

+ Control your risks, control your outcomes

Is your primary total joint arthroplasty patient at risk
of developing a surgical site complication?



Smith+Nephew

PICO[◇] 7

Single Use Negative Pressure
Wound Therapy System

Helping you get **CLOSER TO ZERO[◇]**
surgical site complications⁹

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Is your patient high risk?

BMI ≥ 40	BMI ≥ 35	ASA ≥ 3	Operative time	Revision	Emergency
Significantly more likely to suffer prolonged drainage following total hip arthroplasty (THA)* ²	4.5x times more likely to suffer an surgical site complication (SSC) following total knee arthroplasty (TKA) or THA surgery ^{†1}	8x times more likely to suffer an SSC following TKA or THA surgery ^{‡1}	Surgical site infection (SSI) risk increases by 11% every 15 minutes during TKA ^{§3}	SSI risk can double with revision hip arthroplasty compared with primary procedures ⁴	Deep or organ space SSI can nearly quadruple with revision hip arthroplasty compared with primary procedures ⁴
					Up to 16% SSI rate following peri-prosthetic hip fracture ^{5,6}



ASA ≥ 3
8x
times more likely to suffer an SSC following TKA or THA surgery^{‡1}



*Compared with normal weight; p = 0.001. [†]Compared with patients with a BMI < 35. [‡]Compared with patients with an ASA < 3. [§]Where operative times had a significant independent effect on SSI rates (adjusted OR 1.007, 95% CI 1.004-1.011, P < .001;) which corresponded to an 11% (95% CI 6-17) increase in SSI risk with every 15-minute increase in operative time.

Is your patient high risk?

Certain patient factors correlate with SSI development following primary and revision arthroplasty⁷.
Pre-operative identification can determine the probability of an SSI developing post-operatively⁷.

Procedure				
TJA procedure	Primary hip	Primary knee	Revision hip	Revision knee
Score	0	1	3	3

Chronic obstructive pulmonary disease		
Presence	Yes	No
Score	1	0

Diabetes		
Presence	Yes	No
Score	1	0

Long term insulin use		
Presence	Yes	No
Score	1.5	0

Rheumatoid arthritis or inflammatory arthropathy		
Presence	Yes	No
Score	1.5	0

Tobacco use		
Presence	Yes	No
Score	1.5	0

Lower-extremity osteomyelitis or pyogenic arthritis		
Presence	Yes	No
Score	2	0

Pelvis, thigh, leg traumatic fracture		
Presence	Yes	No
Score	2	0

Lower-extremity pathologic fracture		
Presence	Yes	No
Score	2.5	0

Morbid obesity (BMI ≥ 40)		
Presence	Yes	No
Score	2.5	0

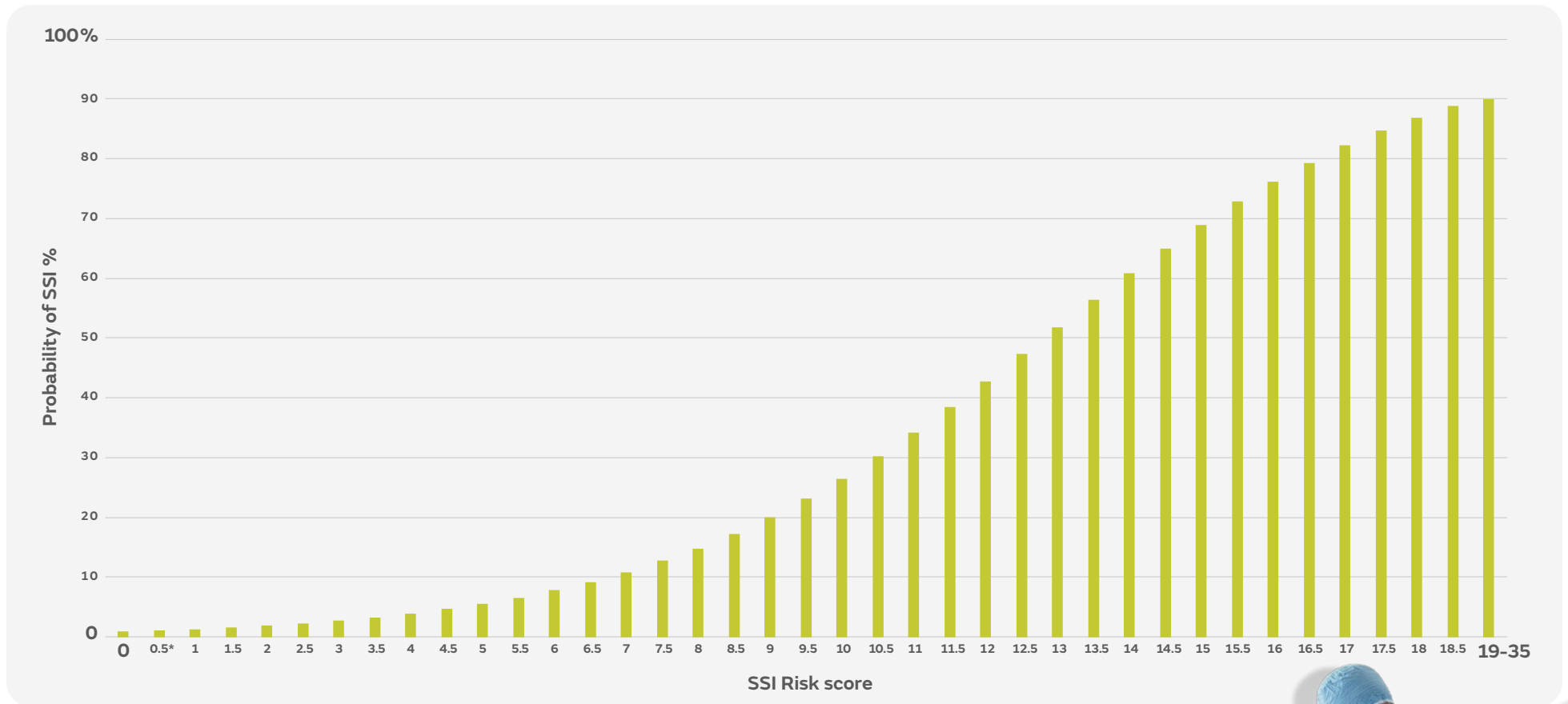
Primary bone cancer		
Presence	Yes	No
Score	4	0

Reaction to prosthesis or implant within 3 years		
Presence	Yes	No
Score	4	0

Staphylococcal septicemia		
Presence	Yes	No
Score	4.5	0

TOTAL PATIENT SCORE:

SSI risk score and corresponding probability of SSI



Certain patient factors correlate with SSI development following primary and revision arthroplasty⁷. Pre-operative identification can determine the probability of an SSI developing post-operatively⁷.

*Interpolated value. A score of 0.5 is not a possible result of any combination of positive risk factors.

+ Control your risks, control your outcomes

PICO[®] sNPWT has shown to **help reduce** the incidence of **SSCs¹**, **length of stay (LoS)¹** and overall **cost** of care⁸ following primary THA and TKA*

Total joint arthroplasty (TJA)

Primary hip arthroplasty (THA)	Primary knee arthroplasty (TKA)
☐ ≥ BMI 35	☐ ≥ BMI 35
☐ ≥ ASA 3	☐ ≥ ASA 3
☐ Diabetes	☐ Diabetes



These specific patient groups who received **PICO[®]** sNPWT prophylactically following primary THA or TKA had **fewer SSCs^{*1}** and **reduced LoS^{*1}** which resulted in up to **£7995 per patient savings** the cost of care^{*8}

*Compared with standard surgical dressings.



+ Surgical incision

Dr Frank Wein, Clinique Louis Pasteur, Essey les Nancy (France)
PICO^o sNPWT on a surgical incision after a primary TKA

Patient

A 76 year-old female

Patient living independently at home, alone.

- **Hypertension**
- **Class 2 obesity**
- **Treated for leukaemia**

Wound history

The patient was hospitalised for a right primary TKA. She remained on anticoagulation therapy until one week before the procedure. She was also prescribed antibiotics.

PICO sNPWT treatment methodology

- In view of the patient's history, the surgeon decided to apply a PICO dressing. At the surgeon's request, the dressing was applied two days after the intervention
- The chosen PICO dressing size was 10 x 30 cm
- At the time, the incision line measured 15.5 cm L and staples were present
- The surgeon decided to leave the PICO system in place for 7 days

Course of PICO sNPWT

- The patient remained in hospital for 7 days due to lack of beds in the post-acute care and rehabilitation ward
- The patient's leg was not immobilised and she was able to wear her compression stocking, the PICO system is compatible for use with compression therapy
- At D1, 25% saturation of the dressing was observed.



The patient received physiotherapy throughout treatment with **PICO** sNPWT

Treatment outcome

- PICO therapy was discontinued at D7. The PICO dressing showed 50% saturation, with no sign of inflammation or dehiscence underneath
- The patient was transferred to post-acute care and rehabilitation at D7. The patient received physiotherapy throughout treatment with PICO sNPWT
- The total duration of treatment was 7 days. PICO sNPWT was then replaced with a OPSITE^o Post-Op Visible dressing
- The patient was re-examined at D22, the incision line was slightly crusted
- Antibiotic therapy was also discontinued
- By D55, the incision was fully healed without any complications
- The patient was pleased with the outcome and the use of the device, which allowed her to retain her daily independence
- The surgeon was also pleased with the device

+ Surgical incision (continued)

Dr Frank Wein, Clinique Louis Pasteur, Essey les Nancy (France)
PICO[®] sNPWT on a surgical incision after a primary TKA



Evolution of closed surgical incision with PICO[®] sNPWT

Day 0



Day 1



Day 7



Day 22



Day 55



REFERENCES

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For detailed product information, including indications for use, contraindications, precautions and warnings, please consult the product's applicable Instructions for Use (IFU) prior to use.

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