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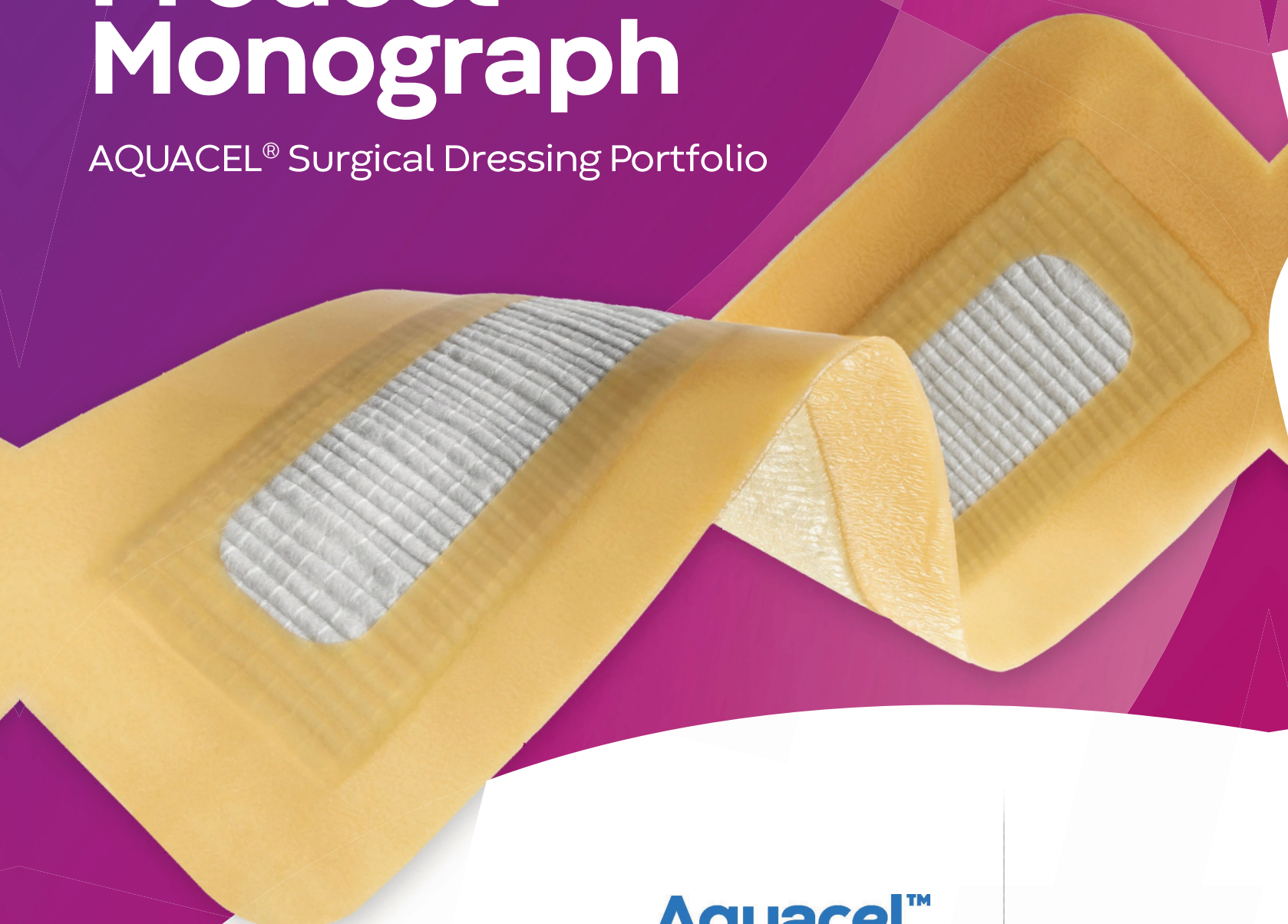
Product Monograph

AQUACEL® Surgical Dressing Portfolio



Aquacel™ Surgical

Aquacel™ Ag Surgical

Hydrofiber® TECHNOLOGY

The clinical evidence for AQUACEL® Ag Surgical dressing and for AQUACEL®/DuoDERM® used in combination is summarised in Tables 1 and 2 respectively.

Table 1:
Clinical Evidence for AQUACEL® Ag Surgical Dressing

Title	Study Design	Clinical Outcomes
Hip/knee arthroplasty		
AQUACEL® Surgical Dressing reduces the rate of acute PJI following total joint arthroplasty: a case-control study. **Cai et al. 2014**[1]	A **retrospective study** in Philadelphia, USA, of 1778 cases of total hip or total knee arthroplasty managed with AQUACEL® Ag Surgical dressing (n=903) or a sterile xeroform and gauze; (n=875).	• 4-fold decrease in acute PJI with AQUACEL® Ag Surgical dressing
Silver-Impregnated Occlusive Dressing Reduces Rates of Acute Periprosthetic Joint Infection After Total Joint Arthroplasty. **Grosso et al. 2017**[2]	A **retrospective study** in New York, USA, reviewed 1173 cases of total hip or total knee arthroplasty following a switch in management from a sterile xeroform and gauze dressing (n=568) to AQUACEL® Ag Surgical dressing (n=605).	• 4-fold decrease in acute PJI with AQUACEL® Ag Surgical dressing
AQUACEL® Ag Surgical Dressing Reduces Surgical Site Infection and Improves Patient Satisfaction in Minimally Invasive Total Knee Arthroplasty: A Prospective, Randomized, Controlled Study. **Kuo et al. 2017**[3]	A **prospective RCT** in 240 patients undergoing minimally invasive total knee arthroplasty in patients managed with AQUACEL® Ag Surgical dressing or Sofra-Tulle™ antimicrobial dressing.	• 10-fold decrease in SSI with AQUACEL® Ag Surgical dressing • Mean wear time was increased from 1.7 days to 5.2 days • Less pain on dressing removal, greater comfort when in place, better ease of use
Role of Surgical Dressings in Total Joint Arthroplasty: A Randomized Controlled Trial. **Springer et al. 2015**[4]	A **prospective RCT** in 262 patients undergoing total knee or total hip arthroplasty. Patients were randomised to receive AQUACEL® Ag Surgical dressing (n=141) or Primapore™ dressing (n=121).	• 8-fold decrease in blistering rate • Fewer dressing changes were required (median, 0 vs 2)
Comparison of the AQUACEL® Ag Surgical Dressing vs Standard Dressing in the Treatment of the Wound Site Infection and Patient Comfort in Total Knee Arthroplasty. **Akdogan & Atilla 2020**[5]	A **retrospective study** of 274 patients who underwent total knee arthroplasty and were managed with either AQUACEL® Ag Surgical dressing (n=139) or a conventional gauze sponge (n=135).	• Reduction in hospital stay • Fewer dressing changes (median, 2 vs 4) • Lower pain scores (median, 2 vs 4) • Higher number of patients could take a shower in the first 3 days following surgery (43.2% vs 14.1%) • Higher patient satisfaction
The effect of wound dressings on infection following total joint arthroplasty. **Chen et al. 2018 (6)**	A **meta-analysis** of 3,721 participants in New York undergoing TJA treated with (1,483) Standard dressings, (1,911) Hydrofiber dressings and (327) Absorbent dressings	• The risk ratio for infection comparing Standard dressings with Hydrofiber was 4.16 (95% CI, 1.71-10.16) as compared to 2.60 (95% CI, 0.66-10.27) when comparing Absorbent with Hydrofiber dressings • Hydrofiber dressings are significantly better than Standard and Absorbent dressings with respect to reducing infection.
Randomized controlled trial of conventional versus modern surgical dressings following primary total hip and knee replacement. **Langlois et. al 2015 (7)**	A **prospective RCT** in France comparing two types of dressing, gauze based vs absorbing hydrofiber after THA or TKA arthroplasties in 80 patients.	• Statistically significant decrease of dressing changes in the hydrofiber group (p=0.0006). • Nurses' satisfaction was significantly higher in the hydrofiber group considering the adherence (p=0.04) and flexibility (p=0.03). • Patients experienced a higher satisfaction with respect to ease of movement (p=0.01) in the hydrofiber group.
Comparison of silver-embedded occlusive dressings and negative pressure wound therapy following total joint arthroplasty in high BMI patients: a randomized controlled trial. **Lygrisse et. Al. 2022 (8)**	A **prospective RCT** in New York of 230 patients, conducted a randomized control trial of patients who had a BMI > 35 m/kg2 and were undergoing primary TJA.	• Following management with AQUACEL® Ag SCD versus NPWT, there were no significant difference in the number of: - wound complications (5.2 vs.1.7%; p=0.28), - 90-day readmissions (0 vs. 1.7%; p=0.50) or - reoperations (2.6 vs. 0%; p=0.25)
Shoulder Arthroplasty		
Silver-impregnated occlusive dressings are a cost-effective strategy for preventing infection after total shoulder arthroplasty. **Puzzitiello et. al. 2021 (9)**	A **seminar** is arthroplasty to determine the cost-effectiveness of the most commonly used type of antimicrobial silver-impregnated occlusive dressing (AQUACEL Ag, Convatec,Oklahoma City, OK, USA) for prosthetic shoulder infection (PSI) prevention after shoulder arthroplasty.	• Antimicrobial silver-impregnated occlusive dressings represent a cost-effective infection prevention strategy after shoulder arthroplasty. The presented model serves as a useful resource to aid in weighing the economic effects of implementing any potential prophylactic measures aimed at minimizing infections after shoulder arthroplasty.
Cardiac surgery		
Aquacel Ag dressing reduces deep sternal wound infection after cardiac surgery. **Schubach et al. 2015**[10]	A **retrospective study** of 711 patients who had major cardiac surgery, managed with AQUACEL® Ag Surgical dressing (n=208) or a dry sterile dressing (n=503).	• No deep sternal wound infections with AQUACEL® Ag Surgical dressing vs 3.4% with a dry sterile dressing
Breast cancer surgery		
A randomized controlled trial on the effect of a silver carboxymethylcellulose dressing on surgical site infections after breast cancer surgery. **Struik et al. 2018**[11]	A **prospective RCT** in women undergoing breast cancer surgery, managed with AQUACEL® Ag Surgical dressing (n=106) or a gauze dressing (n=124).	• 6-fold lower rate of SSI in a subgroup of 121 patients undergoing breast conserving surgery • Longer wear time of first dressing (7 days vs 3 days)
An Advanced Surgical Dressing for High-risk Patients Undergoing Breast Cancer Surgery: A Case-control Study. **Nicotera et. al. 2021**[12]	The aim of this **study** is to evaluate the incidence of surgical site complications in patients presenting with three or more risk factors (or two, of which at least one classified as "high risk"), undergoing breast cancer surgery with/without reconstruction, comparing advanced (AQUACEL® Ag Surgical) with traditional dressing.	• 21 patients were treated with Aquacel Ag Surgical dressings following reconstructive breast surgery and were compared to 21 patients treated with a traditional dressing (sterile gauze). The Aquacel Ag Surgical group was found to be superior in several ways: infection rates were lower, the dressing was easier to remove and aesthetic outcomes were also better.
Thigh lift surgery		
Aquacel Surgical Dressing after Thigh Lift: A Case-Control Study. **Bocchiotti et al. 2016**[13]	A **case-control study** including 40 patients who underwent a thigh lift that were randomised to have one thigh dressed with AQUACEL® Surgical dressing and the other with a gauze dressing.	• Less traumatic to remove • Easier to apply • Improved adherence and strength
Vascular surgery		
"Reducing Surgical Site Infections with Silver impregnated Dressings in Lower Extremity Bypass Patients." **Desai et. al. 2023**[14]	"A **retrospectively study** two consecutive cohorts of 282 vascular surgery patients at a single institution who underwent LE bypasses."	• Use of silver impregnated dressings after LE bypass was associated with a significant reduction in the rate of superficial SSI when compared to DSD

Table 2:
Clinical Evidence for AQUACEL®/DuoDERM® Combination Method

Title	Study Design	Clinical Outcomes
Hip/knee arthroplasty		
A prospective clinical audit of a new dressing design for lower limb arthroplasty wounds. **Clarke et al. 2009**[15]	A **comparative evaluation** was conducted in 428 patients who underwent total hip or total knee arthroplasty dressed with either an adhesive dressing and an integral absorbent pad or using the Jubilee method (AQUACEL® dressing folded to form 3 layers and covered with DuoDERM® Extra Thin dressing).	• 3-fold lower incidence of SSI's • 9-fold reduction in blistering • Increase in mean wear time from 2.3 days to 3.7 days • Reduction in the mean number of dressing changes from 3.2 to 1.5 • 5-fold reduction in delays to hospital discharge due to wound problems
Caesarean section		
Reducing surgical site infection following caesarean section. **Gregson 2011.**[16]	A **surveillance** of 2,382 women after a caesarean section managed with a combined AQUACEL® dressing and DuoDERM® dressing regimen or a film and pad dressing.	• Reduction of SSI rates from 3.3% to 1.3% following the introduction of the Jubilee method.
Colorectal surgery		
Efficacy of a total occlusive ionic silver-containing dressing combination in decreasing risk of surgical site infection: an RCT. **Siah and Yatim. 2011.**[17]	A **prospective RCT** in Singapore in 166 patients who underwent colorectal surgery, compared a combined AQUACEL®/DuoDERM® dressing regimen (AQUACEL® Ag folded in to 2 layers and covered with DuoDERM® Extra Thin) with a sterile, highly absorbent, low adherent pad dressing.	• Reduced mean length of hospital stay 8.5 days vs 9.4 days • Reduced bacterial colonisation in swab cultures taken from the surgical site

[‡]non-surgical AQUACEL® Ag dressing containing the same wound contact layer (Hydrofiber™ with ionic silver) as in AQUACEL® Ag Surgical dressings
PJI, Periprosthetic joint infection; SSI, surgical site infection

Ordering Information

AQUACEL® Ag Surgical Dressing

Dressing size	Incisions length	Total fluid handling per dressing *in vitro* (g/24hr)[9]	Dressings per box	Code
9cm x 10cm	1.5" (4cm)	21.7	10	412009 ELY341
9cm x 15cm	3.5" (9cm)	37.2	10	412010 ELY342
9cm x 25cm	6.5" (17cm)	62.0	10	412011 ELY343
9cm x 30cm	8.5" (22cm)	77.5	10	420670 ELY403
9cm x 35cm	10.5" (27cm)	93.0	10	412012 ELY344

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AQUACEL® Surgical Dressing

Dressing size	Incisions length	Total fluid handling per dressing *in vitro* (g/24hr)[9]	Dressings per box	Code
9cm x 10cm	1.5" (4cm)	21.7	10	412017 ELY323
9cm x 15cm	3.5" (9cm)	37.2	10	412018 ELY324
9cm x 25cm	6.5" (17cm)	62.0	10	412019 ELY325
9cm x 30cm	8.5" (22cm)	77.5	10	420669 ELY402
9cm x 35cm	10.5" (27cm)	93.0	10	412020 ELY326

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