



American
Urological
Association

Education & Research, Inc.

AUA VIRTUAL EXPERIENCE



PD56-06 TRANSFUSION RATES AFTER 800 AQUABLATION PROCEDURES USING VARIOUS HEMOSTASIS METHODS

Dean Elterman*, Thorsten Bach, Enrique Rijo, Vincent Misrai, Paul Anderson, Kevin C. Zorn, Naeem Bhojani,
Albert El Hajj, Bilal Chughtai, and Mihir Desai



Objective

To determine if athermal methods are as effective in preventing blood transfusions as the use of cautery across various prostate volumes following prostate tissue resection for benign prostatic hyperplasia using Aquablation



Methods

The current commercial AQUABEAM robot that performs Aquablation therapy was first used in 2014.

ALL CLINICAL
TRIAL DATA
SINCE 2014



EARLY COMMERCIAL
PROCEDURES IN FRANCE,
GERMANY & SPAIN

Since then, numerous clinical studies have been conducted in various countries:

- Australia
- Canada
- Germany
- India
- Lebanon
- Spain
- New Zealand
- United Kingdom
- United States

Determine the effectiveness of hemostatic techniques in reducing the transfusion rate in patients after Aquablation



Definitions

HEMOSTASIS METHODS

Athermal: without the use of electrocautery

Bladder neck cautery: focal electrocautery around the bladder neck region

TRACTION

Robust: catheter tension of > 600 g (5.9N) with a catheter tension device (CTD)

Standard: taping the catheter to the leg, gauze knot synched up to the meatus or no traction at all

All patients received continuous bladder irrigation as per hospital standard practice



Baseline Characteristics

CHARACTERISTIC	NO TRANSFUSION SUBGROUP (N = 770)	TRANSFUSION SUBGROUP (N = 31)	<i>P</i>
Prostate volume*, mL	66.3 (32.4, 20-280)	88.3 (34.4, 37-160)	0.001
Baseline hemoglobin*, g/dl	14.5 (1.4, 7.5-19)	13.6 (1.6, 8.7-16)	0.002
Resection time*, min	4.6 (2.7, 1-17)	6.7 (3.7, 2.4-17)	0.015
Bladder neck cautery, <i>n</i> (%)	141 (18)	8 (26)	0.343
Robust traction, <i>n</i> (%)	454 (59)	25 (81)	0.015
PSA*, ng/mL	4.9 (4.9, 0.1-36)	6.2 (3.7, 0.48-15)	0.082

*mean (SD, range)



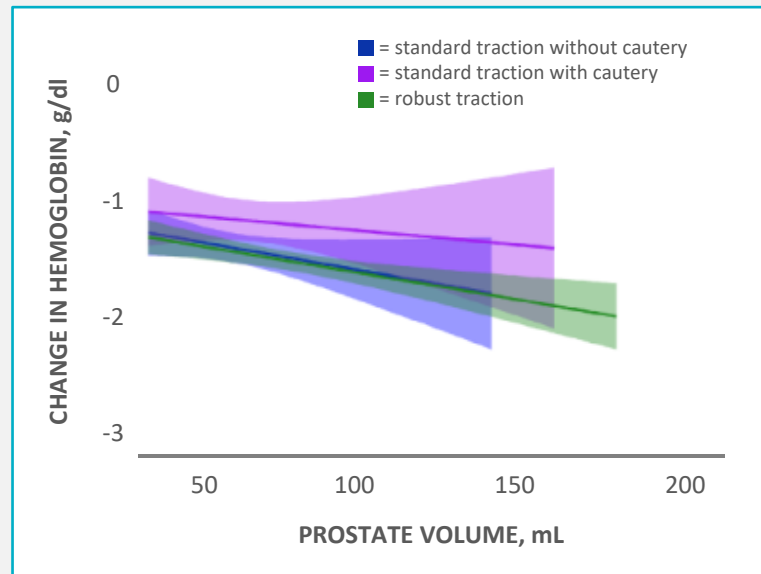
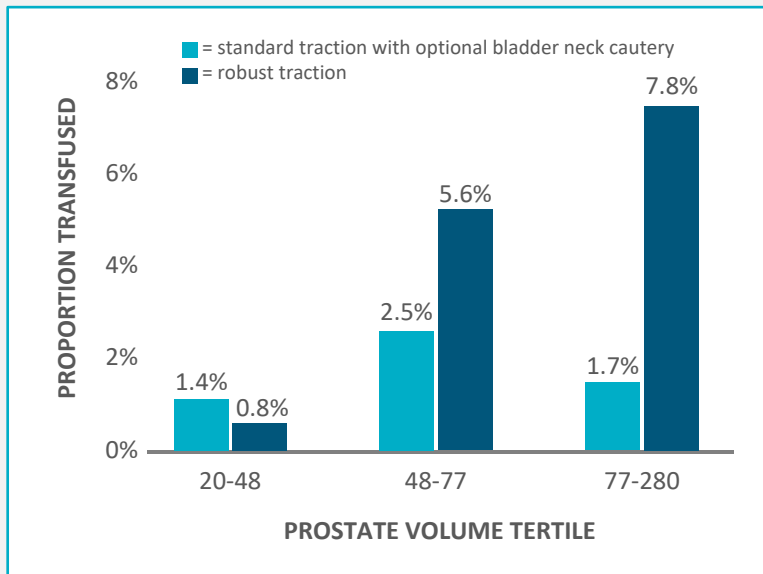
Results: Chronological Transfusion Rates

	PRE-WATER		WATER*		WATER II		COMMERCIAL	
	Standard	Robust	Standard	Robust	Standard	Robust	Standard	Robust
<i>N</i>	79	0	135	0	0	101	108	378
Prostate size, mL, median (range)	38 (28-133)		52 (25-80)			105 (80-150)	60 (20-160)	60 (20-280)
Transfusion rate, %	1.3		1.5			9.9	2.8	4.0

*includes roll-in and randomized patients

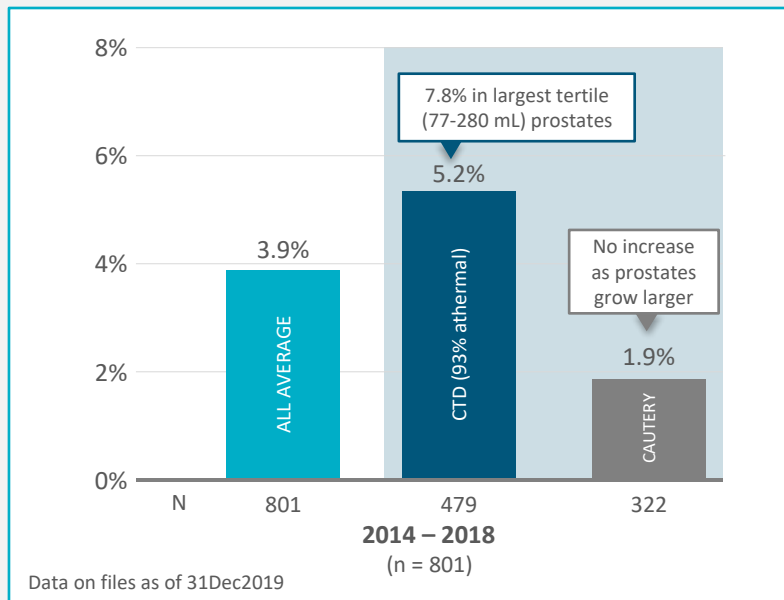


Results: Bladder neck cautery lowers transfusion rates in medium / large prostates - no impact on HGB



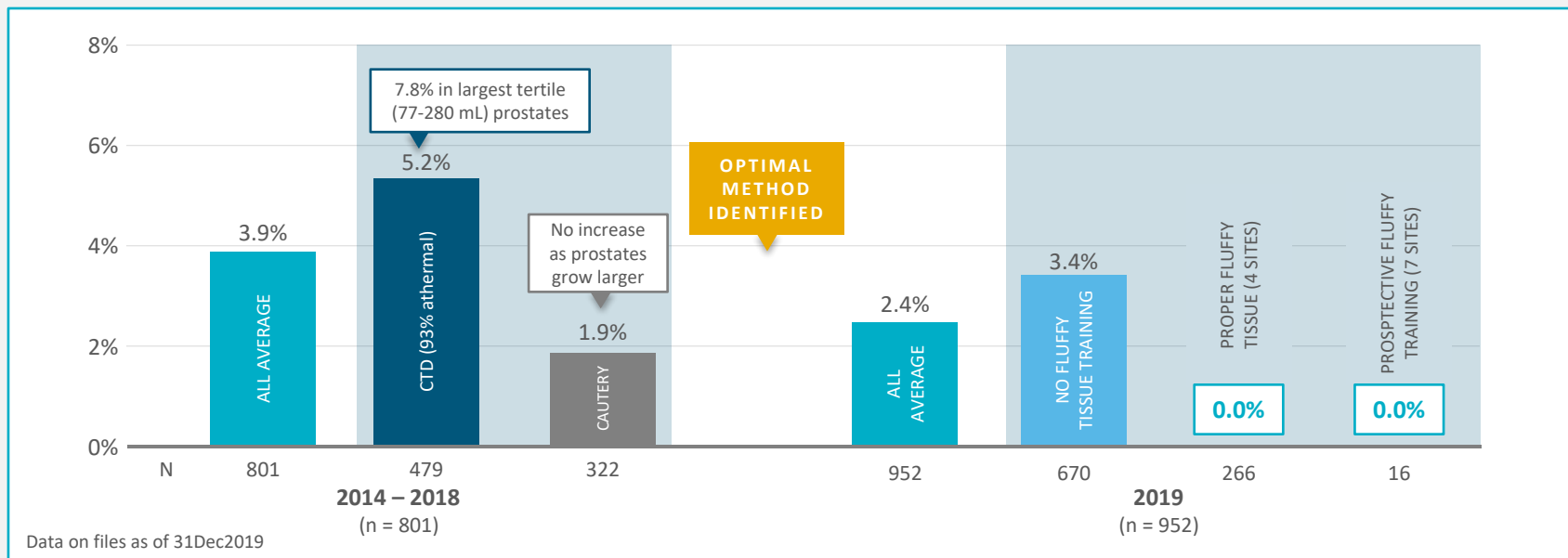


Hemostasis 5 Year Evolution: Optimal hemostasis method identified in 2019 after 800 patient analysis





Hemostasis 5Y Evolution: Optimal hemostasis method identified in 2019 after 800 patient analysis





Transfusion results: Modified “Fluffy Tissue” protocol

	2019	2020	TOTAL (prostate size 20 – 230mL)
NEW	0/16 (0.0%)	3/172 (1.7%)	3/188 (1.6%)
EXPERIENCED	0/266 (0.0%)	0/173 (0.0%)	0/439 (0.0%)
ALL	0/282 (0.0%)	3/345 (0.9%)	3/627 (0.5%)

New sites defined as 20 or less Aquablation cases
Experienced sites defined as more than 20 Aquablation cases

Data as of 01Apr2020



Summary

- An evolution in understanding optimal hemostasis for Aquablation has led to the technique of clearing fluffy tissue at the bladder neck and applying focal cautery across various prostate volumes.
- This has resulted in a recent transfusion rate of 0.5% (3/627).