ConMed

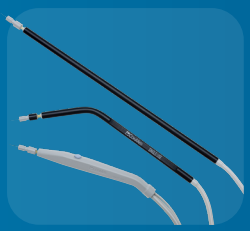
Argon Beam Coagulation in Orthopedics

Learn from surgeons why ABC® Technology is their preferred Advanced Energy Solution.

To learn more about these and other innovative products, call **866-4CONMED** or visit **www.CONMED.com**.

BEND-A-BEAM

ABC® DISSECTING ELECTRODES



ABC® HANDPIECES & LAPAROSCOPIC PROBES

Argon Beam Coagulation in Orthopedics

Dr. Bradley J. Reddick, D.O.

Hip and Knee Orthopedic Surgeon

Oklahoma City, Oklahoma, USA

General Orthopedic Use Case

I started using argon beam coagulation approximately two years ago and have gone exclusively to that technology in all of my hip and knee replacements. I was looking for something that served the purposes of coagulation like bipolar and dissection like monopolar, and it was a perfect union. I trialed it on tourniquet-less total knees, and I really liked it.

The biggest advantage is the jump to tourniquet-less total knees. You just have to try it!

Dr. Justin Miller, DO

Orthopedic Surgeon, Orthopedic Oncologist, and Sarcoma Surgery Fellow

New York City Metropolitan Area

Orthopedic Oncology Use Case

When you're trying to remove tumors, they have a high risk of recurrence. The data shows that using neoadjuvant treatment in order to decrease the risk of local recurrence is important. I choose Argon Beam Coagulation for that.

ABC® allows me to decrease the risk of their local recurrence, allows me to feel more confident that I'm not going to have to bring them back to the operating room, and allows me to trust the surgery that I performed.

Argon Beam Coagulation in Orthopedics

Rapid, Superficial Hemostasis[1,2]

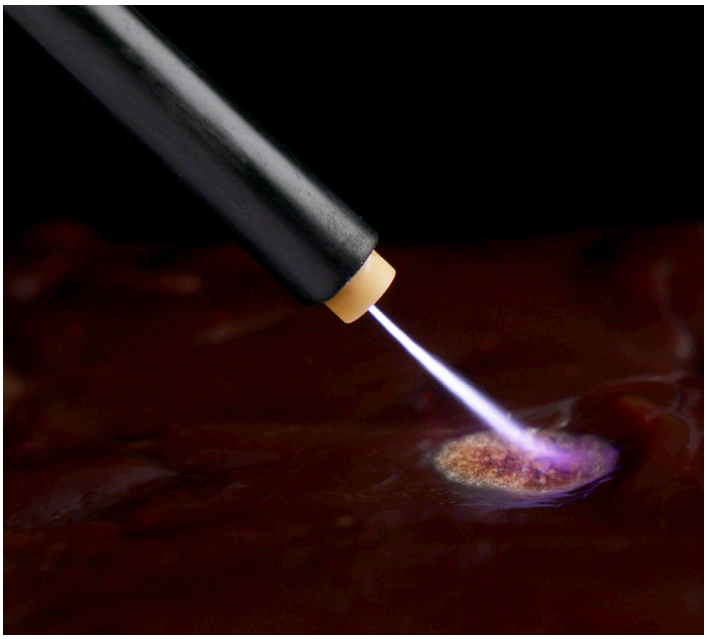
The argon gas clears the surgical site of blood and other fluids to allow dissection and coagulation directly on the stroma of target tissue, reducing carbonization. This rapid hemostasis can result in less blood loss, less OR time and improved eschar integrity — helping reduce the costs and risks associated with transfusions.

Less Tissue Damage[3,4]

Argon gas flowing over the dissecting elctrode may also help to cool tissue at the perimeter of the intended cut. This combination of argon gas with tungsten electrode provides a blend of cut and coagulation effects that may result in cleaner cut with hemostasis. The shallow and consistent depth of the thermal effect further helps to reduce the chance of sloughing and post-op bleeding while enhancing healing.

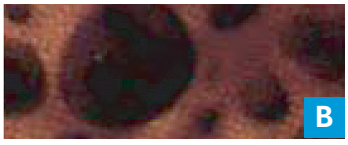
Clear Visualization

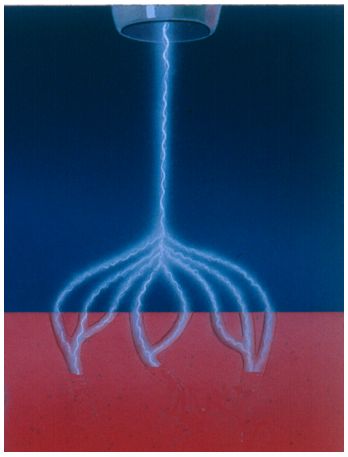
The argon gas carries surgical smoke away from the field of view while also reducing unpleasant odors. It further improves clinical visualization by helping to clear the surgical site of blood and other fluids.

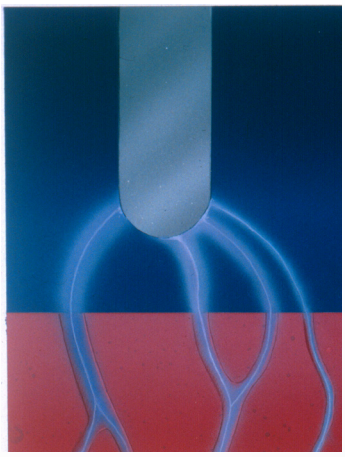


ABC® Technology

Spray Coagulation







[1] Dunham CM, Cornwell EE II, Brathwaite CEM, Militello P. Experience with the Argon Beam Coagulator in Critically Injured Patients. Pan American Journal of Trauma. December 1989

[2] Rosenthal BD, Haughom BD, Levine BR. A Retrospective Analysis of Hemostatic Techniques in Primary Total Knee Arthroplasty: Traditional Electrocautery, Bipolar Sealer, and Argon Beam Coagulation. Am J Orthop (Belle Mead NJ). May 2016

[3] Lewis VO, Wei A, Mendoza T, Primus F, Peabody T, Simon MA. Argon beam coagulation as an adjuvant for local control of giant cell tumor. Clin Orthop Relat Res. January 2007

[4] Heck RK, Pope WD, Ahn JI, Smith RA, Webber BL. Histologic evaluation of the depth of necrosis produced by argon beam coagulation: implications for use as adjuvant treatment of bone tumors. J Surg Orthop Adv. 2009 Summer

Adjuvant Treatment of Tumors

Efficiency

Efficiency is extremely important. Using the ABC® technology… gives me the ability to remove a tumor, decrease its risk of local recurrence, limit the amount of time that the patient is under anesthesia, and limit the amount of time the patient is under a tourniquet. ABC® also keeps the surgical bed dry and clean, once again, decreasing the risk of leaving any tumor behind.

Accessing Remote Anatomy

I use the six-inch Bend-A-Beam® to get me into all the nooks and crannies within a deep cavity…[as well as] the superficial and proximal cavities that I can't see specifically with my eyes.

Limit Spread of Tumors by Creating a Dry Environment

The use of argon beam coagulation and its ability to decrease fluid in the cavity is very important because during this type of procedure, I want to limit any spread of these possible tumors. The fact that it has that ability creates an easier use of the product and also decreases my risk of spreading that tumor throughout the rest of the cavity.

Using the ABC® Technology versus another technology such as Aquamantys can be beneficial due to the fact that you're able to use the argon beam to create a dry environment. Using a saline bipolar cautery or device… you're adding saline, you're creating a wet environment, and that water or that fluid "…" will run where gravity takes it and have the ability to seed that region locally.

Strong Eschar Integrity

Strong eschar integrity is important…because it allows me to understand that the area that I just coagulated, is then stable. And I understand that that area is likely not going to bleed or spread anymore.

Postoperative Care

If I wasn't going to use [ABC®]…then I'd have to postoperatively treat that patient differently. I'd have to monitor them more closely to see if local recurrence was going to happen quickly. Then I [would] also have to protect the patient afterwards, maybe protect their weight bearing slightly afterwards for a period of time and watch them closely for any sort of bone fractures."

– Dr. Justin Miller, DO

Total Joint Arthroplasty

Efficiency

With argon beam coagulation, you can both dissect and coagulate at the same time, and the ability to do that does increase your efficiency in the case. You have everything you need in the palm of your hand as you're doing the case. Once you cut skin it's the only tool you'll need from that point forward.

Exposure

In the total knee, the argon beam coagulation is extremely effective in exposure because that's where you're going to get the majority of your bleeding, especially from the superior and inferior geniculate and the fat pad.

Pretreatment

And it does a very good job in hips to pre-treat areas, whether you're along the medial border of the vastus or the lateral border of the rectus during your dissections.

Precision

The precision of argon beam coagulation is impressive, especially when you're trying to specifically address one area of the wound without coagulating anywhere else. I use it a lot for like parapatellar denervation. Rather than dissecting, I'm just using that beam for nerve ablation.

Strong Eschar Integrity

When you're using the argon beam coagulation for hemostasis, you get a nice eschar on the wound bed...so you don't have to worry about a lot of breakthrough bleeding.

Postoperative Care

ABC® helps with post-operative swelling and post-operative pain control if you can do a very good job of hemostasis during the surgery. I think the better the hemostasis, the better the post-op swelling, the better the post-op pain control."

– Dr. Bradley J. Reddick, D.O.

Ordering Information

Description	QTY	Catalog Number
ABC® Handpieces and Dissecting Electrodes		
ABC® Dissecting Blade Electrode	20/case, 1/pkg	139330
ABC® Dissecting Blunt Needle Electrode	20/case, 1/pkg	139331
3" (7.6cm) Bend-A-Beam Malleable ABC® Handpiece	10/case, 1/pkg	134003
6" (7.6cm) Bend-A-Beam Malleable ABC® Handpiece	10/case, 1/pkg	134006
9" (22.8cm) Bend-A-Beam Malleable ABC® Handpiece	10/case, 1/pkg	134009
Single Function Hand Control ABC Handpiece with 10' (3.05m) cord.	10/case, 1/pkg	130344
Angled (45°) ABC® Foot Control Handpiece	10/case, 1/pkg	130345
HelixAR™ ABC® System & Footswitches		
HelixAR™ System, ABC® Generator and Cart		60-8800-SET
ABC® Single Pedal Footswitch, 15'		60-8475-001
ABC® Single Pedal Footswitch, 30'		60-8470-001
HelixAR™ Wireless Footswitch Kit (Monopolar & ABC® Footswitch, AA Batteries, Reciever/Antenna, Operator's Manual)		60-8480-001
Monopolar Dual Pedal Footswitch, 15'		60-6700-001
Bipolar Single Footswitch, 15'		60-5103-002

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