

Xpert®
SA Nasal
Complete



Test. Inform. Manage.



Xpert® SA Nasal Complete

Detection of *S. aureus* and MRSA Colonization.
In About an Hour.

CE IVD In Vitro Diagnostic Medical Device

 **Cepheid®**
A better way.

“Determining pre-operative carrier status of S. aureus, including MRSA, can be helpful in targeting patient treatment, including decolonization, shown to reduce post-operative SSIs. This is particularly important given the high economic burden of S. aureus infection among patients admitted for elective surgery.”



Professor Jan Kluytmans, MD
Professor of Medical Microbiology and Infection Control
VUmc, Amsterdam

The Need

***Staphylococcus aureus* infections are an increasingly serious public health issue.**

Colonized patients at risk for serious complications include surgical, trauma, burn and dialysis patients:

- *S. aureus* colonized patients are up to 9 times more likely to develop surgical site infections than non-carriers¹
- *S. aureus* is the major cause of access infections and bacteremia in dialysis patients²
- Carriage is the major risk factor for infection with *S. aureus* in dialysis patients⁴
- Up to 80% of nosocomial *S. aureus* infections are caused by a patient's own flora^{3,4}
- SA and MRSA infections are associated with increases in length of hospital stay, costs, morbidity, and mortality^{6,7,8}

The Solution

Rapid and accurate detection of colonization facilitates targeted infection control practices:

- Optimize pre-admission workflow and counseling
- Enables measures to reduce endogenous infection risk, including decolonization
- Supports measures to reduce exogenous infection risk, including barrier/contact precautions
- Aligns with infection control strategies

Performance

Performance Characteristics of Xpert® SA Nasal Complete Compared to MRSA and SA Direct Culture Method

		Reference Culture *			
		MRSA+	SA+/MRSA-	Neg/No Growth	Total
Xpert	MRSA+	159	24	25	208
	SA+/MRSA-	9	393	152	554
	SA-	5	37	1683	1725
	Total	173	454	1860	2487

MRSA		Culture		
		POS	NEG	TOTAL
Xpert	POS	159	49	208
	NEG	14	2265	2279
	Total	173	2314	2487

SA		Culture		
		POS	NEG	TOTAL
Xpert	POS	585	177	762
	NEG	42	1683	1725
	Total	627	1860	2487

SENSITIVITY: **91.9%** PPV: **76.4%**
 SPECIFICITY: **97.9%** NPV: **99.4%**

SENSITIVITY: **93.3%** PPV: **76.8%**
 SPECIFICITY: **90.5%** NPV: **97.6%**

* Xpert SA Nasal Complete Package Insert

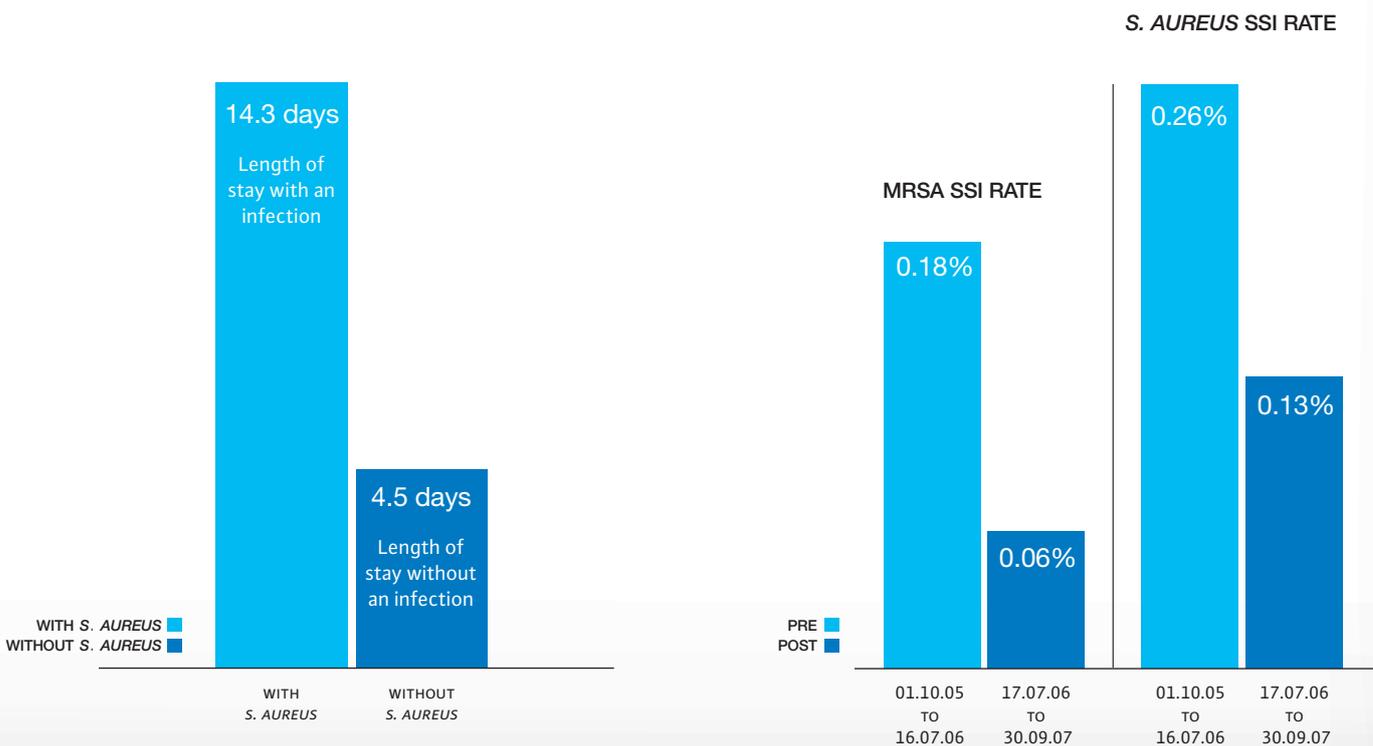
Impact

Impact of Pre-Surgical Screening on Post-Operative Infection Rates⁸

S. aureus can lead to more serious complications, especially in orthopaedic and cardiovascular procedures leading to poor patient outcomes which prolong hospital stay and costs.

Impact on Resource Utilization and Hospital Efficiencies⁵

Pre-surgical screening in combination with decolonization has been shown to reduce post-operative infection rates by up to 60%.



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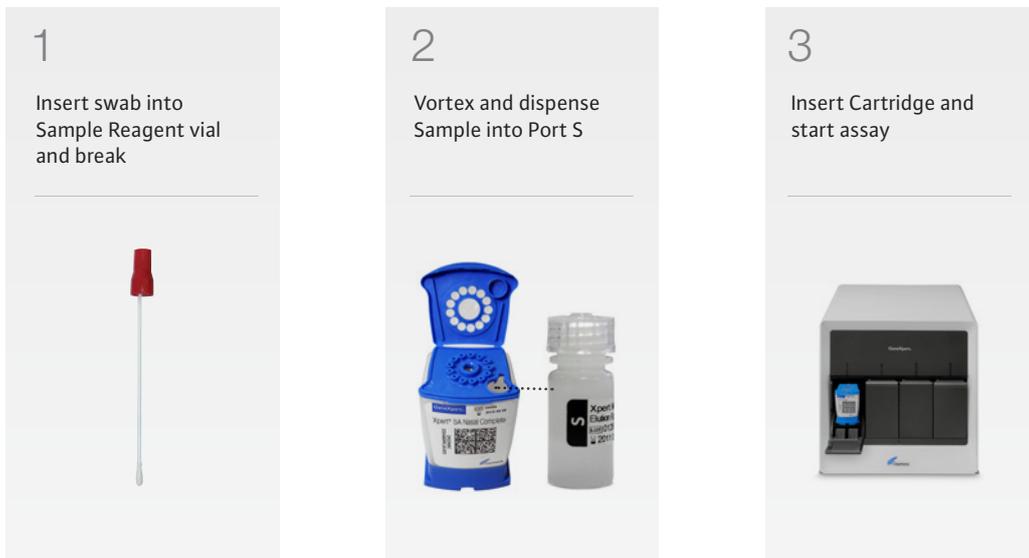
Xpert[®] SA Nasal Complete

- Fully automated process reduces handling time to just minutes
- Random access for flexibility and workflow optimization
- Rapid results to improve patient management
- Fully integrated reagent and instrument system for accuracy and reproducibility

WORKFLOW:

3 Easy Steps

Total hands-on time: <1 Minute



ORDERING INFORMATION

Xpert SA Nasal Complete (10 Cartridges with reagents)Catalog No. GXSACOMP-CE-10

References:

1. Kluytmans, J., *Clinical Microbiology Review*, 1997, Vol 10, No. 3
2. Piraino, B., *Staphylococcus aureus* Infections in Dialysis Patients: Focus on Prevention, *ASAIO Journal* 2000; 46:S13-S17
3. Critchley et al, *Drug Discovery Today*, 2006, Vol. 3 No. 2
4. VL Yu et al., "Staphylococcus aureus nasal carriage and infection in patients on hemodialysis. Efficacy of antibiotic prophylaxis." *NEJM* July 1986
5. Kim D, et al. Massachusetts Society of Pathologists, MRSA Eradication, NEBH Case Study, 2008
6. Engemann et al. "Adverse clinical and economic outcomes attributable to methicillin resistance among patients with *Staphylococcus aureus* surgical site infection, *CID* 36;2003.
7. Anderson et al. "Clinical and Financial Outcomes Due to Methicillin Resistant *Staphylococcus aureus* Surgical Site Infection: A Multi-Center Matched Outcomes Study", *PLoS One*; 2009
8. Noskin et al, "The Burden of *Staphylococcus aureus* Infections on Hospitals in the United States", *Arch Intern Medicine* Vol 165, Aug 2005



The molecular revolution is here.

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