

# Welcome





From a single project to  
integrated branding campaigns,  
The Medical Package  
delivers better marketing results.

The Medical Package® LLC is a full-service marketing and advertising agency dedicated to the medical space. Unlike any company currently in existence, we combine decades of healthcare expertise with senior, award-winning agency talent. Our business model allows for the highest level of accountability, service, and value for our clients.

The Medical Package is comprised of a diverse collection of experienced business and creative people. The company combines in-house and freelance talent so that every project has the best and most efficient outcome.

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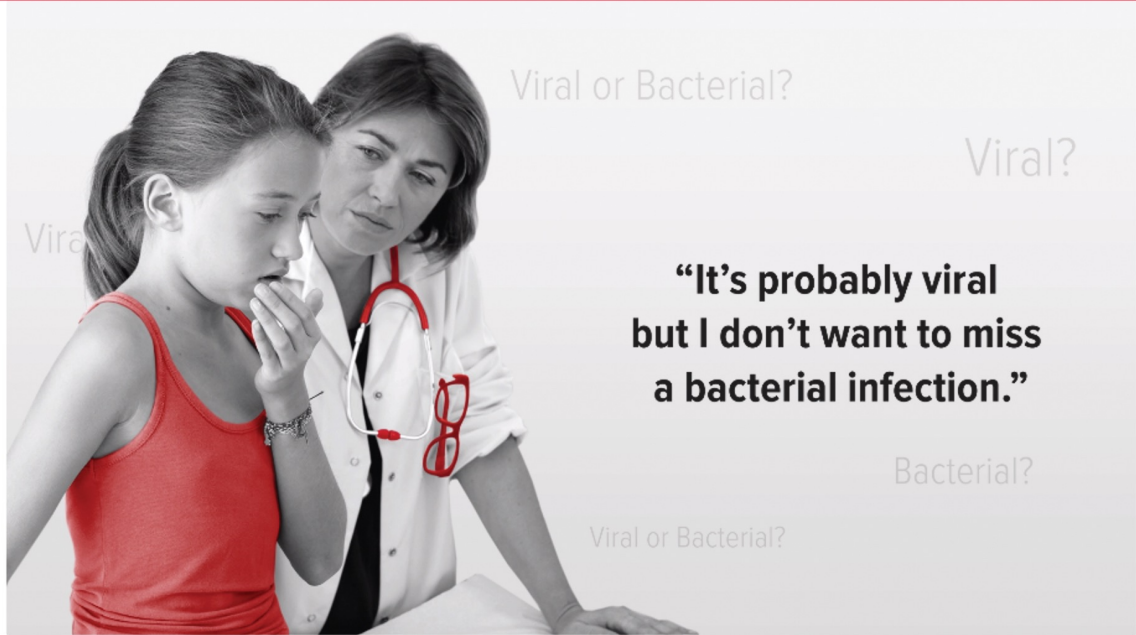


**INTEGRITY**  
PHARMACY™



**NephroCheck®**

*Early, Easy, Accurate. Check.*



**“It’s probably viral  
but I don’t want to miss  
a bacterial infection.”**

Reduce Antibiotic Use



Accurate (99% NPV)



Lower Healthcare Costs



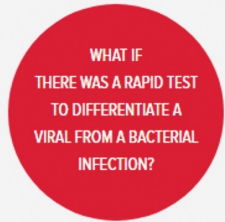
### Viral or Bacterial Infection?

The symptoms can be very similar.

An acute respiratory infection (ARI) is the most common single reason for **outpatient office visits** and **antibiotic prescriptions**.<sup>15</sup>

More than **90%** of patients who present to their healthcare providers with the most common symptom of an ARI—an acute cough—have a syndrome caused by a **virus**.<sup>16</sup>

Unnecessary use of antibiotics leads to **antibiotic resistance**, causing **more than 25,000 deaths** in the EU, and 700,000 globally.<sup>18</sup> Antibiotic resistance results in costs over €1.5 billion in the EU and \$20 billion in the U.S. annually.<sup>17,28</sup>



## INTRODUCING THE SYSMEX® XW™-100

### A CLIA-WAIVED CBC IS NOW POSSIBLE

The Sysmex XW-100 is the first FDA-cleared, CLIA-waived CBC analyzer to provide reliable, convenient, and often, same-visit CBC results. A 15 µL venous blood sample is required. The sample-to-result time is just 3 minutes.

The Sysmex XW-100 can help:

- Expedite diagnosis and treatment
- Improve patient satisfaction
- Streamline workflow



Clinical & Operational Benefits



Comparison & Results Including Suppression



Common Questions

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HOW IT HELPS      SUPPORT      CONTACT

## SUPPORT

[Quick Guides & Instructions for Use Manual](#)

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Clinical & Operational Benefits




Comparison & Results Including Suppression



Common Questions

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# HIV TESTING CAN CHANGE EVERYTHING

Determine HIV-1/2 Ag/Ab Combo

“Every time someone gets tested for HIV, we are one step closer to ending the AIDS epidemic. Learning your HIV status opens the door to powerful HIV prevention and treatment options that could save your life or the life of someone you love.”

—Jonathan Mermin, MD, MPH

Dr. Mermin is the Director of the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP), and a four-term Administrator in the U.S. Public Health Service.

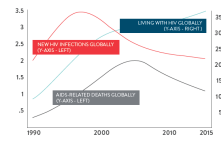
## HIV INCIDENCE AND DISTRIBUTION

According to HIV.gov, there are approximately 1.1 million people living with HIV in the U.S. and 1 in 7 are unaware they are infected with it.<sup>1</sup>

In 2018 there were 37,832 new HIV diagnoses.<sup>2</sup> Approximately 80% of new HIV transmissions are from individuals who do not know they have HIV infection or are not receiving regular care.<sup>3</sup>

The prevention and treatment of people with HIV should be of utmost concern as this will decrease the number contracting the virus and proceeding to AIDS.

GLOBAL NUMBER OF AIDS-RELATED DEATHS, NEW HIV INFECTIONS, AND PEOPLE LIVING WITH HIV, 1990-2015\* (IN MILLIONS)



PREVALENCE, NEW CASES AND DEATHS FROM HIV IN THE UNITED STATES\* (IN MILLIONS)



## A NEW CHALLENGE – OPIOID USE AND HIV INCIDENCE

People who inject drugs accounted for 9% (3,405) of the 37,832 diagnoses of HIV in the United States in 2018. Up to 40% of new users share needles. The prescription opioid and heroin epidemic has led to increased numbers of

of HIV due to injection drug use, however the opioid epidemic has disproportionately affected nonurban areas, where HIV prevalence rates are normally low. These communities have limited services for HIV detection,

## TYPES OF HIV TESTING AND TIME TO RESULTS

HIV tests can be conventional or rapid.<sup>1,2</sup>

CONVENTIONAL	
CONVENTIONAL BLOOD TEST	→ 1 HOUR TO SEVERAL DAYS <sup>1</sup>
CONVENTIONAL ORAL FLUID TEST	→ A FEW DAYS TO TWO WEEKS <sup>2</sup>
RAPID	
RAPID TEST POINT OF CARE	→ <20 MINUTES <sup>3,4</sup>
NEGATIVE	→ NO FURTHER TESTING NEEDED
POSITIVE	→ LABORATORY CONFIRMATION NEEDED
HOME	
HOME TEST	→ 20 MINUTES TO THREE DAYS <sup>5</sup>



Picture from 1985 of Abbott scientists with the first HIV test kit, the Abbott HTLV-III.

## HIV ANTIGEN AND ANTIBODY TESTING

Antibody-only tests were developed in the 1980s and improved the specificity and positive predictive value of the screening procedure by adding recombinant antigens, specifically HIV-1 p24, HIV-2, and HIV-1 group O. Antibody-only assays reduced the antibody-negative window to 4-6 weeks after exposure. With the addition of HIV-2, confirmatory testing of that protein was added to the developing CDC algorithm for HIV testing.<sup>6</sup>

IgM detection was added to assays to produce a new type of HIV test. The IgM/IgG combination reduced the antibody-negative window to approximately 3 weeks. The development of a p24 antigen detection ELISA could detect the virus as early as two weeks.<sup>6</sup>

Detection of HIV after becoming infected has been difficult to ascertain, especially if tests are performed during the window period (the period of time between becoming infected with HIV and the ability of a test to detect HIV) which increases the likelihood of a false negative.

The probability of a false negative decreases with the use of an antibody-antigen test.

FALSE NEGATIVES IN ANTIBODY-ONLY AND ANTIBODY/ANTIGEN HIV TESTS<sup>7</sup>

TIME SINCE EXPOSURE	ANTIBODY TEST (CHANCE OF A FALSE NEGATIVE TEST RESULT)	ANTIBODY/ANTIGEN TEST (CHANCE OF A FALSE NEGATIVE TEST RESULT)
0-9 DAYS	100% CHANCE	100% CHANCE
10-15 DAYS	95-99%	79-99%
16-20 DAYS	56-80%	35-51%
21-28 DAYS	13-46%	8-37%
29-30 DAYS	5-9%	0-8%
31-80 DAYS	3-4%	0%
MORE THAN 80 DAYS	0-1%	0%

### KEY DATES IN THE HISTORY OF HIV TESTING<sup>8</sup>

- 1981:** First AIDS case reported
- 1984:** The FDA licensed the first test to Abbott to screen blood for exposure to HIV<sup>9</sup>
- 1985:** First test for HIV (indirect ELISA)
- 1987:** First Western Blot blood test kit
- 1992:** First rapid test
- 1994:** First oral fluid test
- 1996:** First home and urine tests
- 2002:** First rapid test using fingerstick
- 2003:** Rapid fingerstick test (first granted CLIA waiver)
- 2004:** First rapid oral fluid test (first granted CLIA waiver)
- 2006:** WHO/UNAIDS global guidelines recommend routine HIV screening in U.S. healthcare settings
- 2007:** CDC launches expanded HIV testing initiative in U.S.
- 2010:** First test approved that detects both antigen and antibodies
- 2012:** USPTF gives routine HIV screening an "A" rating
- 2013:** First rapid oral fluid home test
- 2015:** First rapid test approved that detects both antigens and antibodies, and distinguishes between acute and established HIV-1 infection

Centers for Medicare and Medicaid Services announce Medicare coverage of annual HIV screening for all beneficiaries 65+, and for those older and younger beneficiaries as "increased risk" for HIV

**KEEP THEIR DREAMS ALIVE**

#KeepThemLearning



**KEEP TESTING**

Diagnostic testing can allow for more in-person educational experiences. Keep their dreams alive by offering a CLIA-waived COVID-19 antigen test.

**Introducing the BinaxNOW™ COVID-19 Ag Card**



Rapid, reliable, easy-to-use **15 MIN**

Cost-effective

NAVICA™ System - a user-friendly digital platform to support your COVID-19 testing program


For more information visit: [KeepThemLearning.com](https://www.KeepThemLearning.com)

**Abbott**

**KEEP TESTING**

Test so everyone can be at their best. Abbott can help keep your teams playing.

**Introducing the BinaxNOW™ COVID-19 Ag Card**



Rapid, reliable, easy-to-use **15 MIN**

Cost-effective

NAVICA™ System - a user-friendly digital platform to support your COVID-19 testing program

For more information visit: [KeepThemPlaying.com](https://www.KeepThemPlaying.com)

**Abbott**

**KEEP THEM AWARE**

**KEEP THEM PLAYING**

#KeepThemPlaying



**KEEP THEM AWARE**

**KEEP THEM LEARNING**

#KeepThemLearning

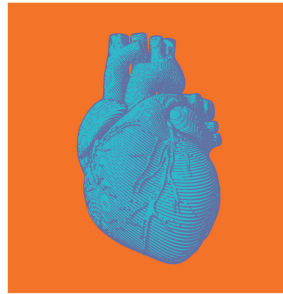
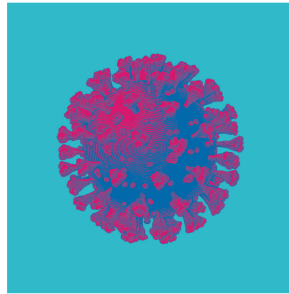


**HATS OFF TO RAPID TESTING**

#HatsOffTesting



They're counting on you.



Make sure you have the biomarkers you need.

ED Visits for Influenza-like Illness Are Predictive of CVD Mortality<sup>1</sup>

ED Census Influences Triage Decision-making<sup>11</sup>

When They Have Trouble Breathing

Patients commonly present to the emergency department (ED) with breathing difficulties.<sup>12</sup> These signs and symptoms may reflect several respiratory and cardiac etiologies.<sup>13</sup> Patients with COVID-19 infection have been shown to present with a greater than 20% incidence of dyspnea and a series of cardiovascular abnormalities.<sup>14</sup>

Influenza can also precipitate cardiac events. This is thought to be due to a range of factors including inflammatory release of cytokines, disruption of atherosclerotic plaques, and thrombogenesis.<sup>15</sup>

ED visits for influenza-like illness have been associated with and predictive of cardiovascular disease (CVD) mortality.<sup>16</sup>

Elder patients with influenza infection and those with prevalent CVD risk factors, have been shown to be especially prone to myocardial infarction.<sup>17</sup> Influenza infection has also been associated with increased in-hospital mortality and mortality in patients with heart failure (HF).<sup>18</sup>

When they have trouble breathing, it is important to rapidly determine the cause and identify existing and potential sequelae whether cardiac or viral in origin.



Three For the Crowd

In the U.S., the demand for ED services has increased rapidly.<sup>19</sup> Past influenza outbreaks and the ongoing pandemic have created great challenges for emergency departments. ED crowding has been shown to negatively impact patient outcomes, patient satisfaction, and patient safety.<sup>20,21</sup> Increased ED occupancy has been found to be associated with more patients classified as higher acuity and result in higher hospital admission rates.<sup>22</sup>

With all this added pressure on the ED, it is now more important than ever to adopt efficiencies which allow for a more rapid diagnosis.

Quidel's Triage<sup>®</sup> array of tests provide important data to assist with an expedient diagnosis and proper course of treatment.



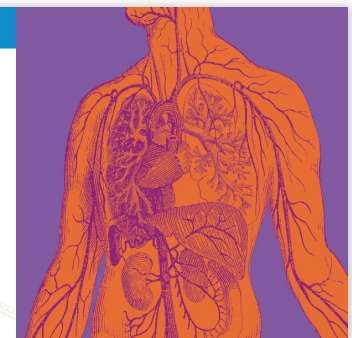
Quidel Triage products are not intended for use in testing for SARS-CoV-2 in clinical.

Knowing Troponin Levels Earlier Can Prevent Cardiac Damage<sup>23,24</sup>

Troponin is the preferred biomarker for aiding in the diagnosis of acute myocardial infarction by providing early detection to prevent myocardial injury and further cardiovascular damage.<sup>25</sup> For patients with underlying CVD, viral illness can further damage myocardial cells through several mechanisms including direct damage by the virus, systemic inflammatory responses, destabilized coronary plaques, and aggravated hypoxia.<sup>26</sup>

The Quidel Triage Cardiac Panel is a fluorescence immunoassay to be used with the Clinitec Triage Meter for the quantitative determination of creatine kinase MB (CK-MB), myoglobin, and troponin I in EDTA anticoagulated whole blood or plasma specimens.<sup>27</sup>

Point-of-care (POC) troponin testing has been shown to decrease patient length of stay, turn around time, and potentially decrease overall costs.<sup>28</sup>

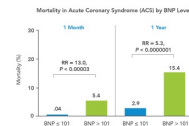


The Triage BNP Test Is Powerful<sup>29</sup>

The Triage BNP Test Can Assist With a Rapid Rule Out<sup>30</sup>

BNP From the Beginning

A B-type natriuretic peptide (BNP) level on admission has been found to be an independent and powerful marker of early and late cardiac mortality in patients with acute chest pain without ST-segment elevation. It is suggested that BNP be measured upon arrival at the ED.<sup>31</sup>



Cardiac mortality in patients with acute chest pain without ST segment elevation, stratified by the measurement of the B-type natriuretic peptide upon arrival at the emergency department. RR = relative risk. P < 0.000001.

Natriuretic peptide testing is now recommended for the prevention, diagnosis, and prognosis of HF.<sup>32</sup>

The newest guideline recommends that the measurement of baseline levels of natriuretic peptide biomarkers and/or cardiac troponin on admission are useful in establishing a prognosis in acute decompensated heart failure.<sup>33</sup>

The evidence is strong. When you need to know, you need a BNP.

Indication	Class	Level of Evidence
Diagnosis	I	A
Prognosis	I	A
Pre-discharge Risk Assessment	IIa	B-R
Prevent Onset of Heart Failure	IIa	B-R

HF = heart failure; B = balanced.

A single measurement of BNP in the ED is associated with greater diagnostic accuracy and its use decreases time to discharge and cost of stay.<sup>34</sup>

The Quidel Triage BNP Test is a rapid, POC, fluorescence immunoassay used with the Quidel Triage MeterPro. The test is used to measure BNP (EDTA anticoagulated whole blood or plasma specimens). The Triage BNP Test is the first rapid BNP immunoassay indicated for risk stratification for both ACS and HF.<sup>35</sup>





A CLIA-WAIVED CBC  
IS NOW  
POSSIBLE.



CLIA Waived  
XW-100

RxOnly

#### IT MAY FIT WELL IN YOUR PRACTICE

Previously, CBC testing required sending samples to a lab for results. The Sysmex XW-100 has changed that. The CLIA-waived designation ensures that it's simple to use, has a low risk of providing erroneous results, and can be operated without additional training beyond simply reading the manufacturer's instructions and following the on-screen prompts.

The Sysmex XW-100 can be an especially good fit for your well patient visits. It is very compact with a height of 13.8 inches and a width of 7.3 inches. The Sysmex XW-100 and its reagents can fit on a countertop. Daily QC takes less than 30 minutes.



#### VALUABLE INFORMATION

The Sysmex XW-100 offers a 3-part differential with 12 different parameters:

- Total #WBCs
- Total #RBCs
- Hemoglobin
- Hematocrit
- Total #platelets
- Total #neutrophils
- % of neutrophils
- Total #lymphocytes
- % of lymphocytes
- Total #other WBCs
- % of other WBCs
- MCV

The Sysmex XW-100 is not for use in diagnosing or monitoring patients with primary or secondary chronic hematologic diseases/disorders, oncology patients, critically ill patients, or children under the age of two.

#### PROTECTING YOU AND YOUR PATIENTS

Blood parameters can be complicated to measure. The complexity of the sample and underlying patient conditions may result in suppression of results. This will appear as 4 asterisks (\*\*\*\*) where in most cases a result would be generated. The Sysmex XW-100 is designed to protect your patients and your practice from inaccurate results.

For more information, review the Sysmex XW-100 Quick Guide or visit [CBCin3.com](http://CBCin3.com).

#### SYSMEX XW-100 RESULTS (SUPPRESSED)

Instrument Type XW100  
Serial # C2083

Date: Jan 14, 2019  
Time: 12:18 PM  
Operator MKZ

Patient ID 1875  
Patient DOB May 28, 1972

WBC 6.2 x 10<sup>9</sup>/L  
RBC 4.38 x 10<sup>12</sup>/L  
HGB \*\*\*\*  
HCT \*\*\*\*  
PLT 344 x 10<sup>9</sup>/L

#Neut 4.4 x 10<sup>9</sup>/L  
%Neut 71.3 %

#Lymph 1.6 x 10<sup>9</sup>/L  
%Lymph 25.6 %

#OtherWBC 0.2 x 10<sup>9</sup>/L  
%OtherWBC 3.1 % Low

MCV \*\*\*\*



Run sample if device alerts to do so. If results are still suppressed, send sample out as per your standard protocol.

#### NOTES

#### RECOMMEND FURTHER TESTING.

#### Adult Reference Ranges

WBC 3.9 - 10.4 x 10<sup>9</sup>/L  
RBC 3.71 - 5.52 x 10<sup>12</sup>/L  
HGB 10.9 - 16.7 g/dL  
HCT 32.5 - 49.4 %  
PLT 148 - 382 x 10<sup>9</sup>/L  
#Neut 2.2 - 7.1 x 10<sup>9</sup>/L  
%Neut 48.4 - 76.9 %  
#Lymph 0.3 - 3.4 x 10<sup>9</sup>/L  
%Lymph 14.7 - 45.9 %  
#OtherWBC 0.2 - 1.2 x 10<sup>9</sup>/L  
%OtherWBC 3.2 - 16.9 %  
MCV 82.5 - 98.0 fL

---End-Report---



# A New Focus for Cardiac Diagnostics

Giving Shape to Ideas

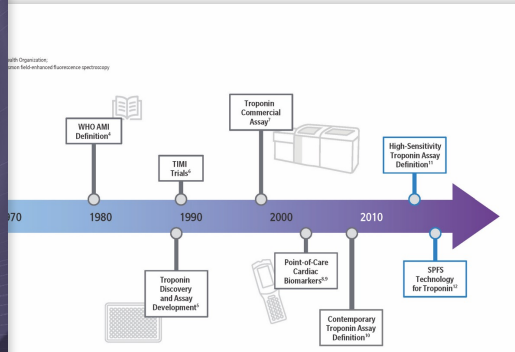
## The Evolution of Troponin Testing

Research into troponin, a more specific cardiac biomarker than had previously been available, began in the 1980s with the first commercial diagnostic assay to appear in 1988.<sup>1</sup> Troponin soon became established as a highly specific indicator of heart damage and was rapidly incorporated in the definition of myocardial infarction and cardiac guidelines.<sup>14</sup>

Point-of-care cardiac markers have now been available for over two decades<sup>15</sup> and multiple studies have confirmed that troponin testing at the bedside reduces emergency department length of stay.<sup>16,17</sup> Troponin remains the "gold standard" biomarker for determination of myocardial damage yet technologies and their assays are rapidly evolving.

"Lateral flow has inherent limitations in terms of being able to reliably deliver a certain amount of fluid in a very reliable way. We need something that will be rapid and sensitive and lateral flow is just not the way to do it."

—Alan HS Wu, PhD, DABCC, FRCB



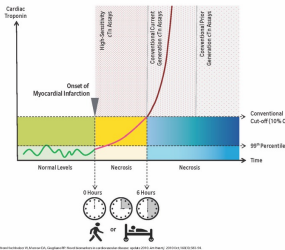
## New Technologies and Treatment Paradigms

Implementation of high-sensitivity troponin (hsTn) assays have brought enhanced sensitivity, precision, and the ability to fulfill the universal definition of acute myocardial infarction (AMI).<sup>11,13</sup>

The capability of hsTn to measure cardiac troponin concentrations > 10-fold lower than those detectable by previous-generation assays, and with high precision, is now leading to new accelerated protocols for managing acute coronary conditions.<sup>11,12</sup>

High sensitivity troponin assays have performed well for early rule-out and rule-in for acute myocardial infarction with trials reporting earlier discharge, earlier treatment, and greater confidence with regard to disposition of patients.<sup>14-18</sup>

## Improved Diagnostic Technologies Can Lead to Improvements in Care<sup>19</sup>



## Now Offering

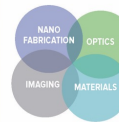
### Gold Standard High Sensitivity Cardiac Troponin (cTnI) Analysis

#### Critical Early Biomarker for Preclinical Cardiovascular Risk/Benefit Assessments

- Quantitative readouts for cardiovascular toxicity (CTX) and/or phenotypic drug screening in animal models of cardiovascular (CV) diseases
- Minimum sample requirements: 15-30 µL of heparinized plasma\*
- Turnaround Time (TAT): within 96 hours after receipt of samples
- Detection & precision:
  - 2.0 to 50,000 ng/L (mouse plasma sample)
  - CV 10% at 9.6 ng/L

We also offer an onsite test (whole blood or centrifuged fresh plasma) for daily monitoring.

#### Our Core Technologies

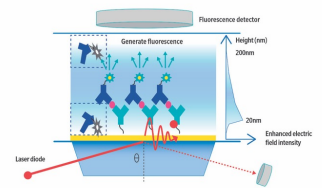


#### SPFS (Surface Plasmon Field Enhanced Fluorescence Spectroscopy)

SPFS works by detecting the fluorescence signal of fluorophore probes held in place by an antigen-antibody reaction. These probes are excited by near-field light induced on the surface of a thin layer of gold.

To perform high-sensitivity detection, a proprietary advanced sensing technology has been developed to measure even the faintest of signals from the immune reaction.<sup>1</sup>

Konica Minolta's strength in fluorescent nanomaterials for bioimaging and sensing along with advanced photonics and electro-optical engineering have allowed for such advancements.



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<sup>10</sup>SPFS can be made available. Please contact us for more information.  
1. [https://www.konamicaminoia.com/bioimaging/healthcare/high\\_sensitivity.html](https://www.konamicaminoia.com/bioimaging/healthcare/high_sensitivity.html) Account 13 November 2018

## IT'S A CHALLENGE:

IMPROVING PAIN MANAGEMENT  
WHILE REDUCING OPIOIDS



## TWO MAJOR CHALLENGES:

YOUR BUDGET AND PAIN MANAGEMENT



### IMPROVE PAIN MANAGEMENT

**INDICATION**  
CALDOLOR is a nonsteroidal anti-inflammatory drug indicated in adults and pediatric patients who require analgesia for:

- Management of mild to moderate pain and the management of moderate to severe pain as adjunct to opioid analgesics
- Reduction of fever

**IMPORTANT SAFETY INFORMATION**

**CONTRAINDICATIONS**  
CALDOLOR is contraindicated in patients with known hypersensitivity to any NSAIDs, including but not limited to ibuprofen or any component of the CALDOLOR, and in patients who have had a history of asthma, urticaria, or other allergic hypersensitivity likely caused by other NSAIDs. Serious, sometimes fatal, anaphylactoid reactions to NSAIDs have been reported in such patients. CALDOLOR is contraindicated in the setting of coronary artery bypass graft (CABG) surgery.

**WARNINGS AND PRECAUTIONS**  
CALDOLOR should be used with caution in patients with known cardiovascular (CV) disease or risk factors for CV disease, a history of peptic ulcer disease and/or GI bleeding, renal or liver disease or impaired renal or liver function, or a history of GI bleeding. In patients with a history of GI bleeding, the use of CALDOLOR should be avoided. In patients with a history of GI bleeding, the use of CALDOLOR should be avoided. In patients with a history of GI bleeding, the use of CALDOLOR should be avoided.

**ADVERSE REACTIONS**  
The most common adverse reactions in patients include headache, dizziness, nausea, vomiting, and diarrhea (≥5%). The most common adverse reactions in pediatric patients are headache, nausea, vomiting, and diarrhea (≥5%).

**WARNING RISK OF SERIOUS CARDIOVASCULAR AND GASTROINTESTINAL EVENTS**  
• Risk of serious cardiovascular events, including myocardial infarction and stroke, which can be fatal. This risk may occur with treatment of mild to moderate pain and the management of moderate to severe pain as adjunct to opioid analgesics.

**Do not prescribing information for complete box warnings on the Package Insert attached to the center of this visual aid.**

### Improve Pain Management

Plan management that becomes increasingly challenging. There are pressures to offer more effective pain control and reduce opioid use at the same time.<sup>1</sup>

Pain happens both centrally and peripherally.<sup>2,3</sup> CALDOLOR<sup>®</sup> is a non-opioid IV NSAID that helps manage pain:<sup>4</sup>

- at the nociceptors,
- at the dorsal horn,
- by crossing the blood brain barrier

**CALDOLOR Aids Peripherally and Centrally, Inhibiting Both COX-1 and COX-2 With Balanced Activity**

NSAIDs Exert Their Effects Via Inhibition of the Arachidonic Acid-Cyclooxygenase (COX) Pathway<sup>5</sup>

**CALDOLOR Blood Levels Reach a Higher Maximum<sup>6</sup>**

**Do not prescribing information for complete box warnings on the Package Insert attached to the center of this visual aid.**

**CALDOLOR<sup>®</sup> (ibuprofen) Injection**  
800 mg/200 mL (4 mg/mL) injection

Design: For intravenous use. See package insert for dosage information. Single dose contains Chlorbutol<sup>®</sup> as a preservative. Non-sterile and nonpyrogenic. USP Class. **Category 1 (USP Class II)**

By Only **CLIMBERLAND<sup>®</sup> PHARMACEUTICALS, INC.**

### Hang With Us

CALDOLOR<sup>®</sup> is now available in a premixed bag and at similar cost.<sup>1</sup>

Ready-to-use drug forms are shown to reduce provider time by 32% and material cost by 80%.<sup>2</sup>

- Proven pain control<sup>1,3,4</sup>
- Reduces opioid use<sup>1,4,5</sup>
- Cost-effective<sup>1,6</sup>

CALDOLOR<sup>®</sup> is also indicated for pediatric use for both fever and analgesia.<sup>1,7</sup>

**Do not prescribing information for complete box warnings on the Package Insert attached to the center of this visual aid.**

1. CALDOLOR<sup>®</sup> Prescribing Information. Nashville, TN: Cumberland Pharmaceuticals Inc.; 2018. See also: Cohen H, Douchagtas J, Ezzamel C, et al. Ready-to-use ibuprofen injection, versus conventional ampoules: a multicenter, randomized, controlled trial of efficacy, pharmacokinetics, and tolerability. *Pharmaceuticals*. 2020;13(10):1918.

2. Singh N, Singh A, Patel A. A multicenter, randomized, double-blind, placebo-controlled trial of intravenous ibuprofen 800 mg injection for treatment of pain in postoperative orthopedic outpatients. *Am J Orthop*. 2018;47(10):648-652.

3. Rasmussen JH, Rasmussen GJ, Singh A, et al. Accepted safety analyses of intravenous ibuprofen (CALDOLOR<sup>®</sup>) in adults. *J Pain Res*. 2018;10:154-161.

4. Rasmussen JH, Rasmussen GJ, Singh A, et al. Intravenous ibuprofen (CALDOLOR<sup>®</sup>) in adults: a multicenter, randomized, double-blind, placebo-controlled trial of efficacy, pharmacokinetics, and tolerability. *Pharmaceuticals*. 2020;13(10):1918.

5. Rhee JH, Rasmussen GJ, Singh A, et al. Intravenous ibuprofen (CALDOLOR<sup>®</sup>) in adults: a multicenter, randomized, double-blind, placebo-controlled trial of efficacy, pharmacokinetics, and tolerability. *Pharmaceuticals*. 2020;13(10):1918.

6. Rasmussen JH, Rasmussen GJ, Singh A, et al. Intravenous ibuprofen (CALDOLOR<sup>®</sup>) in adults: a multicenter, randomized, double-blind, placebo-controlled trial of efficacy, pharmacokinetics, and tolerability. *Pharmaceuticals*. 2020;13(10):1918.

7. Rasmussen JH, Rasmussen GJ, Singh A, et al. Intravenous ibuprofen (CALDOLOR<sup>®</sup>) in adults: a multicenter, randomized, double-blind, placebo-controlled trial of efficacy, pharmacokinetics, and tolerability. *Pharmaceuticals*. 2020;13(10):1918.

### CALDOLOR<sup>®</sup> (ibuprofen) Injection CAN HELP WITH BOTH<sup>1-5</sup>

**INDICATION**  
CALDOLOR is a nonsteroidal anti-inflammatory drug indicated in adults and pediatric patients who require analgesia for:

- Management of mild to moderate pain and the management of moderate to severe pain as adjunct to opioid analgesics
- Reduction of fever

**IMPORTANT SAFETY INFORMATION**

**CONTRAINDICATIONS**  
CALDOLOR is contraindicated in patients with known hypersensitivity to any NSAIDs, including but not limited to ibuprofen or any component of the drug product, and in patients who have had a history of asthma, urticaria, or other allergic hypersensitivity likely caused by other NSAIDs. Serious, sometimes fatal, anaphylactoid reactions to NSAIDs have been reported in such patients. CALDOLOR is contraindicated in the setting of coronary artery bypass graft (CABG) surgery.

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**ADVERSE REACTIONS**  
The most common adverse reactions in patients include headache, dizziness, nausea, vomiting, and diarrhea (≥5%). The most common adverse reactions in pediatric patients are headache, nausea, vomiting, and diarrhea (≥5%).

**WARNING RISK OF SERIOUS CARDIOVASCULAR AND GASTROINTESTINAL EVENTS**  
• Risk of serious cardiovascular events, including myocardial infarction and stroke, which can be fatal. This risk may occur with treatment of mild to moderate pain and the management of moderate to severe pain as adjunct to opioid analgesics.

**Do not prescribing information for complete box warnings on the Package Insert attached to the center of this visual aid.**

### Reduce Opioids

In three multicenter, randomized, double-blind placebo-controlled CALDOLOR<sup>®</sup> was found to reduce opioids when compared to placebo in elective orthopedic surgery patients who received CALDOLOR<sup>®</sup> 30.9% less morphine (P < 0.001) than those receiving placebo.<sup>1</sup> and efficacy trial of CALDOLOR<sup>®</sup> as a post-operative analgesic to abdominal hysterectomy, the median morphine requirement was 19% (P = 0.001).<sup>2</sup> A third trial evaluated the use of CALDOLOR<sup>®</sup> for analgesia and found a 50% reduction in the amount of post-operative (P = 0.002).<sup>3</sup>

**Patients Treated With CALDOLOR<sup>®</sup> Used Up to 50% Fewer Morphine Equivalents<sup>1,2,3</sup>**

Procedure	N	P Value	Amount Consumed (%)
Elective orthopedic surgery	N = 195	P < 0.001	30.9%
Abdominal hysterectomy	N = 319	P < 0.001	19.0%
Plastic reconstructive	N = 138	P = 0.021	50.0%

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### Artroscopic Knee Surgery

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### Your Time Is Valuable

CALDOLOR<sup>®</sup> is now available in a single-use premixed bag, requiring no dilution and at similar cost.<sup>1</sup>

**Valid for 737 Compounding Preparation**

Material	Pharmacy	Order	Chain	Preparation	Prepared by Pharmacist	Not Used by Pharmacist	Discarded 24 Hours
Bag	Pharmacy	Order	Chain	Preparation	Prepared by Pharmacist	Not Used by Pharmacist	Discarded 24 Hours

**CALDOLOR<sup>®</sup> is a Premixed Bag**

Bag in Pharmacy | Order | Chain | Preparation | Prepared by Pharmacist | Not Used by Pharmacist | Discarded 24 Hours

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**It Can Be Difficult to Determine the Cause of Their Acute Respiratory Infection<sup>1</sup>**



**What If There Was a Rapid Test That Would Differentiate a Viral From a Bacterial Infection?**



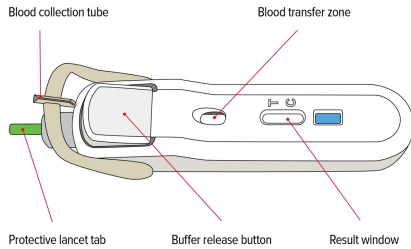
**FebriDx Is Supported by Science**

Two prospective, multi-center clinical trials demonstrated high sensitivity and specificity identifying clinically significant bacterial and viral infections.<sup>5,6</sup>

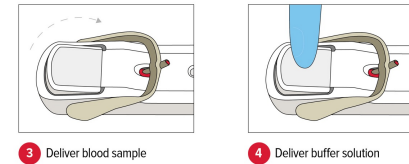
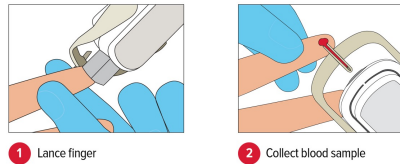
- Revealed greater accuracy than stand alone CRP or procalcitonin in identifying viral and bacterial origin for acute respiratory infections<sup>5</sup>
- Determined to have a **97-99% NPV** to assist ruling out a bacterial infection<sup>5,6</sup>

Sample size (n)	Fever (hyperthermia)	Clinical Diagnosis	Sensitivity [95% CI]	Specificity [95% CI]	PPV [95% CI]	NPV [95% CI]
121 Shapiro et al. <sup>5</sup>	Exhibited on enrollment (100% febrile)	Bacterial	95% [77-100]	94% [88-98]	76% [59-87]	99% [93-100]
		Viral	90% [81-96]	78% [62-89]	89% [82-93]	80% [67-89]
220 Shapiro et al. <sup>6</sup>	Reported within last 3 days (55% febrile)	Bacterial	85% [69-95]	93% [89-96]	69% [56-79]	97% [94-99]
		Viral	90% [83-94]	76% [66-84]	83% [77-87]	85% [77-90]
205 Self et al. <sup>8</sup>	Reported within last 3 days (13% febrile)	Bacterial	80% [59-93]	93% [90-97]	63% [45-79]	97% [94-99]
		Viral	87% [75-95]	83% [77-89]	64% [53-75]	95% [90-98]

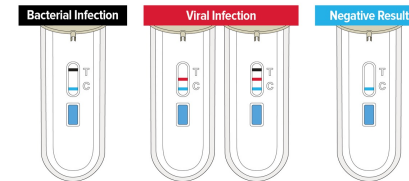
**An All-in-One Test Device**



**FebriDx Test Procedure and Interpretation of Results**



- FebriDx results indicating elevated CRP **without** an associated elevated MxA are interpreted as a bacterial infection.
- FebriDx results indicating an elevated MxA, **with or without** an associated elevated CRP, are interpreted as a viral infection.
- Valid tests showing no elevated CRP or MxA are interpreted as negative and suggests the absence of a pathogen-associated systemic host immune response.<sup>15-17</sup>



INTRODUCING THE FIRST REAL IMPROVEMENT  
IN RENAL TESTING IN OVER 60 YEARS

NephroCheck

ASTUTE MEDICAL  
Innovative Biomarkers. Smarter Healthcare.

Ortho Clinical Diagnostics

AKI

DISCOVERY


THE NephroCheck™ TEST

FUNCTIONAL BIOMARKERS  
Serum Creatinine, Urine Output

Stress/Injury → Decline in Function →

**Risk Factors\*\***

- Sepsis
- Pneumonia
- Cardiogenic Shock
- Major Surgery
- Cardiac Surgery
- Nephrotoxic Drugs
- Radicontrast Agents



Asymptomatic → Symptomatic

DISCOVERY

THE NephroCheck™ TEST

The current diagnostic paradigm for AKI relies largely on biomarkers of function that have been in clinical use for over 60 years. These are known to be insensitive and slow to change after kidney injury, often leading to a late and inaccurate diagnosis of AKI with significant adverse outcomes.

**The AKIRisk™ Score is NOT ELEVATED by COMMON COMORBIDITIES\***


Results from Astute-sponsored studies demonstrated that AKIRisk™ Scores are not elevated for those with:

- \*Chronic comorbidities without an AKI
- \*Acute cardiovascular and/or respiratory compromised patients without AKI

The AKIRisk™ Score has significant ability to discriminate patients with AKI from no AKI.

The NephroCheck™ test is not elevated by comorbidities and conditions common in patients at risk for AKI.





Assess AKI Risk. Now.

DISCOVERY

THE NephroCheck™ TEST

\*These data show that AKIRisk™ Scores are not elevated (relative to results for apparently healthy subjects) for subjects with chronic comorbidities or for intended use patients without AKI. Commonly, AKIRisk™ Scores are substantially elevated for subjects for intended use patients.



The ED never sleeps.



Alere Triage® Solutions.

Rapid Solutions at the Point-of-Care.

Alere Triage® Cardiac Solutions.

The following timeline represents a typical patient who presents to the ED with symptoms of chest pain.

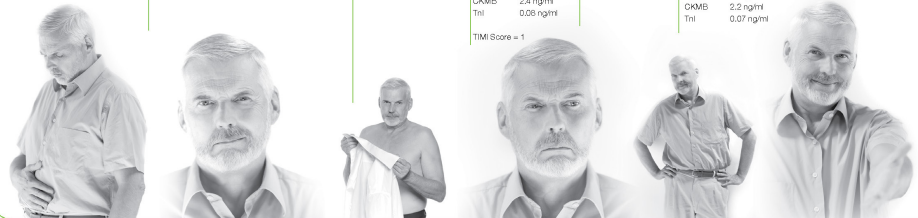
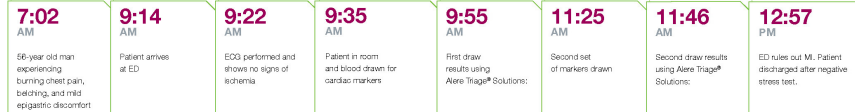
Research has demonstrated that by utilizing a point-of-care, serial multi-marker strategy, the patient can be evaluated and sent home in a few hours.



- ▶ Accurate, quantitative cardiac marker results in approximately 15 minutes<sup>1</sup>
- ▶ Triage may be possible within 2 hours using an accelerated protocol<sup>2</sup>
- ▶ Simple, one-step testing, compact and portable, low maintenance, built-in quality control features<sup>3</sup>

Alere Triage® Cardiac Panel<sup>1</sup>

- ▶ Myoglobin
- ▶ CKMB
- ▶ Troponin I



<sup>1</sup>Not all panels available. The Alere Triage® Cardiac Panel<sup>1</sup> may include troponin, CKMB, Myoglobin, and BNP. <sup>2</sup>Not all panels available. The Alere Triage® Cardiac Panel<sup>1</sup> may include troponin, CKMB, Myoglobin, and BNP. <sup>3</sup>Not all panels available. The Alere Triage® Cardiac Panel<sup>1</sup> may include troponin, CKMB, Myoglobin, and BNP.

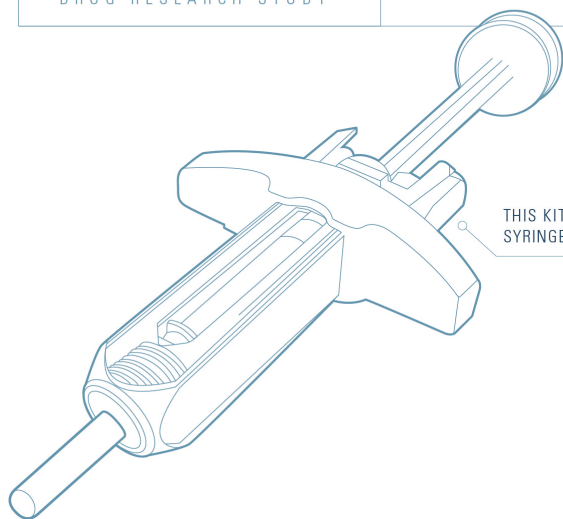


AA PHARMACEUTICALS

AA101488

DRUG RESEARCH STUDY

# Patient Guide

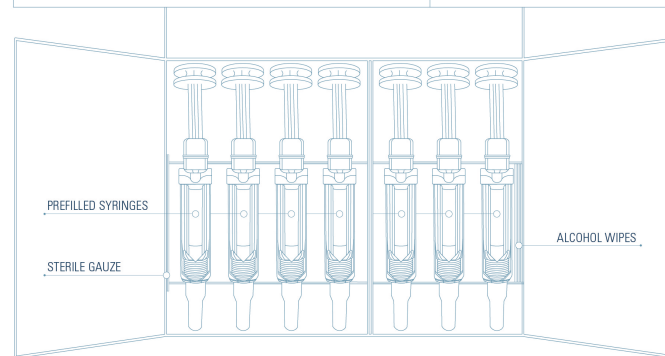


THIS KIT INCLUDES 7 PREFILLED DISPOSABLE SYRINGES & SUPPLIES FOR DAILY PATIENT USE

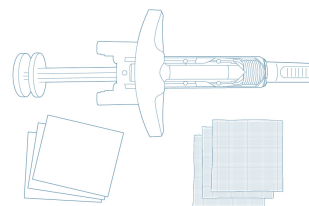
### This kit contains supplies and the study drug.

This includes alcohol wipes and sterile gauze along with the study drug—already contained in prefilled syringes.

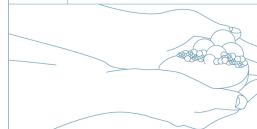
*The syringes must be kept at room temperature, between 68 and 77 degrees Fahrenheit or 20 – 25 degrees Celsius.*



**1** Remove the items you will need from the kit, including an alcohol wipe, sterile gauze and a prefilled syringe.

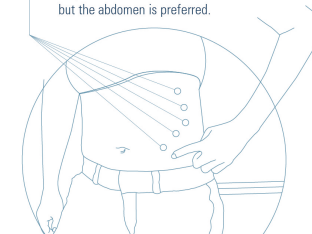


**2** Wash your hands thoroughly with soap and water.

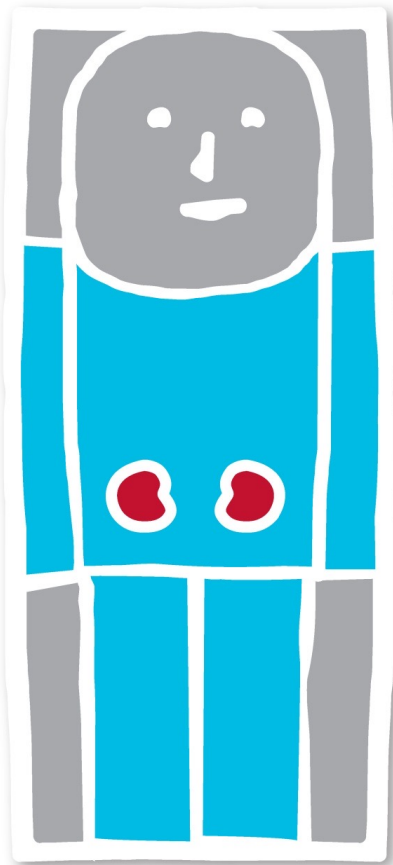


**3** Choose an administration site along your abdomen.

The preferred site is the abdomen. It is important that you do not administer the dose in the same spot every time. Alternate your injection to a different spot along the abdomen each day. The thigh or upper arm may also be used as administration sites, but the abdomen is preferred.



*Do not administer your dose in an area that is bruised or swollen, or where the skin is irritated, red, infected, scarred or tattooed.*



 @AcuteKidneyMan



The screenshot shows the LinkedIn profile for Nexus Dx, Inc. The header includes the LinkedIn logo, a search bar, and navigation icons for Home, My Network, Jobs, Messaging, Notifications, Me, and Work. The main content area features the Nexus Dx logo, a profile picture of a medical device, and the text: "Nexus Dx, Inc. Medical Devices · San Diego, California · 557 followers". Below this is a bio: "Nexus Dx is a global provider of near-patient testing systems and advanced diagnostic solutions." and buttons for "+ Follow" and "Learn more". A link "See all 40 employees on LinkedIn" is also present. The page is divided into sections: "Home" (with sub-sections for About, Jobs, and People), "All" (with sub-sections for Images, Documents, and Videos), and "Community hashtags" (listing #nexusdx with 0 followers and #pointofcare with 143 followers). A post from Nexus Dx, Inc. is visible, stating: "No sample prep needed. An innovative design makes the Nexus IB10 easy to use. Learn more. <https://lnkd.in/eABYuEF>".

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COVID-19 Health Eq... Immunology Cancer Cardiology Podcasts Health Tips

POSTS REELS VIDEOS TAGGED

“ It was very difficult watching our daughter struggle day in and day out in the NICU...  
— Tyler Zongker

NEW PODCAST! **MISSING?**  
Finding Polyps in a Pandemic

What's wrong with my Mommy?  
Listen to find out.

Dr. Margaret A. Liu

Adnexal Mass Risk Assessments: Do Risk Algorithms Improve Care?

Seven Things to Know About Treating Hyponatremia

What's the best thing you can say to your patient?

Don't die from embarrassment.  
GET THE FACTS. GET CHECKED.

COVID-19 Health Eq... Immunology Cancer Cardiology Podcasts Health Tips

“Follow the data. Most often, the data is somewhere between both ends of the political spectrum.”

Dr. James Januzzi Jr.

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Finding Polyps in a Pandemic  
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On Medical Grounds @OnMedGrounds · Jun 24

Melody Butler is the founding executive director and president of Nurses Who Vaccinate. A registered nurse and infection preventionist, hear her personal journey to 'yes' and recommendations for vaccine advocacy. #vaccines #MedTwitter #InfectiousDisease  
[zou.io/HPF](http://zou.io/HPF)

Seven Things to Know About Treating Hyponatremia

Seven Things to Know About Treating Hyponatremia

A Heart Has To Be Seen

Medical Mystery Cases

"The doctor wants me to come back AGAIN?"  
THE PRESCHOOL PUZZLE

SPECIAL EPISODE  
SAVE A NURSE

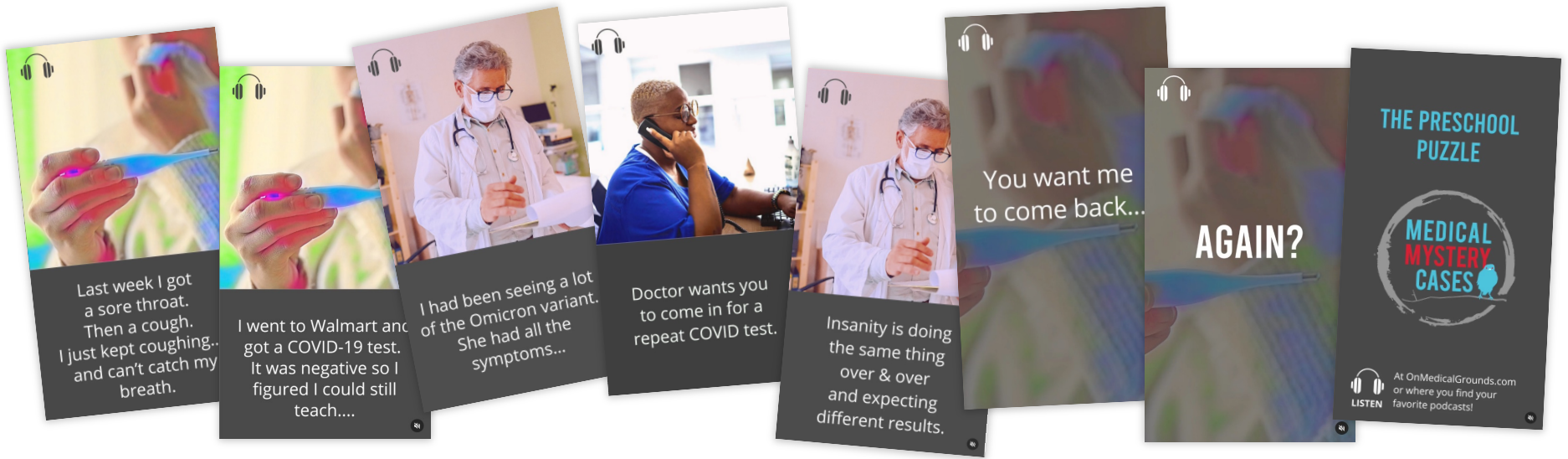
1 "Remain apolitical data-driven"

2 "Take a stand when it matters."

THE BABY OR THE BUFFET?

MEDICAL MYSTERY CASES

Short tales to ponder from On Medical Grounds



# WADDLE WITH ME

Remember to use antibiotics only when necessary. #StewartShip

# WADDLE WITH ME

Help prevent the spread of COVID-19

- Wash Your Hands
- Avoid Touching Your Face
- Disinfect All Surfaces
- Distance Yourself Socially
- Listen and Follow Expert Advice
- Everyone Must Do Their Part!

Remember to use antibiotics only when necessary. #StewartShip

# WADDLE WITH ME

Did you know a "waddle" is a group of penguins on land?

But right now we are social distancing to help prevent the spread of COVID-19.

Remember to use antibiotics only when necessary. #StewartShip

# STAY HOME FOR THEM

Help Healthcare Workers Stay Safe!

Stay home to help stop the spread of COVID-19.

Remember to use antibiotics only when necessary. #StewartShip

# THANK YOU

Healthcare Professionals!

Your LONG hours, HARD work, and STRENGTH to fight COVID-19 make a *real* difference to your patients—and the world.

#StewartShip

# STEWART SCHOOL ANTIBIOTICS DO NOT KILL COVID-19 VIRUS.

Antibiotics only kill bacteria, not virus. Please listen to and follow the advice of your healthcare provider.

#StewartShip

# WADDLE WITH ME

Help prevent the spread of COVID-19

**W**ash your hands frequently and thoroughly. Scrub for at least 20 seconds with soap & water, or use hand sanitizer with at least 60% alcohol.

Remember to use antibiotics only when necessary. #StewartShip

# WADDLE WITH ME

Help prevent the spread of COVID-19

**A**void touching your face, especially eyes, nose, mouth or mouth with unwashed hands. Sneeze or cough into a disposable tissue or the inside of your elbow, then wash your hands again.

Remember to use antibiotics only when necessary. #StewartShip

# WADDLE WITH ME

Help prevent the spread of COVID-19

**D**isinfect and clean all frequently touched surfaces daily. This includes phones, keyboards, desks, tables, counters, chairs, door knobs, cabinet handles, door bells, keys, etc.—icebergs too.

Remember to use antibiotics only when necessary. #StewartShip

# STAY HOME STAY SAFE SLOW THE SPREAD

We all need to ice-o-late!

#StewartShip

# STEWART SCHOOL HAND DRYERS DO NOT KILL COVID-19 VIRUS.

The best way to protect yourself and others is to wash your hands frequently and thoroughly. Scrub for at least 20 seconds with soap & water, or use hand sanitizer with at least 60% alcohol.

#StewartShip

# DON'T FLOAT SO CLOSE TO ME

Keep a distance of 6 feet—about the length of an average door—between you and others.

#StewartShip

# WADDLE WITH ME

Help prevent the spread of COVID-19

**D**istance yourself socially by keeping at least 6 feet—about the length of an average door—between you and others to prevent inhaling droplets of the virus. Avoid close contact with anyone ill.

Remember to use antibiotics only when necessary. #StewartShip

# WADDLE WITH ME

Help prevent the spread of COVID-19

**L**isten to and follow expert advice. This pandemic is a rapidly evolving situation. Scientists are learning more about the novel COVID-19 virus everyday and will provide updated guidance as available.

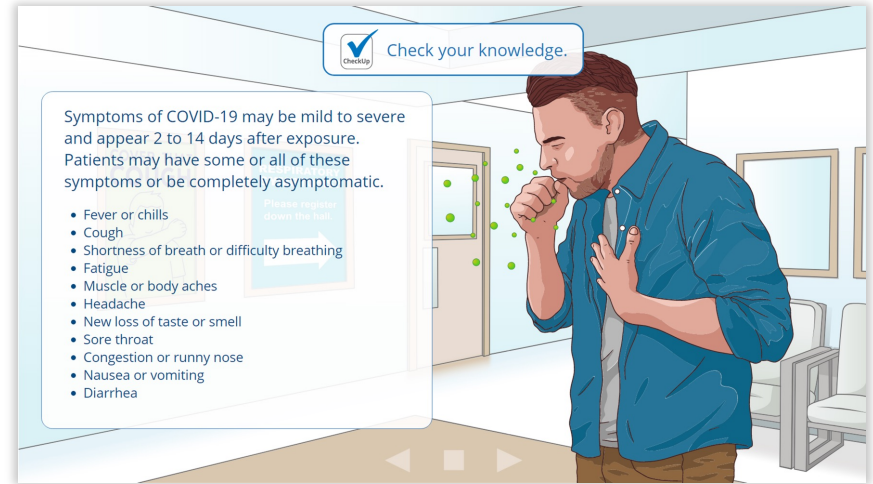
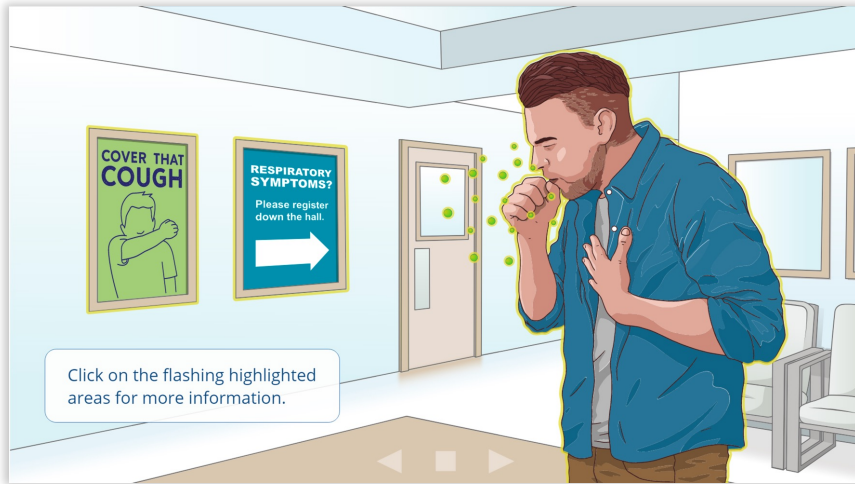
Remember to use antibiotics only when necessary. #StewartShip

# WADDLE WITH ME

Help prevent the spread of COVID-19

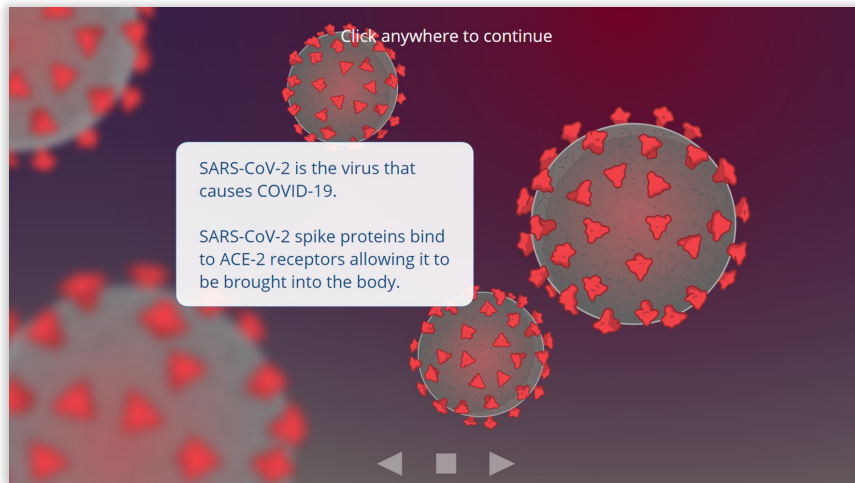
**E**veryone must do their part! COVID-19 is a global disease that can infect anyone and any age group. We all must work together to slow its spread and infection rate until a vaccine or cure is found.

Remember to use antibiotics only when necessary. #StewartShip



Symptoms of COVID-19 may be mild to severe and appear 2 to 14 days after exposure. Patients may have some or all of these symptoms or be completely asymptomatic.

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea



SARS-CoV-2 is the virus that causes COVID-19.

SARS-CoV-2 spike proteins bind to ACE-2 receptors allowing it to be brought into the body.



Hand sanitizer should be provided to all patients and healthcare workers through individual bottles or dispensers. These should be placed at reception and throughout the facility.



**ATHOS<sup>3</sup>**

In *The Three Musketeers*, Athos, Porthos, and Aramis are friends of the novel's protagonist, d'Artagnan. However, prior to the initiation of their friendship, they meet to duel. As it turns out, in one day, d'Artagnan manages to have three separate altercations, one with each of the three musketeers, and schedules three separate duels with each of them, all at the same time – clearly a confident young man! As Athos and d'Artagnan prepare to duel, the soldiers of Cardinal Richelieu appear and the musketeers begin battle with the soldiers of the Cardinal. d'Artagnan throws in with the musketeers, and so begins this famous friendship.

**Global Trial Update**

**North America:** It's official, ATHOS<sup>3</sup> has gone global with the first SIV (Site Initiation Visit) outside of the U.S., conducted in early December. In November, La Jolla received a "No Objection Letter" from Health Canada, allowing us to proceed with opening the trial. New sites are being initiated each week with a target of 15 sites across Canada. These are in addition to the 45 sites opening in the U.S. [Learn more here.](#)



**Frequently Asked Questions (& Answers!)**

**Q1:** Is it acceptable to use 6 hourly MAPs that were obtained as SOC prior to consent and enrollment, and is it necessary to obtain 6 additional MAPs once consent is obtained?  
**A1:** It is acceptable to use the MAPs collected as SOC procedures for the 6 hourly MAPs required as screening procedures in the study. [Read more here.](#)



**Study Site Spotlight**

**Laurence W. Busse, MD** — Dr. Laurence Busse is an intensivist with Medical Critical Care Services at Inova Fairfax Medical Campus. He received his medical degree in 2008 from George Washington University where he graduated with Distinction (Alpha Omega Alpha). Prior to that, he received a Bachelor of Arts from Tulane University and a Master of Business Administration from Emory University. [Learn more here.](#)



**Company Spotlight**

**Meet and Greet** — Rena Harrigan, MPH, serves as Senior Clinical Project Manager at La Jolla. She completed her undergraduate education in biology in her native country, the U.S. Virgin Islands. Rena then moved to San Diego to attend San Diego State University where she obtained her Master's degree in Public Health. She has 17 years of clinical research experience. [Read more.](#)



**Calendar & Upcoming Events**

- North American Study Coordinator Meeting  
January 14-15, 2016
- Canadian Critical Care Trials Group (CCCTG) Winter 2016 Scientific Meeting  
January 25-28, 2016
- Upcoming Medical Meetings: [View more.](#)



**Vasopressor Calculator**

Thank you to Rodrigo Iglesias MD, and Huseyin Oguz Yilmaz MD, Research Fellows, Outcomes Research, Anesthesiology Institute, Cleveland Clinic Foundation for a very useful screening tool developed for smart phones. The tool was developed by Dr. Iglesias from the equation in the study protocol and he has given his approval to share it with study sites.

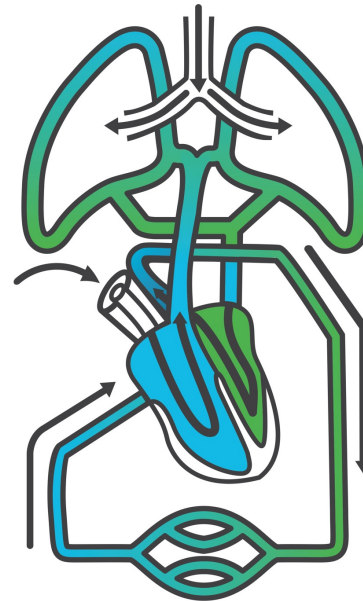
Simply bookmark <http://ames.mobi/inspire> web address on your phone's browser and open the page whenever you need access.

Tp: If you cannot access the calculator, your wi-fi service may be blocking it. You may need to connect to the address via your mobile service or talk to your IT Department.



**DISTRIBUTIVE SHOCK CLINICAL TRIAL:  
 NOW ENROLLING**

LA JOLLA PHARMACEUTICAL COMPANY IS CONDUCTING A PHASE 3, DOUBLE-BLIND, RANDOMIZED STUDY OF LIPC-501 (ANGIOTENSIN II) IN ADULT PATIENTS DIAGNOSED WITH CATECHOLAMINE-RESISTANT HYPOTENSION (CRH).



**Angiotensin II is a peptide hormone naturally produced by the body that regulates blood pressure via vasoconstriction and sodium reabsorption.**

Catecholamine-resistant hypotension (CRH) is an often-fatal condition resulting from an underlying cause such as septic shock, blood loss due to trauma, or severe drug reactions.

When these conditions occur, most patients will respond to either volume expansion or vasopressor treatment.

However, 6-7% of patients will require excessive doses of vasopressors and will be deemed to be resistant.

**PRIMARY OUTCOME MEASURE:**

- Increased mean arterial pressure (MAP)

**KEY INCLUSION CRITERIA:**

- Adult patients ≥ 18 years of age with CRH, defined as those who require a total sum catecholamine dose of > 0.2 mcg/kg/min for a minimum of 6 hours and a maximum of 48 hours, to maintain a MAP between 55-70 mmHg.

- Patients must have clinical features of high-output shock by meeting **one** of the following criteria.

Central venous oxygen saturation (ScvO<sub>2</sub>) > 70%  
 and central venous pressure (CVP) > 8 mmHg  
 OR  
 Cardiac Index (CI) > 2.3 L/min/BSA

**FOR ADDITIONAL INFORMATION:**  
[ClinicalTrials.gov/ct02338843](http://ClinicalTrials.gov/ct02338843)

**TOLL FREE STUDY HOTLINE:**  
**(800) 815-4398**

PRINCIPAL INVESTIGATOR // // RESEARCH COORDINATORS



Huey N. Fluey  
(Influenza)



Paul Neumonia  
(*Streptococcus pneumoniae*)

We know your patients.  
Now get to know us.

It's that time of year when we appear—Influenza and *Streptococcus pneumoniae*. When we cause symptoms, we can be difficult to tell apart. We can visit alone, or sometimes we enjoy each other's company.

It is important to know us so you can determine the proper course of treatment for your patient. If you use **Alere™ i** and **BinaxNOW®**, you can find us in minutes, treat your patient—and soon we will be on our way.

To learn more about infectious disease testing, **contact your local Alere Account Executive by calling 1.877.441.7440, or visit alere.com.**

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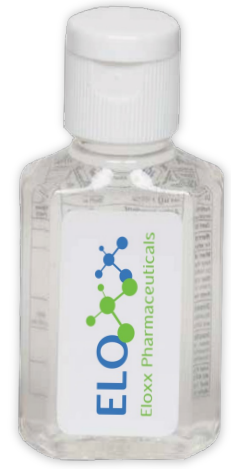
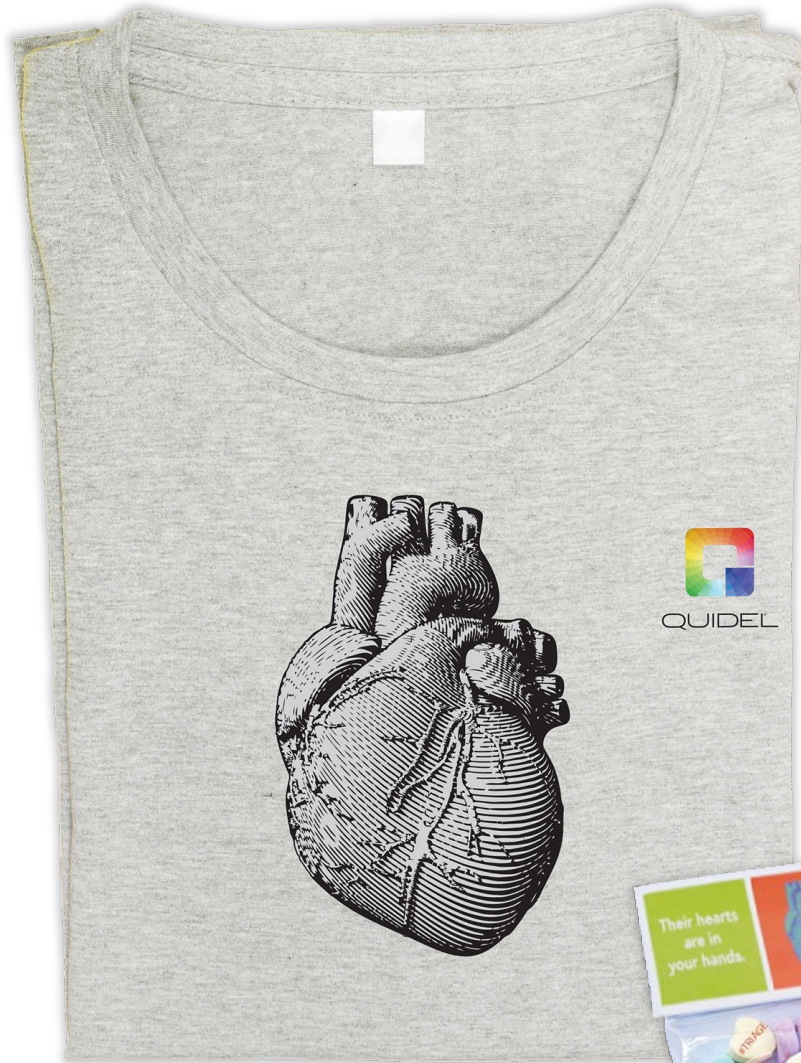
  
**Introducing  
a NEW test that  
differentiates between  
a viral & bacterial  
infection within  
10 minutes.**















Thank you for your time.



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