Investor Presentation

August 8th, 2017

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Forward Looking Statement

This presentation is for informational purposes only and should not be considered as an offer to buy or sell securities. No stock exchange has either approved or disapproved of the information that is contained in this presentation. This presentation may contain forward-looking statements within the meaning of Canadian Securities legislation and the forward-looking statements contained herein are made as at the date of this presentation and, accordingly, are subject to change after such date. Undue reliance should not be placed on such statements. These statements involve a number of risks and uncertainties including statements regarding the outlook for Medicure Inc., business and operational results. By nature, these risks and uncertainties could cause actual results to differ materially from what has been indicated. Factors that could cause actual results to differ materially from any forward-looking statement include, but are not limited to, product recalls, competition from similar products and other factors including those risks and uncertainties identified above, and those contained in the Company's most recent MD&A and Form 20F.

Medicure Inc. undertakes no obligation to update publicly or otherwise revise any forward-looking information as a result of new information, future results or other such factors which affect this information, except as required by law.

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Medicure

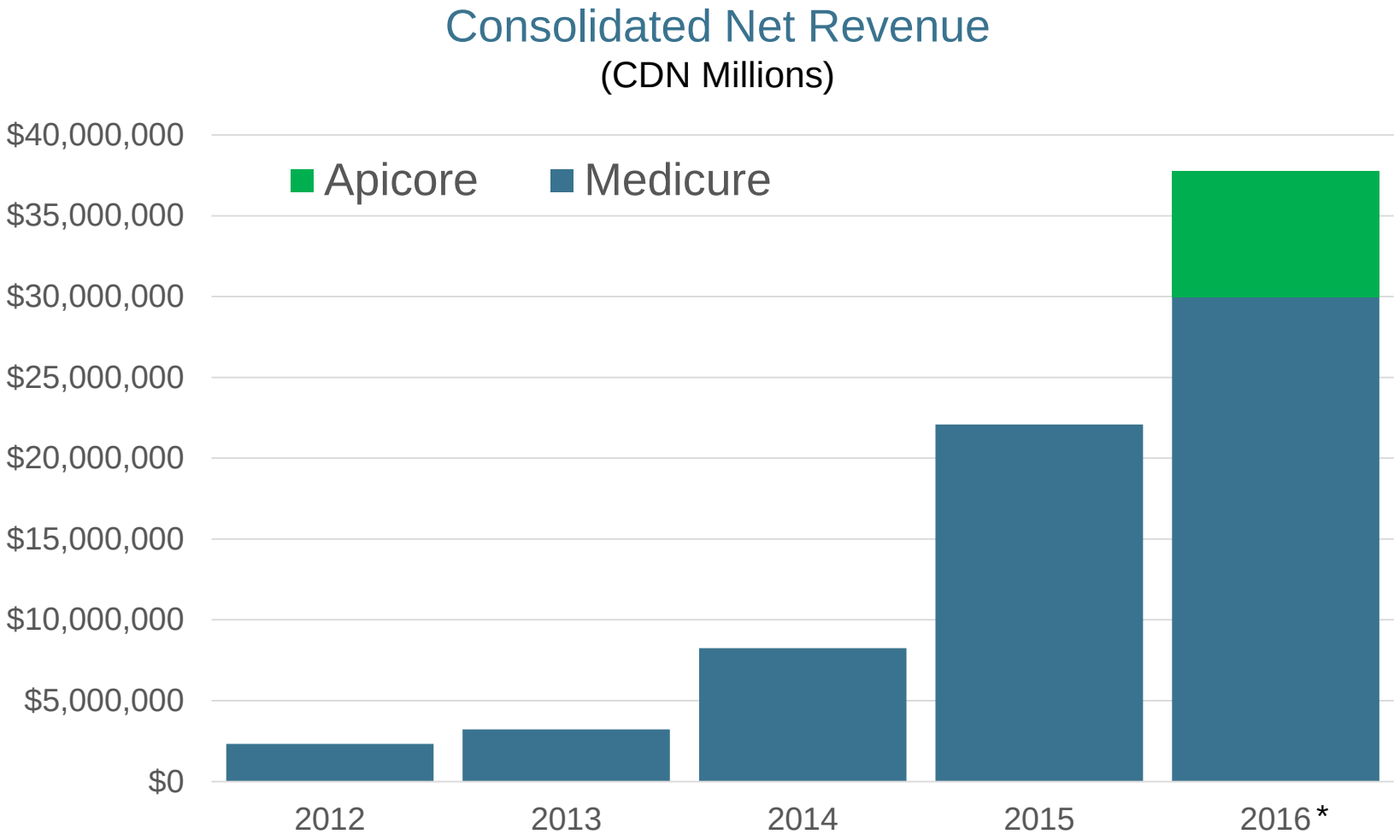
A specialty pharmaceutical company focused on the development and commercialization of therapeutics for the U.S. hospital market.

Key Attributes:

- U.S. hospital sales force with cardio focus
- Proven success with growth of Aggrastat® franchise
- Expanding portfolio through product development
- Owner of FDA approved API* manufacturer
- Growing revenue and cash flow positive

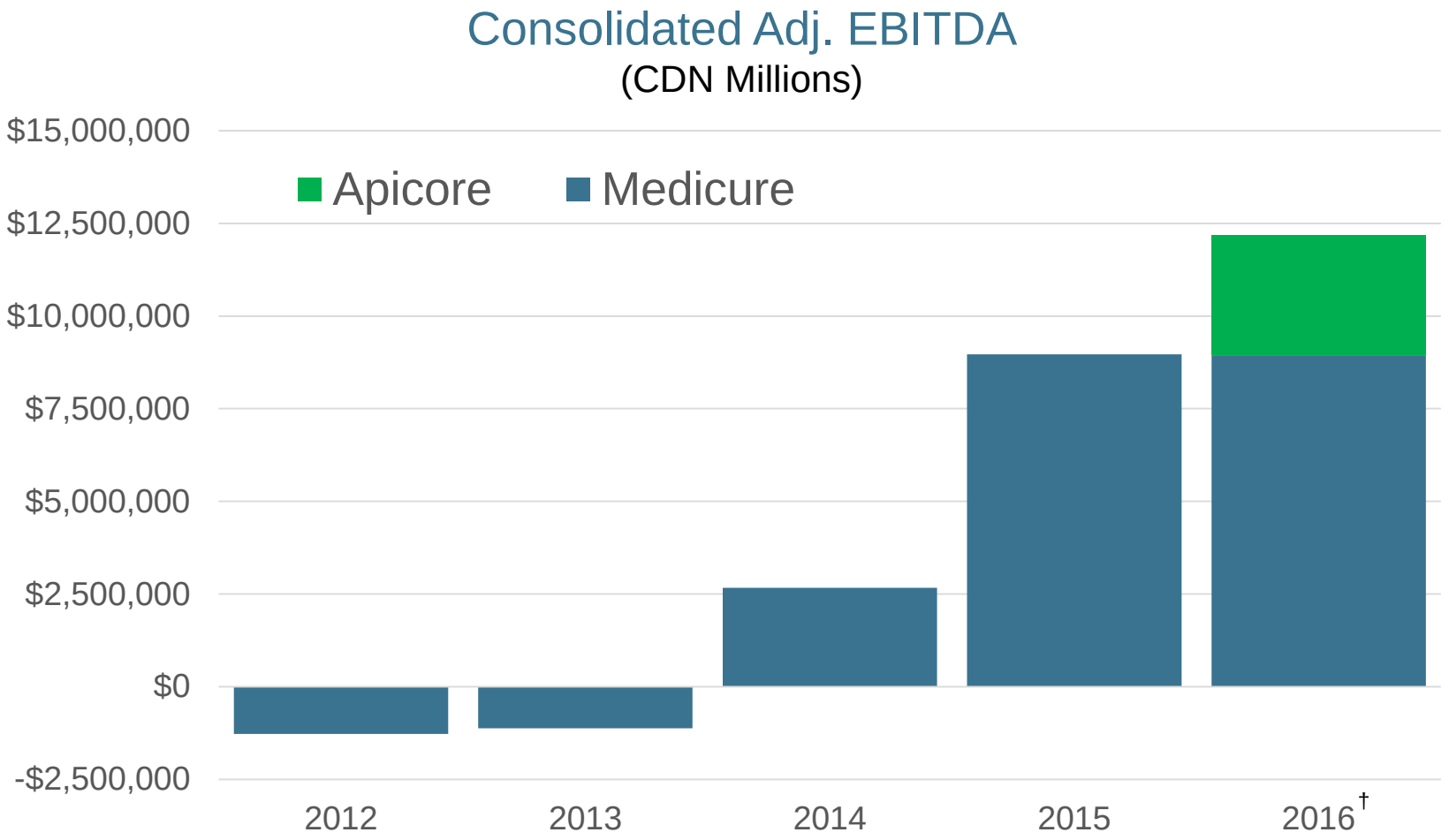
* API = Active Pharmaceutical Ingredient

Net Revenue Growth



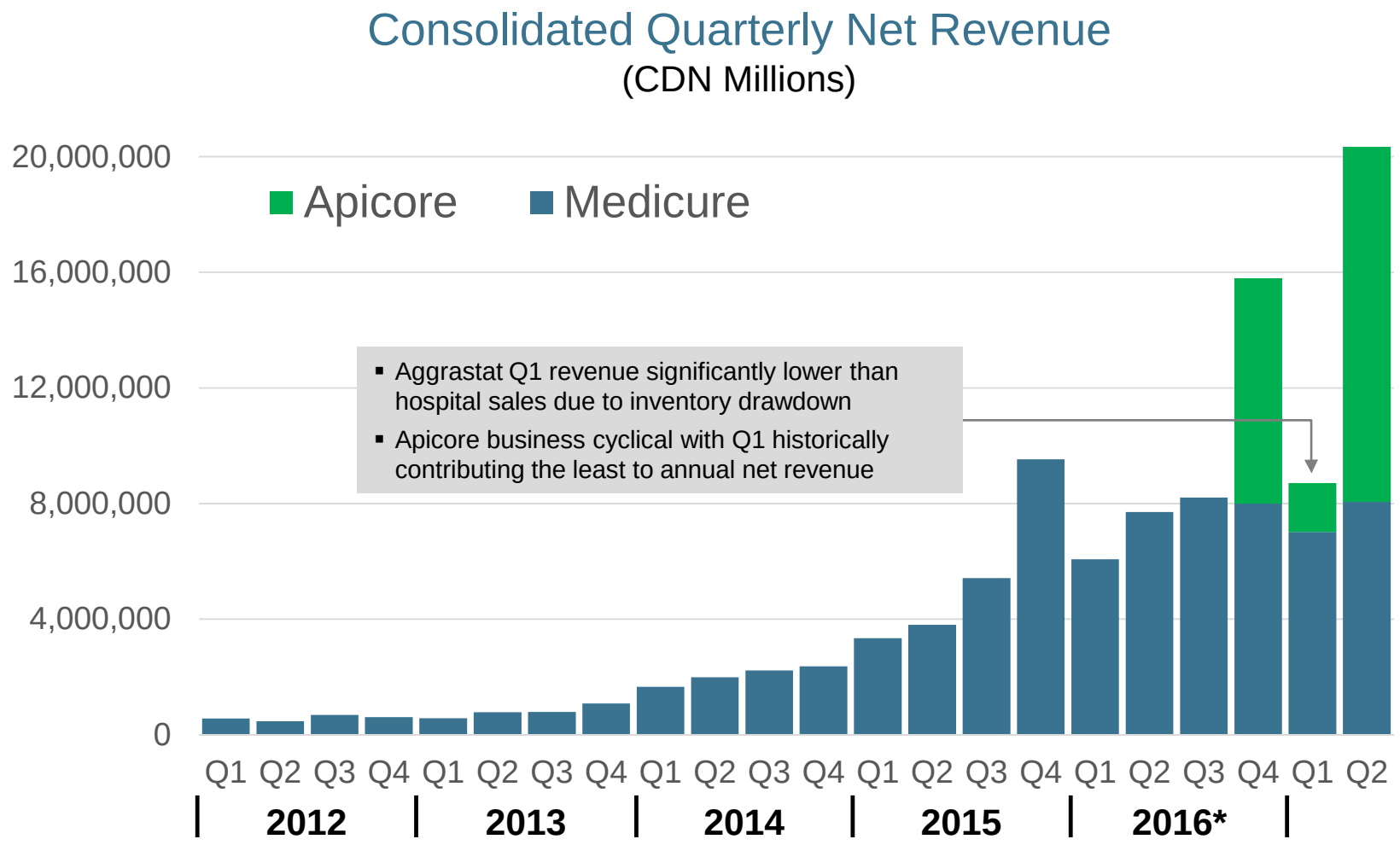
* Apicore acquisition closed on December 1, 2016; therefore, only December 2016 Apicore net revenue is accounted for in fiscal 2016.

Adj. EBITDA* Growth



* The Company defines EBITDA as "earnings before interest, taxes, depreciation, amortization and other income or expense" and Adjusted EBITDA as "EBITDA adjusted for non-cash and one-time items". The terms "EBITDA" and "Adjusted EBITDA", as it relates to the results prepared using International Financial Reporting Standards ("IFRS"), do not have any standardized meaning according to IFRS. It is therefore unlikely to be comparable to similar measures presented by other companies. † Apicore acquisition closed on December 1, 2016; therefore, only December 2016 Apicore Adj. EBITDA is accounted for in fiscal 2016.

Quarterly Net Revenue



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AGGRASTAT®

(tirofiban hydrochloride) Injection

Acute cardiovascular hospital product

- I.V. platelet inhibitor; binds to GP IIb/IIIa receptor
- Indicated for Acute Coronary Syndrome (ACS)
- 41% reduction in death and MI in high-risk patients[1]

- Launched by Merck in 1998
- U.S. rights acquired by Medicure in 2006
- Medicure obtained broader FDA approval in October 2013 for High Dose Bolus regimen
- Patented until 2023

1. PRISM-PLUS Study Investigators. N Engl J Med. 1998;338:1488-1497

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FDA Approval: Bolus Vial

Aggrastat is now available as a concentrated bolus vial

- Pre-mixed, single bolus delivery*
- Formulated for convenient IV push
- No pump programming needed
- Relatively neutral pH
- Does not require refrigeration

* Current 100 mL and 250 mL (both 50 mcg/mL) bag formats provide the infusion dose.

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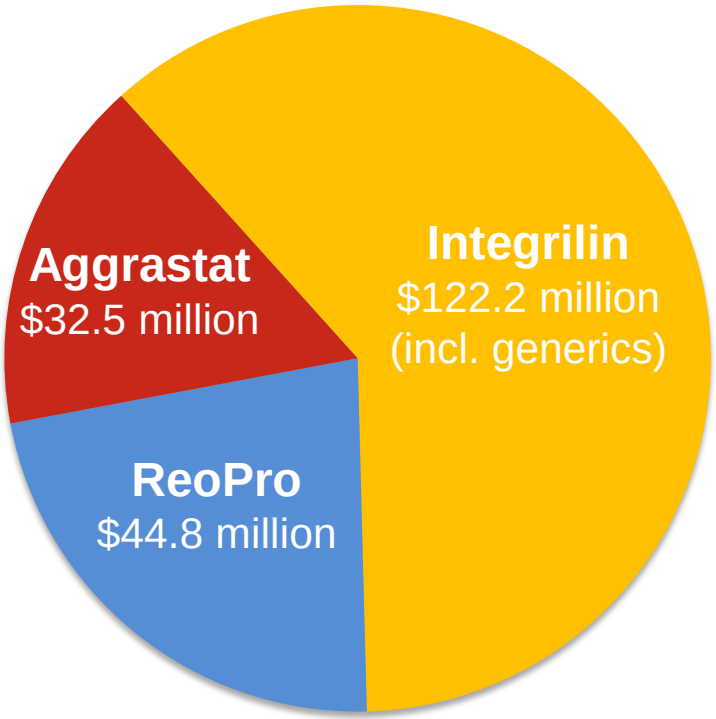
U.S. GP IIb/IIIa Inhibitor (GPI) Market

Aggrastat Market Positioning:

- Significant platelet inhibition profile
- Robust data in over 8,000 patients
- Class 1 guideline recommended[1,2]
- Numerous administration conveniences
- Lower per-patient acquisition costs

2016 GPI Market = $200 Million USD
(WAC* Hospital Sales)



* WAC = Wholesale Acquisition Costs (no discounts/rebates)

1. Amsterdam EA et al. J Am Coll Cardiol 2014;64:2645-2687
2. Levine GN et al. J Am Coll Cardiol 2011; 58:e44-e122

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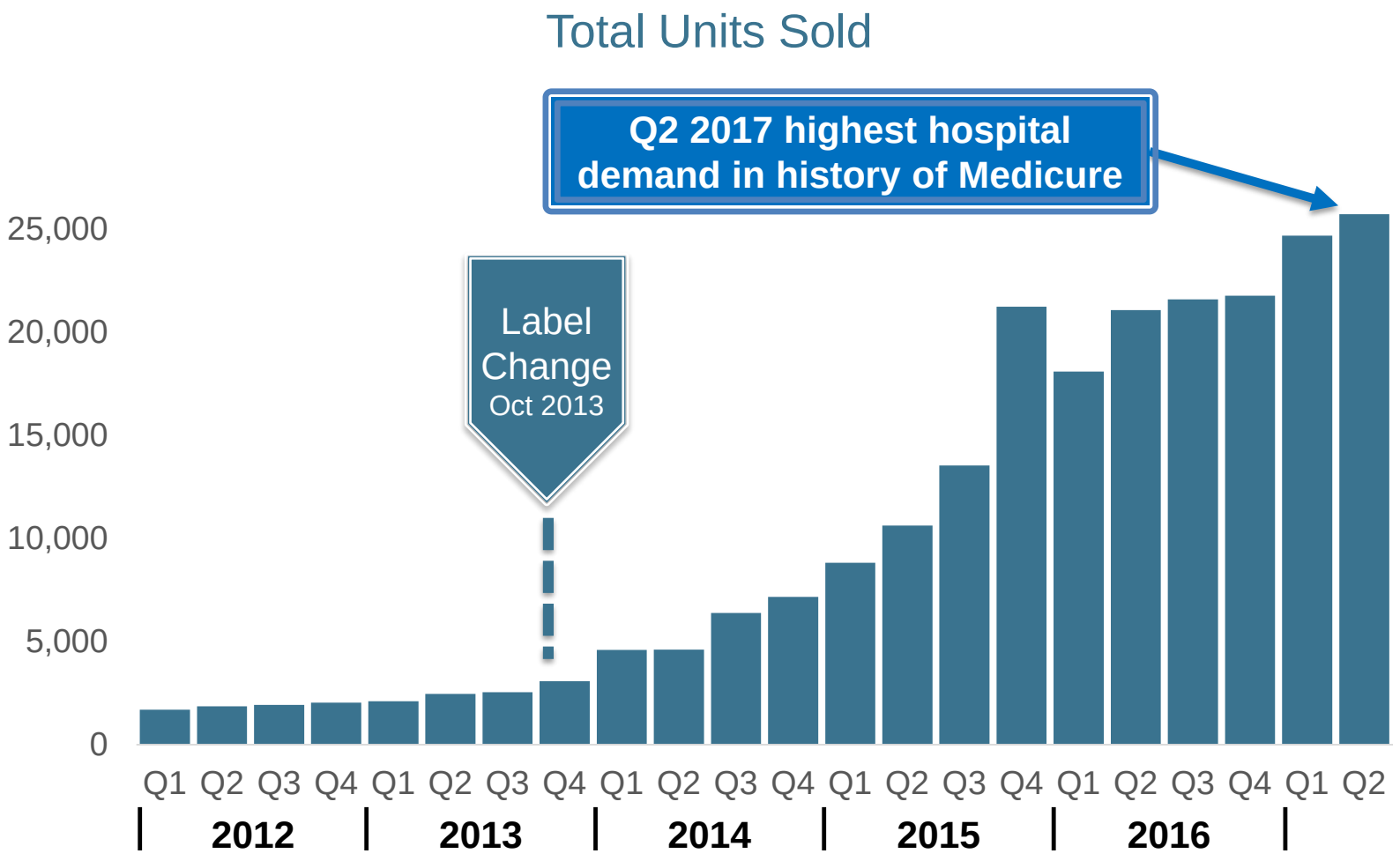
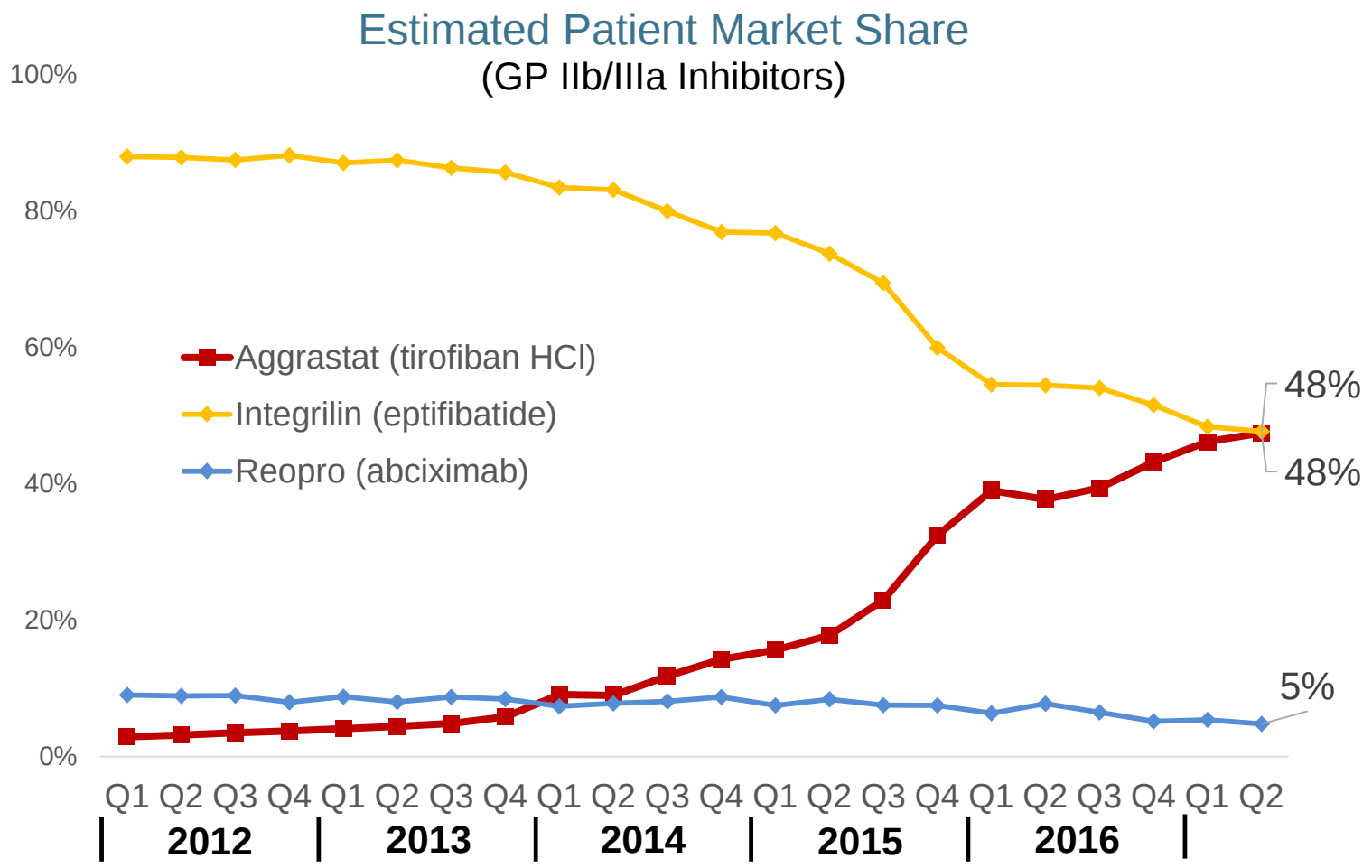
AGGRASTAT® Hospital Demand



AGGRASTAT® Patient Market Share



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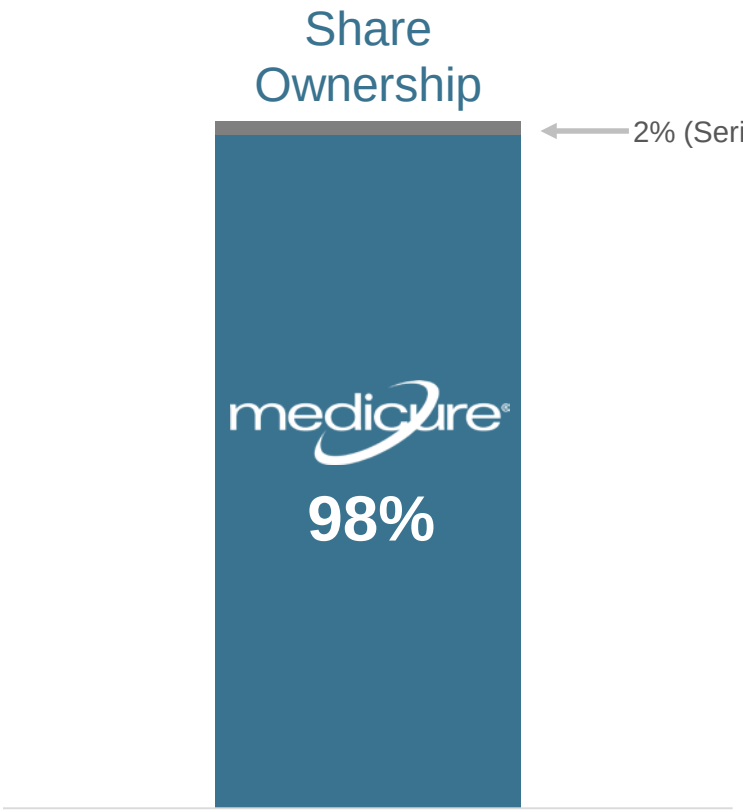
Remaining Option Exercised – July 2017



Apicore™

a private manufacturer of complex active pharmaceutical ingredients (APIs) and developer of generic products (ANDAs)

1. Mechanism in place for redemption of Series A-1 Preferred shares.

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Apicore Background

API Manufacturer & ANDA Developer:

- Complex synthetic chemistry
- Early & “first-to-file” generics
- Two FDA approved facilities
- >100 API products
- >50 customers (Mylan, Teva, Sandoz, etc.)

History:

- Founded in 2004 (New Jersey)
- Expanded Indian facility in 2013-14
- Total 210 employees

Somerset, New Jersey

Vadodara, Gujarat, India

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Recent Apicore ANDA Approvals

On March 23, 2017 Medicure announced FDA approval of Apicore's Tetrabenazine ANDA

- Treatment for involuntary movements of Huntington's disease
- Branded product Xenazine® sold by Valeant Pharmaceuticals
- Generic versions of 12.5 mg and 25 mg tablets approved
- Co-development with TAGI Pharma (commercial partner)

ANDA pipeline:

- >15 ANDAs under development and growing
- ANDA partnership with Medicure filed with FDA in December 2016

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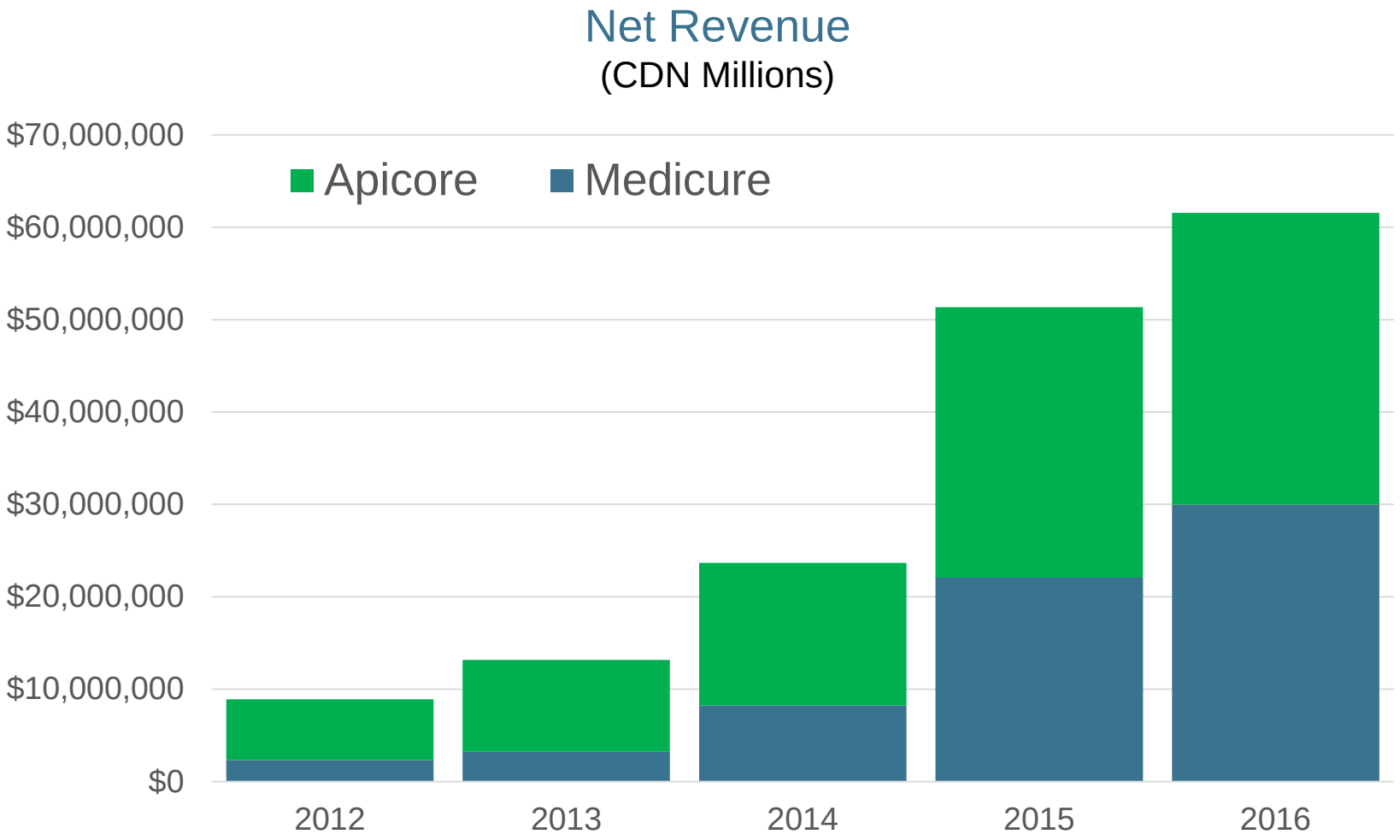
Full Year Net Revenue: combined*



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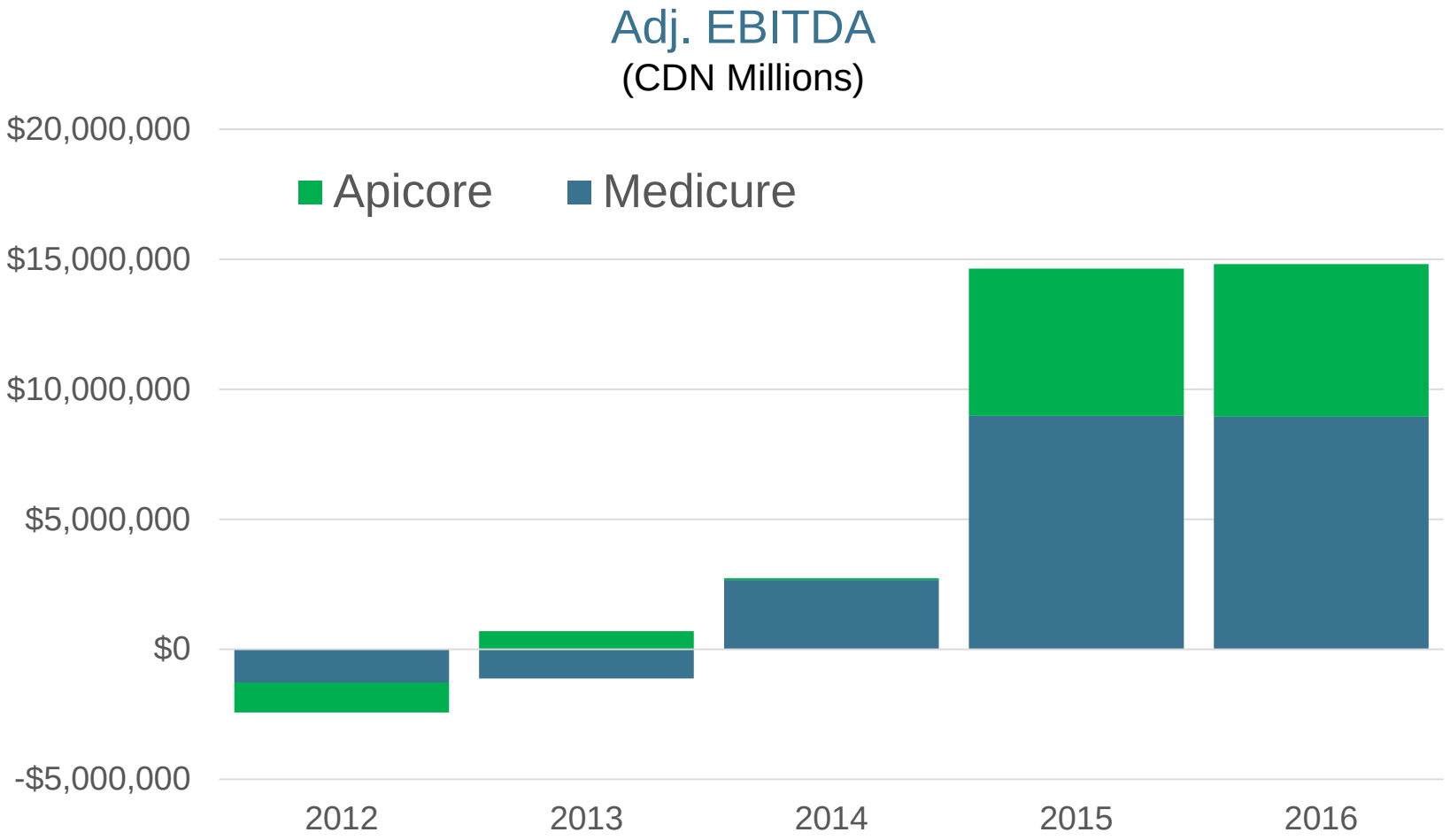
Full Year Adj. EBITDA*: combined †



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Product & Business Development

- Building a specialty pharmaceutical portfolio focused on the U.S. hospital market
- Leveraging our sales infrastructure
- Investing in reduced risk - high reward development projects
- Maintaining focus on profitability

✓ **First ANDA for generic cardiovascular drug filed with FDA**

✓ **Two more cardiovascular generics under development**

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Key Financial Info – MPH: TSXV

Cap Structure As of August 4th, 2017

Basic Total	15,633,127
Fully Diluted Total	17,824,544
Share Price	**C$7.90**
Market Cap	**C$123,501,703**

- **Recent Financial Highlights**
  - 2016 Net Revenue $37.8 M
  - 2016 Adj. EBITDA $12.2 M
  - Q2 2017 Net Revenue $20.3 M
  - Q2 2017 Adj. EBITDA $6.2 M
- **Focus**
  - Continue to grow Aggrastat revenue
  - Diversify through product & business development

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Thank you

Contact a Product Specialist
1.800.509.0544

For More Information
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www.aggrastat.com

Investor Relations
ir@medicure.com 1.888.435.2220 (Ext. 228)

Aggrastat Prescribing Information

Indication: AGGRASTAT is indicated to reduce the rate of thrombotic cardiovascular events (combined endpoint of death, myocardial infarction, or refractory ischemia/repeat cardiac procedure) in patients with non-ST elevation acute coronary syndrome (NSTE-ACS).

Dosage and Administration:

High-Dose Bolus Regimen:

Administer intravenously ***25 mcg/kg within 5 minutes and then 0.15 mcg/kg/min for up to 18 hours***. In patients with CrCl ≤60 mL/min, use the full bolus and halve the maintenance infusion.

Contraindications: Known hypersensitivity to any component of AGGRASTAT; History of thrombocytopenia with prior exposure to AGGRASTAT; Active internal bleeding, or history of bleeding diathesis, major surgical procedure or severe physical trauma within previous month

Warnings and Precautions: AGGRASTAT can cause serious bleeding. If bleeding cannot be controlled discontinue AGGRASTAT; Thrombocytopenia: Discontinue AGGRASTAT and heparin

Adverse Reactions: Bleeding is the most commonly reported adverse reaction

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