consortium for Performance Improvement, and the National Committee for Quality Assurance. *Circulation* 2014;129(8):926-949.

3 Naidu, et al. SCAI Expert Consensus Statement: 2016 Best Practices in the Cardiac Cath. Lab. CCI (published on line ahead of print, April 2016. doi:10.1002/ccd.26551.



# Hospital Impact From CI-AKI

Hospital costs increase for patients with CI-AKI as most procedure-related poor outcomes are the responsibility of the hospital

1. Increased length of stay<sup>1</sup>

2. Increased 30-day readmissions<sup>2</sup>

3. Increased bundled payment risk<sup>3</sup>



700 hospitals with 2.8M angiography patients with CKD 2012-2017

<sup>1</sup> Subramanian S, et al. Economic Burden of CIN: Implications for Prevention Strategies. *Journal of Medical Economics*. 2007;10:119-134.

<sup>1</sup> Pfunter A, et al. Agency for Healthcare Research and Quality Statistical Brief #168. December 2013. <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb168-Hospital-Costs-United-States-2011.pdf>

<sup>2</sup> Center of Medicare and Medicaid Services Website: <http://www.cms.gov/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-ReductionProgram.html>

<sup>2</sup> American Hospital Association Factsheet: Hospital Readmission Reduction Program. April 14, 2014. <http://www.aha.org/content/13/fs-readmissions.pdf>

<sup>3</sup> American College of Cardiology CMS Releases Proposed 2018 Medicare QPP Rule <http://www.acc.org/latest-in-cardiology/articles/2017/06/20/17/40/cms-releases-proposed-2018-medicare-qpp-rule>

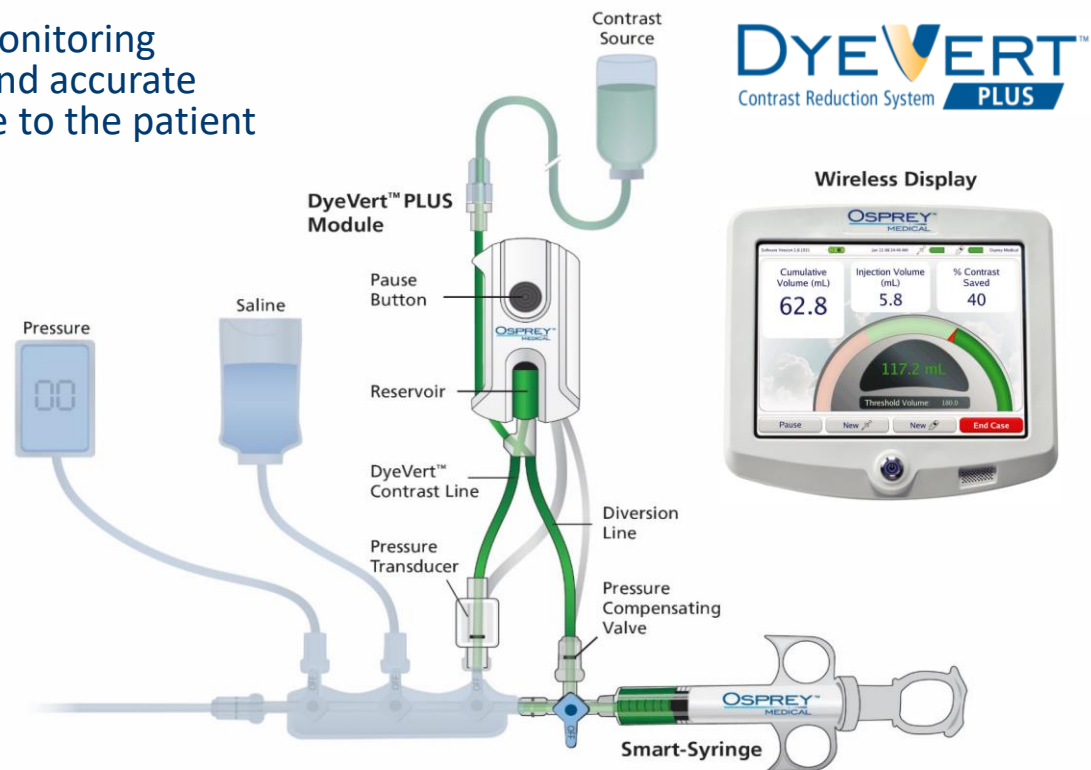
# Osprey's Therapy Solution



Osprey's technologies are the only FDA cleared product clinically proven to:

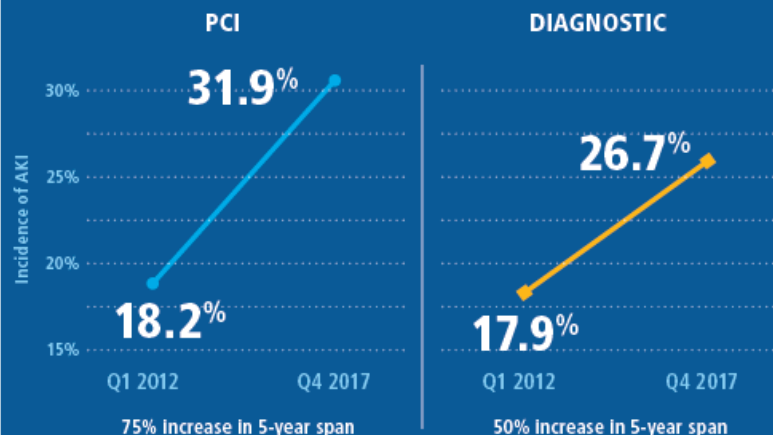
1. Reduce dye in angiographic procedures
2. No compromise to image quality
3. Allow for real-time contrast monitoring of maximum allowable dose and accurate measure of total contrast dose to the patient

**Over 40% average  
dye reduction<sup>1</sup>**



700 hospitals with 2.8M angiography patients with CKD 2012-2017

## AKI IS A RISING PROBLEM IN CKD PATIENTS



## AKI INCREASES HOSPITAL COST

(MEAN OBSERVED CHARGES)

Index Procedure	\$10,000	\$20,000	\$30,000	\$40,000
OVERALL PATIENTS NO AKI	\$12,567			
CKD PATIENTS WITHOUT AKI	\$15,362			
CKD PATIENTS WITH AKI	\$30,399			

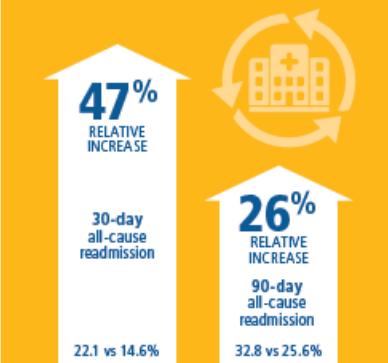
### Index Procedure + 30 Days

OVERALL PATIENTS NO AKI	\$14,416
CKD PATIENTS WITHOUT AKI	\$18,615
CKD PATIENTS WITH AKI	\$34,767

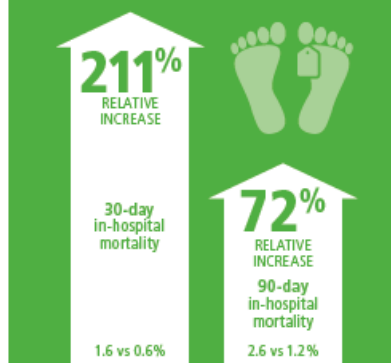
### Index Procedure + 90 Days

OVERALL PATIENTS NO AKI	\$15,946
CKD PATIENTS WITHOUT AKI	\$22,003
CKD PATIENTS WITH AKI	\$38,129

## AKI INCREASES READMISSIONS IN CKD PATIENTS



## AKI INCREASES MORTALITY IN CKD PATIENTS



## AKI PATIENTS ARE MORE LIKELY TO BE DISCHARGED TO NON-HOME FACILITIES



**5x**  
more likely to be discharged to hospice



**2.8x**  
more likely to be discharged to nursing or rehab facility



**2x**  
more likely to be transferred to acute care hospital



# Osprey's cost neutrality rebate

Osprey's "Be Kind to Kidneys" program rebates DyeVert Plus product costs to the extent these are not offset by savings related to CI-AKI reduction

## *Southeastern US Medical Center*

Cost of AKI to Hospital <sup>1,2</sup>	
Number of Annual Diagnostic and PCI Procedures	6,376
Risk Adjusted-AKI Rate per the NCDR Cath PCI Registry	15%
Estimated Number of At-Risk Patients Developing AKI Annually	956
Cost per AKI Patient – Additional Length of Stay <sup>1,2</sup>	\$12,000

**Total Annual Cost of AKI to Hospital** **\$11,472,000**

Device Cost to Hospital	
Number of Annual PCI's	6,376
DyeVert Plus (25% of Patients)	1,594
DyeVert Plus Price	\$350

**Total Annual Device Cost to Hospital** **\$557,900**

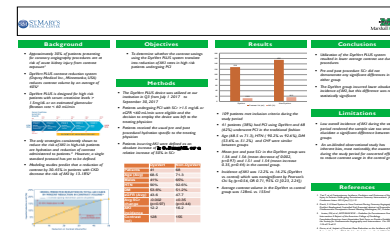
Clear value proposition

<sup>1</sup> Subramanian, *Jour Med Economics*; 2007; 10:119-134.

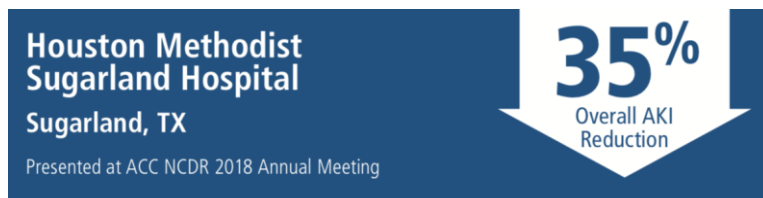
<sup>2</sup> Pfunter A, et al. Agency for Healthcare Research and Quality Statistical Brief #168. December 2013. <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb168-Hospital-Costs-United-States-2011.pdf>.

# AKI reduction initiatives

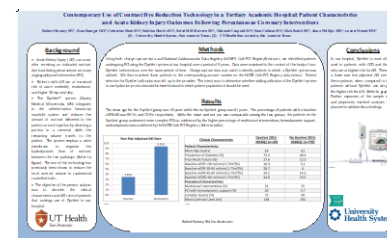
## Real-World AKI Prevention Strategies that Work



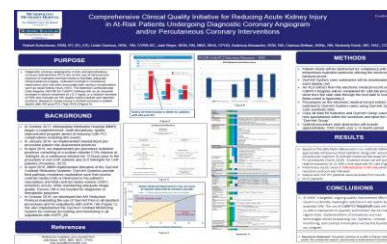
 **ST. MARY'S**  
MEDICAL CENTER



HOUSTON  
**Methodist**  
SUGAR LAND HOSPITAL



 **University**  
Health System



**METROPOLITAN**  
**METHODIST HOSPITAL**  
A CAMPUS OF METHODIST HOSPITAL  
*Your Methodist Center City Hospital*  
"Serving Humanity to Honor God"  
[www.MetropolitanMethodistHospital.com](http://www.MetropolitanMethodistHospital.com)

# Successful commercial adoption

## 1 DyeVert unit sales growth

**63%** unit sales growth in Q2 2019 compared to Q2 2018

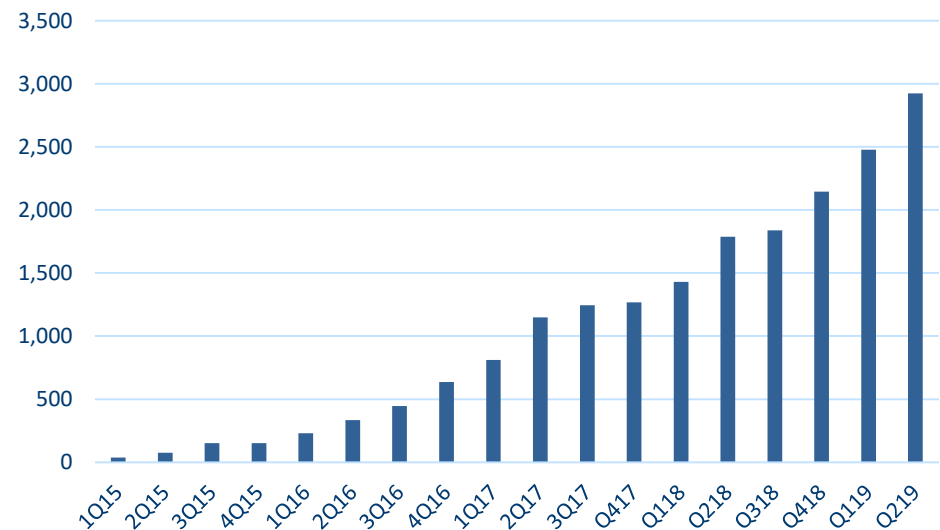
## 2 Total hospitals purchasing

**19%** increase in new hospitals purchasing year over year

## 3 Revenue growth

**53%** revenue growth in Q2 2019 compared to Q2 2018

**Quarterly DyeVert sales since inception (# units)**



Penetration **<5%** of total addressable market

# Osprey's market opportunity

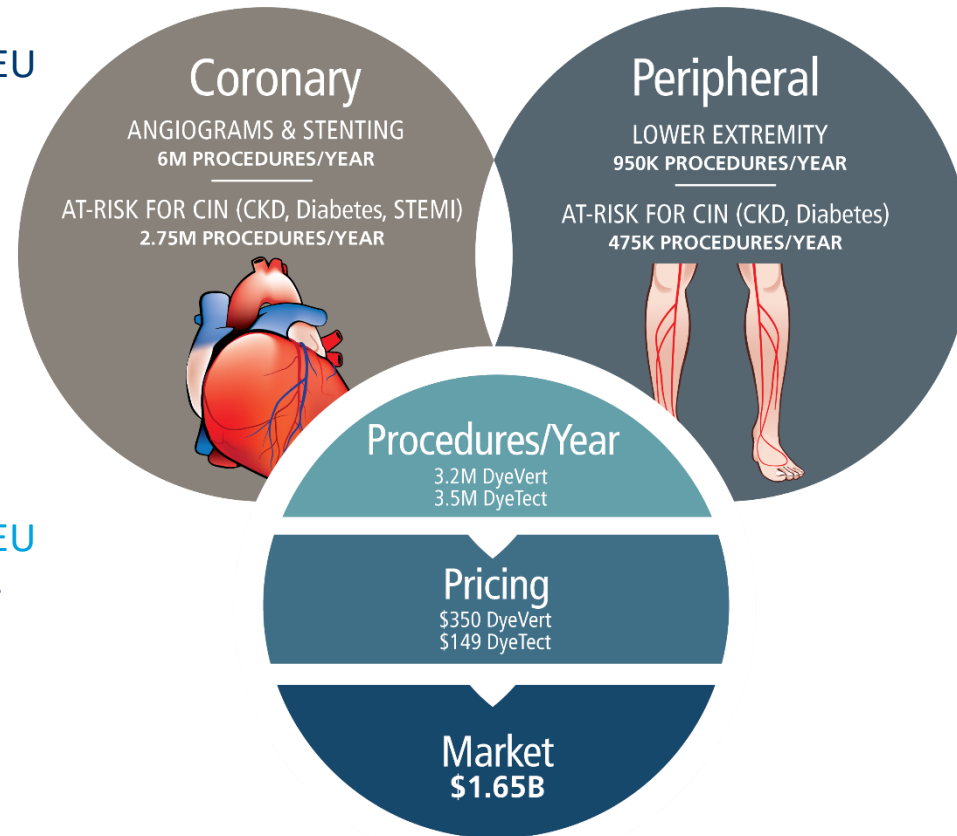
## DyeVert Plus market opportunity of 3.2m procedures per year in the USA and Western EU

- **CKD:** 1.3 million procedures per year
- **Diabetes:** 1.0 million procedures per year
- **STEMI:** 440K procedures per year
- **Peripheral:** 450K procedures per year

## DyeTest market opportunity of 3.5m procedures per year in the USA and Western EU

- **Coronary:** 3.1 million procedures per year
- **Peripheral:** 476K procedures per year

*Average selling price of DyeVert is US\$350*



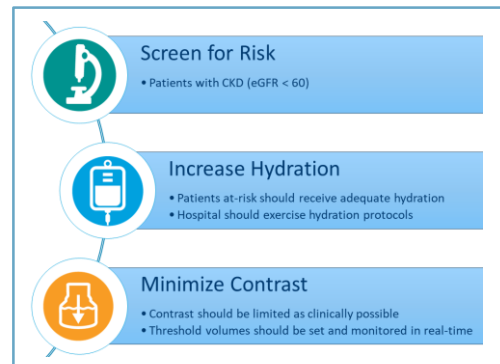
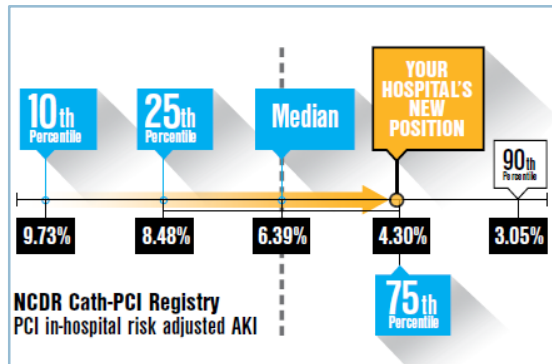
**Total market opportunity \$1.65Bn**

# Go to market strategy

The problem

The guidelines

Osprey's products



The only **FDA** cleared  
product for contrast reduction

In the US market, Osprey has 16 sales representatives + 8 clinical specialists driving adoption  
In the EU, Osprey uses a distribution model



# Osprey achieved 50% market coverage of GPOs

## Highlights of GPO strategy to date



Four major GPO contract wins



50% market coverage of AKI



Achieved stable unit pricing



Awarded rare "value based" contracts

## What is driving Osprey's GPO success?

High "burden of illness" of AKI

GPOs understand the significant prevalence and cost of AKI for their member hospitals

Measurable results

NDCR database measures AKI as a key quality indicator in reports, enabling GPOs to track improvements over time

Effective physician engagement

Joint physician society guidelines stress importance of dye minimisation – DyeVert is only FDA cleared product to do this

Single department metric

Reduction of AKI is single hospital department focus, making it easier to achieve quality improvement

**Execution evident:** 2Q FY19 GPO-based unit sales growth of 162% versus pcp to 1,741 units; 67% of US DyeVert sales mix (39% in pcp)

# Company overview

## Public Market Overview

Share price (26-Aug-19)	A\$0.061
52 week low / high	A\$0.061 / A\$0.255
Number of shares (m)	431.8
<b>Market capitalisation</b>	<b>A\$26.3m</b>
Cash (30-Jun-19) <sup>1</sup>	US\$16.3m / A\$23.3m
Debt (30-Jun-19)	-
<b>Enterprise value</b>	<b>A\$3.0m</b>

Note: Assumes AUD:USD exchange rate of 0.70

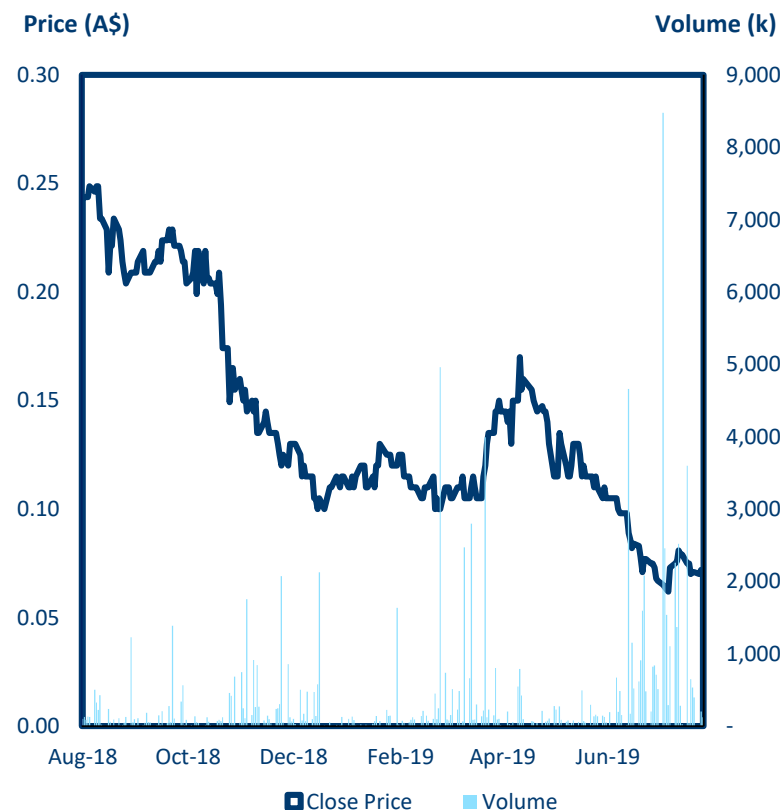
## Shareholder Overview

Shareholder	CDIs	%
Brandon Capital Partners	116.3m	26.9%
Allan Gray	75.0m	17.4%
CM Capital	34.0m	7.9%
Kinetic	23.8m	5.5%

Source: IRESS; market data as at August 2019

Notes. (1) Assumes AUD:USD exchange rate of A\$:US\$0.70

## Share Price Performance (12 months)



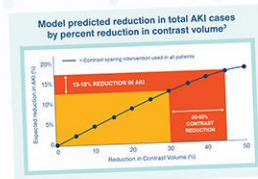
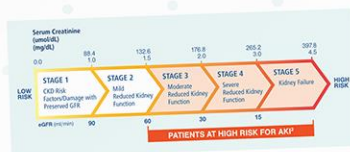
# AKI is NOT OK

OSPREY™  
MEDICAL  
www.ospreymed.com

About one in three angiography patients are at risk for contrast-induced acute kidney injury (AKI) due to chronic kidney disease (CKD) and comorbidities. For these patients, the dye used for visualization during procedures can be toxic, leading to serious complications. But you can make angiography safer for CKD patients by following clinical society guidelines.<sup>1</sup>

	<b>Screen</b>	Patients with an eGFR < 60 ml/min are at high risk for AKI events.
	<b>Hydrate</b>	Adequate preparatory hydration should be given to at-risk patients.
	<b>Reduce</b>	Minimize contrast dosage to high-risk patients.

The DyeVert™ Plus contrast reduction system allows you to reduce dye volume and monitor usage real-time without compromising image quality. The only FDA-cleared technology for dye volume reduction, the DyeVert system is an effective tool in following clinical society guidelines. To learn more visit [www.ospreymed.com/bekindtokidneys](http://www.ospreymed.com/bekindtokidneys).



be kind to KIDNEYS

<sup>1</sup> Levin GW, et al. *Circulation*. 2013; 128:e534-535.  
<sup>2</sup> Adapted graphic from the National Kidney Foundation.  
<sup>3</sup> Epstein M, et al. *ACC* 2016 Cat. 28, Epib. Jan. 15.

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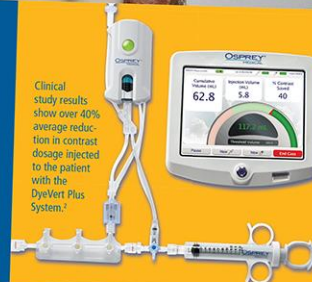
## HANDLE WITH CARE.

About one in four of your cath lab patients have Chronic Kidney Disease (CKD) or other risk factors for developing Acute Kidney Injury (AKI). What are you doing to reduce the risk of AKI for them? American College of Cardiology Guidelines are clear: **Screen for risk. Introduce hydration. And reduce dye dosage.<sup>1</sup>**

The DyeVert™ Plus Contrast Reduction System can help. It's the only FDA-indicated technology for contrast volume reduction. And it doesn't compromise image quality. So remember: Fix the heart. But don't forget the kidneys. Your high-risk patients' health depends on it.

To learn more visit [www.ospreymed.com/technology](http://www.ospreymed.com/technology)

**DYEVERT™ PLUS**  
Contrast Reduction System



Clinical study results show over 40% average reduction in contrast dosage injected to the patient with the DyeVert Plus System.<sup>2</sup>

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<sup>1</sup> Levine GW, et al. *Circulation*. 2013; 128:e534-535.

<sup>2</sup> DyeVert, S. A. Heart System to Save Contrast During Coronary Angiography – The DyeVert™ Randomized Controlled Trial. Presented abstract at Transcatheter Cardiovascular Therapeutics Annual Meeting, Washington, DC, October 2016.

Please consult product labels and package inserts for indication, contraindications, warnings, precautions, complications, and information for use statement. Rx only.  
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**DyeVert™, DyeVert Plus and DyeTect Systems Regulatory Status:** Europe – CE Mark obtained; Australia – TGA approval obtained; United States – 510(k) cleared.