

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5088580

<b>SUBMISSION TYPE:</b>	RESUBMISSION
<b>NATURE OF CONVEYANCE:</b>	COURT ORDER
<b>RESUBMIT DOCUMENT ID:</b>	504959169
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
POLYZEN, INC.	03/28/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	POLYZEN, INC.
<b>Street Address:</b>	1041 CLASSIC ROAD
<b>City:</b>	APEX
<b>State/Country:</b>	NORTH CAROLINA
<b>Postal Code:</b>	27539
<b>Name:</b>	RADIADYNE, LLC
<b>Street Address:</b>	10801 HAMMERLY BLVD., STE. 220
<b>City:</b>	HOUSTON
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	77043
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Patent Number:</b>	8740845
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(713)650-6458
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	8323697852
<b>Email:</b>	patent@boulwarevaloir.com
<b>Correspondent Name:</b>	TAMSEN VALOIR
<b>Address Line 1:</b>	BOULWARE & VALOIR
<b>Address Line 2:</b>	2603 AUGUSTA DR., STE. 1350
<b>Address Line 4:</b>	HOUSTON, TEXAS 77057
<b>ATTORNEY DOCKET NUMBER:</b>	RAD:845 PATENT
<b>NAME OF SUBMITTER:</b>	NORA SEIGEL
<b>SIGNATURE:</b>	/Nora Seigel/

<b>DATE SIGNED:</b>	08/08/2018
<b>Total Attachments: 24</b> source=845 Patent#page1.tif source=845 Patent#page2.tif source=845 Patent#page3.tif source=845 Patent#page4.tif source=845 Patent#page5.tif source=845 Patent#page6.tif source=845 Patent#page7.tif source=845 Patent#page8.tif source=845 Patent#page9.tif source=845 Patent#page10.tif source=845 Patent#page11.tif source=845 Patent#page12.tif source=845 Patent#page13.tif source=845 Patent#page14.tif source=845 Patent#page15.tif source=845 Patent#page16.tif source=845 Patent#page17.tif source=845 Patent#page18.tif source=845 Patent#page19.tif source=845 Patent#page20.tif source=845 Patent#page21.tif source=845 Patent#page22.tif source=845 Patent#page23.tif source=845 Patent#page24.tif	

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
WESTERN DIVISION  
No. 5:14-CV-323-D

POLYZEN, INC.,

Plaintiff,

v.

RADIADYNE, LLC,

Defendant.

**ORDER**

On April 18, 2016, RadiaDyne, LLC (“RadiaDyne” or “defendant”) moved for summary judgment concerning Polyzen, Inc.’s (“Polyzen” or “plaintiff”) patent-infringement claim [D.E. 98] and filed a memorandum in support [D.E. 100]. Essentially, RadiaDyne contends that, as a matter of law, it at least jointly owns the patent at issue in this case, U.S. Patent 8,740,845 (“the ‘845 patent”), that RadiaDyne does not consent to Polyzen’s patent-infringement action against RadiaDyne, and that Polyzen lacks standing to pursue the patent-infringement claim absent such consent. See, e.g., Lucent Techs., Inc. v. Gateway, Inc., 543 F.3d 710, 722 (Fed. Cir. 2008); Polyzen, Inc. v. RadiaDyne, LLC, No. 5:11-CV-662-D, 2016 WL 5360676, at \*1–9 (E.D.N.C. Sept. 23, 2016) (unpublished) (“Polyzen I”). Polyzen responded in opposition [D.E. 127] and also filed its own motion for summary judgment on ownership [D.E. 92]. On May 25, 2016, RadiaDyne replied [D.E. 167].

As explained below, the ‘845 patent is a “continuation” of U.S. Patent 7,976,497 (“the ‘497 patent”), and the issues presented in RadiaDyne’s supplemental summary-judgment motion are materially indistinguishable from the issues presented in Polyzen I concerning the ‘497 patent. As in Polyzen I, the court concludes that it lacks subject-matter jurisdiction over Polyzen’s patent-

infringement action because RadiaDyne at least jointly owns the '845 patent, RadiaDyne has not consented to Polyzen's patent-infringement action, and Polyzen lacks standing to sue for patent infringement without RadiaDyne's consent. See Polyzen I, 2016 WL 5360676, at \*1–10. Accordingly, the court denies RadiaDyne's supplemental motion for summary judgment concerning Polyzen's patent-infringement action [D.E. 98], denies Polyzen's motion for summary judgment regarding ownership [D.E. 92], and dismisses without prejudice Polyzen's patent-infringement action for lack of subject-matter jurisdiction. See Fed. R. Civ. P. 12(b)(1); cf. Fed R. Civ. P. 56. Additionally, the court dismisses Polyzen's motion for summary judgment regarding RadiaDyne's defense of inventorship [D.E. 95] and dismisses Polyzen's motion for summary judgment regarding laches, waiver, and estoppel [D.E. 89].

I.

For clarity, the court restates many of the facts recounted in Polyzen I, without adding quotation marks. After recounting the facts leading to the issuance of the '497 patent, the court adds information concerning the '845 patent.

In early 2007, John Isham, founder and president of RadiaDyne, learned of Polyzen when searching the Internet for “medical balloons” and “medical devices.” Polyzen I, 2016 WL 5360576, at \*1. Isham had an idea for a non-latex rectal medical balloon catheter used in connection with prostate treatment and was looking for someone to assist with producing and manufacturing it. Id. Isham contacted Polyzen, but did not want to reveal the details of his idea until Polyzen entered into a Confidentiality Agreement. See id. On February 9, 2007, RadiaDyne and Polyzen entered into a Confidentiality Agreement. See id. The Confidentiality Agreement stated that “[b]oth parties agree that no right or license under any patent or trade secret now or hereafter owned or controlled by either party is granted to the other party by this agreement.” Id. (quotation omitted). On February 12, 2007,

RadiaDyne and Polyzen began working together to develop a medical balloon device design and the technology and process necessary to produce and manufacture it. See id.

On March 26, 2007, Rubin Shah, a Polyzen employee, sent Isham a quote for a project to “Design & Thermoform/ RF Weld PU Balloon – Phase I.” See id. \*2 (quotation omitted). The quote totaled \$23,500, and it included a price of \$4,500 for “design” and a price of \$19,000 for prototype production. Id. Tilak Shah, Polyzen’s founder, created the quote. Id. On March 28, 2007, RadiaDyne issued a purchase order to Polyzen for a total of \$23,500. See id. On March 29, 2007, Polyzen sent RadiaDyne its first invoice, and RadiaDyne paid a deposit of \$4,500. See id.

On July 20, 2007, Polyzen’s Rubin Shah emailed RadiaDyne’s John Isham a “first draft” of the Development and Commercialization Agreement (“DCA”) that Polyzen had prepared on July 18, 2007. See id. The “purpose of [the DCA was] to document various verbal agreements and understandings between the parties and define future expectations of each other as both parties continue the efforts on the product development and manufacturing of samples for a) feasibility study; b) functionality testing; c) clinical trials and future commercialization of specific design of rectal balloon catheter.” Id. (quotation omitted). The first draft of the DCA defined “RADIADYNE PRODUCT” in paragraph 2.e as “[s]pecific design of rectal balloon catheter for locating/supporting prostate during brachytherapy with Polyzen’s Balloon Process Technology.” Id. (quotation omitted). The first draft of the DCA also confirmed that “[t]he parties agree that RADIADYNE TECHNOLOGY and RADIADYNE PRODUCT will remain the properties of RADIADYNE.” Id. (quotation omitted). Thereafter, RadiaDyne and Polyzen agreed upon a three-layer balloon that Polyzen would make for RadiaDyne to sell to clinicians for “immobilizing the prostate during radiation therapy treatments for cancer patients.” Id. (quotation omitted). The balloon design “included internal welds and a distal bulge when the balloon was inflated.” Id. (quotation omitted).

On July 27, 2007, Polyzen sent the three-layer balloon design to Isham, which he approved. See id. On July 31, 2007, Isham sent Rubin Shah an email and told him that RadiaDyne wanted to launch the product at the October 2007 ASTRO trade show. See id. Rubin Shah responded that same day and told Isham that Polyzen could meet the deadline despite it being “a very aggressive timeline.” Id. (quotation omitted). Isham replied later in the day and asked for information on the manufacturing process so he could “submit [an] FDA Registration letter.” Id. (quotation omitted).

On August 16, 2007, Polyzen prepared an updated draft of the DCA. See id. Also on August 16, 2007, Ruben Shah of Polyzen forwarded the updated draft to Isham of RadiaDyne for his review. See id. The August 16, 2007 updated draft DCA stated:

The purpose of this term sheet is to document various verbal agreements and understandings between the parties and define future expectations of each other as both parties continue the efforts on the product development and manufacturing of samples for a) feasibility study; b) functionality testing; c) clinical trials and future commercialization of specific design of rectal balloon catheter, and this will serve as a reference document during initial stages of work between the parties until further manufacturing/supply agreement to be concluded.

Id. (quotation omitted). The August 16, 2007 updated draft DCA contained the same definitions of “RADIADYNE PRODUCT” and provisions for ownership of “RADIADYNE PRODUCT” as the July 2007 draft DCA. See id. (quotation omitted).

On September 25, 2007, Polyzen filed a provisional patent application for what would become the ‘497 patent. See id. Polyzen did not inform RadiaDyne of the provisional patent application, and RadiaDyne was unaware of it. See id. Polyzen intended to file the patent application before the balloon was publicly displayed at the October 2007 ASTRO trade show. See id.

On September 26, 2007, Tilak Shah sent Isham quotes for two new phases: Phase II, which consisted of the production of 100 samples “for testing and trials,” and Phase III, which consisted

of full-scale production of the medical balloons. See id. \*3. RadiaDyne completed purchase orders for both phases. See id.

On October 9, 2007, Polyzen and RadiaDyne entered into a “Development and Commercialization Agreement” that memorialized different rights and obligations of the two parties. See id. (quotation omitted). The October 2007 DCA stated:

The purpose of this agreement is to document various verbal agreements and understandings between the parties and define future expectations of each other as both parties continue the efforts on the product development and manufacturing of samples for a) feasibility study; b) functionality testing; c) clinical trials and future commercialization of specific design of rectal balloon catheter.

Id. (quotation omitted). The October 2007 DCA defined “RADIADYNE PRODUCT as “[s]pecific design of rectal balloon catheter for locating/supporting prostate during radiation therapy with Polyzen’s Balloon Process Technology” and confirmed RadiaDyne’s ownership of “RADIADYNE PRODUCT.” Id. (quotation omitted). In the October 2007 DCA, at Isham’s request, “radiation therapy” was substituted for “brachytherapy.” See id.

On October 25, 2007, at Polyzen’s request, RadiaDyne tore up the October 2007 DCA because Polyzen wanted to change paragraph 6.d concerning manufacturing of the “RADIADYNE PRODUCT.” See id.

On February 8, 2008, Polyzen and RadiaDyne entered into a new and almost identical DCA. See id. Polyzen drafted the 2008 DCA with the assistance of Willy Manfroy, an intellectual property licensing specialist. See id.

The 2008 DCA stated:

The purpose of this agreement is to document various verbal agreements and understandings between the parties and define future expectations of each other as both parties continue the efforts on the product development and manufacturing of samples for a) feasibility study; b) functionality testing; c) clinical trials and future commercialization of specific design of rectal balloon catheter.

Id. (quotation omitted). The 2008 DCA defined “RADIADYNE PRODUCT” as “[s]pecific design of rectal balloon catheter for locating/supporting prostate during radiation therapy with Polyzen’s Balloon Process Technology.” Id. (emphasis and quotation omitted). The 2008 DCA defined Polyzen’s Balloon Process Technology as “POLYZEN’S PU film welded balloon technology, including film formulation, thickness and multi-layer film welded, designed to articulate desired shape and profile of balloons for various applications. Functional coating, including anti-adhesion coating formulation and process to apply such formulation onto any device. POLYZEN provided coating services for a fee to cover all out-of-pocket expenses and overhead to prepare samples or coat the products for its customers.” Id. (quotation omitted). In the 2008 DCA, “[t]he parties agree[d] that RADIADYNE TECHNOLOGY and RADIADYNE PRODUCT will remain the properties of RADIADYNE and POLYZEN TECHNOLOGY, DEVICE PROCESS TECHNOLOGY and BALLOON PROCESS TECHNOLOGY will remain the property of POLYZEN.” Id. (quotation omitted). In the 2008 DCA, the parties also agreed that definition and assignment of intellectual property survive any termination of the 2008 DCA and the confidentiality agreement dated February 12, 2007, between the parties. Id.

On March 12, 2008, Isham forwarded to Dielectrics, Inc. (“Dielectrics”), another manufacturer, the “product specification drawings” for the balloon which Polyzen had sent to Isham. See id. \*4.

On September 25, 2008, Polyzen filed a utility patent application for a “Multi-Layer Film Welded Articulated Balloon.” See id. The utility patent application would become the ’497 patent. See id.

On September 10, 2009, Isham forwarded to Dielectrics another email from Polyzen, which contained an attachment with an updated balloon design. See id. In November 2009, RadiaDyne



terminated the 2008 DCA with Polyzen. See id.

On June 6, 2011, Polyzen filed a patent application that became the ‘845 patent. See [D.E. 99 ] ¶ 22; [D.E. 128] ¶ 22. The new application was a “continuation” of the ‘497 patent that is the subject of Polyzen I. See [D.E. 99 ] ¶ 23; [D.E. 128] ¶ 23. The ‘845 patent names the same two purported inventors (Tilak Shah and Chris Stone) as the ‘497 patent. See [D.E. 99 ] ¶ 24; [D.E. 128] ¶ 24. The ‘845 patent has the same nine drawings as the ‘497 patent. [D.E. 99 ] ¶ 22; [D.E. 128] ¶ 26. The only difference is that the ‘845 patent’s drawings were created by Computer-Assisted Design software (“CAD”), rather than hand-drawn as in the ‘497 patent. Id. [D.E. 99] ¶ 22. Moreover, the “Background of the Invention,” Brief Description of the Drawings,” and “Detailed Description of the Preferred Embodiments” in the ‘845 patent are materially indistinguishable from the corresponding sections in the ‘497 patent. Id. ¶ 27.

On July 12, 2011, the United States Patent & Trademark Office (“PTO”) issued Patent No. 7,976,497 (“the ‘497 patent”). See Polyzen I., 2016 WL 5360576, at \*4. The ‘497 patent listed Tilak Shah and Christopher Strom as inventors and Polyzen as the assignee. Id. The ‘497 patent issued with five claims, all reciting a three-layer “medical balloon device.” Id.<sup>1</sup> Four of the claims specify

---

<sup>1</sup> The ‘497 patent’s five claims are:

1. A medical balloon device, comprising:

a first thermoplastic film layer comprising a first material, wherein the first layer includes a first edge;

a second thermoplastic film layer comprising a second material, wherein the second layer includes a second edge joined to the first edge to form a bottom inflatable compartment between the first and second layer;

a third thermoplastic film layer including proximal and distal portions and comprising a third material different from the first and second materials wherein the third layer includes a third edge joined to the second edge to form a top inflatable compartment between the second and third layer; and

an opening in said bottom inflatable compartment to receive a lumen, wherein the bottom inflatable compartment is in fluid communication with the top inflatable compartment.

2. The medical balloon device of claim 1, wherein the second and third layers are

an inflated distal bulge or “arcuate shape.” Id.

On November 21, 2011, Polyzen filed suit in this court against RadiaDyne alleging patent infringement of the ‘497 patent. Id. On December 13, 2011, RadiaDyne moved to dismiss Polyzen’s action for lack of jurisdiction and to correct ownership of the patent-in-suit. Id. On December 23, 2011, RadiaDyne sued Polyzen in the United States District Court for the Southern District of Texas, alleging breach of contract, fraud, federal unfair competition under 15 U.S.C. § 1125(a), conversion, and trespass to chattels. See id. On February 24, 2012, the Southern District of Texas transferred RadiaDyne’s case to this court. See id. On July 2, 2012, the court consolidated the two cases. See id.

On June 3, 2014, the ‘845 patent issued with 21 claims, all directed to “a medical balloon device.” [D.E. 99] ¶¶ 28–29; [D.E. 128] ¶¶ 28–29. On June 4, 2014, Polyzen filed this action against RadiaDyne asserting the ‘845 patent. [D.E. 99] ¶ 30; [D.E. 128] ¶ 30. Radiadyne’s answer asserted that:

[p]ursuant to the contracts between Polyzen and RadiaDyne, and the terms and conditions of the purchase orders and invoices between RadiaDyne and Polyzen, RadiaDyne was and is the lawful owner of the design of the rectal balloon device

---

secured intermediate said second and third edges so that the distal portion of the third layer bulges upwardly upon inflation.

3. The medical balloon device of claim 1, wherein the top inflatable compartment is adapted to distend to form a bulged conformation of the distal portion of the third layer relative to the proximal portion upon inflation.

4. The medical balloon device of claim 1, wherein the top inflatable compartment is further secured between the second and third layers intermediate said second and third edges to form an arcuate shape in the distal portion of the third layer upon inflation.

5. The medical balloon device of claim 1, wherein the second and third layers are secured at an intermediate portion so that said third layer upon inflation bulges upwardly between the intermediate portion and the third edge at the distal portion of the third layer.

Id. at \*4 n.1.

made by Polyzen for RadiaDyne, as well as any intellectual property relating thereto [and as] such, RadiaDyne is entitled to an assignment of the '845 Patents . . . and Polyzen's claims of infringement of the '845 Patent must be dismissed.

[D.E. 99] ¶ 31 (alteration in original); see [D.E. 128] ¶ 31.

On April 18, 2016, Radiadyne filed a supplemental motion for summary judgment [D.E. 98], a statement of material facts [D.E. 99], and a memorandum in support [D.E. 100]. On May 12, 2016, Polyzen responded in opposition [D.E. 127, 128, 129]. On May 25, 2016, RadiaDyne replied [D.E. 167] and responded to Polyzen's objections to RadiaDyne's statement of facts in support of the motion for summary determination on the issue of joint ownership [D. E. 179].

On April 18, 2016, Polyzen moved for summary judgment regarding laches, waiver, and estoppel [D.E. 89, 90, 91], regarding RadiaDyne's claim of ownership [D.E. 92, 93, 94], and regarding RadiaDyne's defense of inventorship [D.E. 95, 96, 97]. RadiaDyne responded to these motions [D.E. 118 through 126].

On September 23, 2016, the court issued Polyzen I. See Polyzen I, 2016 WL 5360576, at \*1. In that order, the court concluded that it lacks subject-matter jurisdiction over Polyzen's patent-infringement claim concerning the '497 patent because RadiaDyne at least jointly owns the '497 patent, RadiaDyne has not consented to the Polyzen's patent infringement claim, and Polyzen lacks standing to sue for patent infringement without RadiaDyne's consent. Id. at \*1–10. Accordingly, the court dismissed without prejudice Polyzen's patent infringement claim concerning the '497 patent for lack of subject-matter jurisdiction. Id.

## II.

Summary judgment is appropriate if the moving party demonstrates that there is no genuine dispute as to any material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(a). The party seeking summary judgment must initially show an absence of a genuine

dispute of material fact or the absence of evidence to support the nonmoving party's case. Celotex Corp. v. Catrett, 477 U.S. 317, 325 (1986). If a moving party meets its burden, the nonmoving party must "come forward with specific facts showing that there is a genuine issue for trial." Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 587 (1986) (quotation and emphasis omitted). A genuine issue for trial exists if there is sufficient evidence favoring the nonmoving party for a jury to return a verdict for that party. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 249 (1986). "The mere existence of a scintilla of evidence in support of the plaintiff's position [is] insufficient . . . ." Id. at 252; see Beale v. Hardy, 769 F.2d 213, 214 (4th Cir. 1985) ("The nonmoving party, however, cannot create a genuine issue of material fact through mere speculation or the building of one inference upon another."). Only factual disputes that might affect the outcome under substantive law properly preclude summary judgment. Anderson, 477 U.S. at 248. In reviewing the factual record, the court views the facts in the light most favorable to the nonmoving party and draws reasonable inferences in that party's favor. Matsushita, 475 U.S. at 587–88. "When cross-motions for summary judgment are before a court, the court examines each motion separately, employing the familiar standard under Rule 56 of the Federal Rules of Civil Procedure." Desmond v. PNGI Charles Town Gaming, L.L.C., 630 F.3d 351, 354 (4th Cir. 2011).

RadiaDyne seeks summary judgment and contends that Polyzen lacks standing to sue because RadiaDyne at least jointly owns the '845 patent and does not consent to Polyzen's patent-infringement action. See, e.g., SiRF Tech., Inc. v. Int'l Trade Comm'n, 601 F.3d 1319, 1325 (Fed. Cir. 2010) (holding that "[a]bsent the voluntary joinder of all co-owners of a patent, a co-owner acting alone" lacks standing to sue for patent infringement (quotation omitted)); Lucent Techs., Inc., 543 F.3d at 721–22 (same); Israel Bio-Eng'g Project v. Amgen Inc., 475 F.3d 1256, 1264 (Fed. Cir. 2007) ("Where one co-owner possesses an undivided part of the entire patent, that joint owner must

join all the other co-owners to establish standing.”); Ethicon, Inc. v. U.S. Surgical Corp., 135 F.3d 1456, 1468 (Fed. Cir. 1998) (“[A]s a matter of substantive patent law, all co-owners must ordinarily consent to join as plaintiffs in an infringement suit.”); Schering Corp. v. Roussel-UCLAF SA, 104 F.3d 341, 345 (Fed. Cir. 1997) (“[O]ne co-owner has the right to impede the other co-owner’s ability to sue infringers by refusing to voluntarily join in such a suit.”). “Absent the voluntary joinder of all co-owners of a patent, a co-owner acting alone will lack standing.” Israel Bio-Eng’g Project, 475 F.3d at 1264–65.

Polyzen, as the party bringing the patent-infringement action, must establish that it has standing to sue for patent infringement concerning the ‘845 patent. See, e.g., MHL TEK, LLC v. Nissan Motor Co., 655 F.3d 1266, 1274 (Fed. Cir. 2011). In support of its position that it has standing to sue RadiaDyne for patent infringement concerning the ‘845 patent, Polyzen contends that RadiaDyne is not the co-owner of the ‘845 patent.

Subject-matter jurisdiction is the court’s “statutory or constitutional power to adjudicate the case.” Steel Co. v. Citizens for a Better Env’t, 523 U.S. 83, 89 (1998) (emphasis omitted). The court “must determine that it has subject-matter jurisdiction over [a claim] before it can pass on the merits of that [claim].” Constantine v. Rectors & Visitors of George Mason Univ., 411 F.3d 474, 479–80 (4th Cir. 2005). Polyzen has the burden of establishing that the court has subject-matter jurisdiction over its patent-infringement action. See, e.g., Steel Co., 523 U.S. at 104; Richmond, Fredericksburg & Potomac R.R. v. United States, 945 F.2d 765, 768 (4th Cir. 1991).

When a district court may dismiss a claim under Rule 56 or Rule 12(b)(1) for lack of subject-matter jurisdiction, the Fourth Circuit has “observe[d] that[,] rather than granting summary judgment pursuant to Rule 56[ ], the district court should . . . dismiss[ ] the suit for want of jurisdiction under Rule 12(b)(1).” Williams v. United States, 50 F.3d 299, 304 (4th Cir. 1995); see White Tail Park,

Inc. v. Stroube, 413 F.3d 451, 459 (4th Cir. 2005); Evans v. B.F. Perkins, Div. of Standex Int'l Corp., 166 F.3d 642, 647 & n.3 (4th Cir. 1999); see also Saval v. BL Ltd., 710 F.2d 1027, 1029 n.2 (4th Cir. 1983). Proceeding under the Rule 12(b)(1) framework is appropriate even where neither party has brought a motion under it. See Williams, 50 F.3d at 301–02, 304 (discussing procedural posture).

There are two ways that the court may conclude that it lacks subject-matter jurisdiction under Rule 12(b)(1). See Lovern v. Edwards, 190 F.3d 648, 654 (4th Cir. 1999). “The court may find insufficient allegations in the pleadings, viewing the alleged facts in the light most favorable to the plaintiff, similar to an evaluation pursuant to Rule 12(b)(6). Alternatively, after an evidentiary hearing, the court may weigh the evidence in determining whether the facts support the jurisdictional allegations.” Id. (citations omitted). Thus, a motion under Rule 12(b)(1) permits “[a] trial court [to] consider evidence by affidavit, depositions or live testimony without converting the proceeding to one for summary judgment.” Adams v. Bain, 697 F.2d 1213, 1219 (4th Cir. 1982); see Suter v. United States, 441 F.3d 306, 309 n.2 (4th Cir. 2006). When the court weighs the evidence relevant to subject-matter jurisdiction, “the presumption of truthfulness normally accorded a complaint’s allegations does not apply, and the district court is entitled to decide disputed issues of fact with respect to subject matter jurisdiction.” Kerns v. United States, 585 F.3d 187, 192 (4th Cir. 2009). Here, neither party has requested an evidentiary hearing, but both have submitted competent evidence relevant to subject-matter jurisdiction. Thus, the court considers that evidence in resolving the dispute about subject-matter jurisdiction. See id. at 192–93; White Tail Park, Inc., 413 F.3d at 459; Evans, 166 F.3d at 647; Williams, 50 F.3d at 303–04; Saval, 710 F.2d at 1029 n.2.

In resolving whether Polyzen has standing to assert its patent-infringement action concerning the ‘845 patent, this court notes that it has twice analyzed the ‘497 patent and the 2008 DCA. See

Polyzen I, 2016 WL 5360576, at \*7. Specifically, on February 18, 2015, this court resolved pending motions for partial summary judgment. See id. In its order, the court discussed the ‘497 patent and the 2008 DCA. The court reiterated:

The 2008 DCA assigns to RadiaDyne the so-called “RadiaDyne Product,” or the “[s]pecific design of rectal balloon catheter for locating/supporting prostate during radiation therapy with Polyzen’s Balloon Process Technology.” 2008 DCA ¶¶ 2.e, 6.a (original emphasis omitted and emphasis added). “Design” means, among other definitions, “a preliminary sketch or outline . . . showing the main features of something to be executed,” or “the drawing up of specifications as to structure, forms, positions, materials . . . in the form of a layout for setting up, building, or fabrication.” Webster’s Third New International Dictionary 611–12 (1993). The Balloon Process Technology, which paragraph 2.e of the 2008 DCA expressly incorporates into the RadiaDyne Product, includes “Polyzen’s PU film welded balloon technology . . . designed to articulate desired shape and profile of balloons for various applications.” Id. ¶ 2.d.

Id. On August 7, 2015, this court again discussed the ‘497 patent and the 2008 DCA. The court wrote:

The relevant contractual language in the 2008 DCA states that “RadiaDyne Product will remain the propert[y] of RadiaDyne.” 2008 DCA [D.E. 109-16] 4 (paragraph 6.a). “Remain” means “to continue unchanged in form, condition, status, or quantity” or “continue to be.” Webster’s Third New International Dictionary 1919 (1993). “Will remain” arguably falls into a grey zone between the strong operative language of “does hereby grant,” which unambiguously creates a present interest, and the future-focused language of “will be assigned,” which creates only an equitable interest and not legal title. Cf. Roche, 583 F.3d at 841 (noting that a promisee “might have gained certain equitable rights” against the inventor where the contract contained an agreement to assign); Arachnid, 939 F.2d at 1581 (“Although an agreement to assign in the future inventions not yet developed may vest the promisee with equitable rights in those inventions once made, such an agreement does not by itself vest legal title to patents on the inventions in the promisee.”). The most natural reading, however, creates a present legal interest in RadiaDyne in an exclusive license. “Will remain” suggests that the RadiaDyne Product always has been and continues to be the property of RadiaDyne; there was no additional right that needed to be assigned when the ‘497 patent application was filed and when the ‘497 patent issued. Thus, the 2008 DCA created by operation of law an exclusive license for RadiaDyne to the claims of the ‘497 patent covered by the definition of RadiaDyne Product. See Roche, 583 F.3d at 842 (noting that a present assignment creates a legal title in the patent “no later than the [patent] application’s filing date”); Tilak Shah 30(b)(6) Dep. [D.E. 132-1] 192 (Polyzen filed its provisional patent application on

September 25, 2007). With the automatic issuance of an exclusive license, Polyzen did not breach the terms of the 2008 DCA because it transferred to RadiaDyne, to the extent legally possible, the patent rights that the 2008 DCA created in RadiaDyne.

Here, there is a genuine issue of material fact as to the scope of the '497 patent and whether the 2008 DCA required Polyzen to assign the '497 patent to RadiaDyne or grant an exclusive license to specific claims of that patent. If the 2008 DCA required Polyzen to grant an exclusive license, the 2008 DCA also created that license by operation of law, thereby avoiding the breach of contract that the court previously determined occurred. Thus, the court grants Polyzen's motion for reconsideration [D.E. 146] and denies RadiaDyne's motion for partial summary judgment on its breach of contract claim [D.E. 112].

Id. \*7–8 (quotation omitted).

Under the 2008 DCA, RadiaDyne owns "RADIADYNE PRODUCT." See id. 6. This court has held and continues to believe that the claims of the '497 patent cover "RADIADYNE PRODUCT." See id. \*8. Even though this court found a genuine issue of material fact as to "whether the scope of the '497 patent is broader than the definition of RadiaDyne Product, with specific reference to claim four," id. (quotation omitted), that issue does not change the fact that RadiaDyne and Polyzen at least jointly own the '497 patent. See id. The same conclusion holds true for the '845 patent. Simply put, Polyzen and RadiaDyne contractually allocated ownership of certain subject matter (including "RADIADYNE PRODUCT"), and Polyzen later obtained the '497 patent and the '845 patent covering the subject matter allocated, at least in part, to RadiaDyne during the contract period. Thus, RadiaDyne is a co-owner of the '497 patent and the '845 patent. See, e.g., Lucent Techs., Inc., 543 F.3d at 721–22; Polyzen I, 2016 WL 5360676, at \*1–9; Bushberger v. Protecto Wrap Co., No. 07-CV-8, 2008 WL 725189, at \*5 (E.D. Wisc. Mar. 17, 2008) (unpublished).

All co-owners of a patent must be joined as plaintiffs to establish standing for a patent-infringement action. See, e.g., Lucent Techs., Inc., 543 F.3d at 721–22; Israel Bio-Eng'g, 475 F.3d at 1264, 1268; Ethicon, Inc., 135 F.3d at 1468; Bushberger, 2008 WL 725189, at \*5. RadiaDyne did



not voluntarily join Polyzen's patent-infringement action concerning the '845 patent. Thus, the court lacks subject-matter jurisdiction over Polyzen's patent-infringement action concerning the '845 patent. See, e.g., Lucent Techs., Inc., 543 F.3d at 721–22; Israel Bio-Eng'g, 475 F.3d at 1264, 1268; Ethicon, Inc., 135 F.3d at 1468; Bushberger, 2008 WL 725189, at \*5. Accordingly, the court denies RadiaDyne's supplemental motion for summary judgment, denies Polyzen's motion for summary judgment on ownership, and dismisses without prejudice Polyzen's patent-infringement action concerning the '845 patent. See Fed. R. Civ. P. 12(b)(1); cf. Fed. R. Civ. P. 56.<sup>2</sup>

In opposition to this conclusion, Polyzen makes numerous arguments in both its response in opposition to RadiaDyne's motions and Polyzen's own cross-motion for summary judgment on ownership. See [D.E. 92, 93, 94, 127, 128, 129]. First, Polyzen argues that the February 2007 Confidentiality Agreement defeats RadiaDyne's contention that RadiaDyne at least jointly owns the '845 patent. See Polyzen I, 2016 WL 536056, at \*8. RadiaDyne, however, does not claim that the 2007 Confidentiality Agreement created or granted RadiaDyne's ownership rights in the '845 patent. See id. Rather, RadiaDyne contends that RadiaDyne's ownership rights were created by conduct between the parties and are memorialized in the 2008 DCA. See id. Thus, Polyzen's argument fails.

Second, Polyzen argues that RadiaDyne really contends that the 2008 DCA assigned intellectual property to RadiaDyne without using the word assignment or referencing the transfer of intellectual property rights. See id. RadiaDyne, however, does not contend that the 2008 DCA assigned or transferred patent rights. See id. Rather, RadiaDyne persuasively contends that it at least jointly owns the '845 patent based on: (1) the parties' agreement in the 2008 DCA that the balloon

---

<sup>2</sup> Alternatively, even if the summary-judgment standard applied to RadiaDyne's motion, the court would grant summary judgment in favor of RadiaDyne under Rule 56. See Fed. R. Civ. P. 56. The court reaches this conclusion after looking at the record in the light most favorable to Polyzen and drawing all reasonable inferences in Polyzen's favor. See Matsushita, 475 U.S. at 587–88.

design would remain owned by RadiaDyne, as reflected in the 2007 DCA and the 2008 DCA's definitions of "RADIADYNE PRODUCT" as encompassing the balloon design; (2) Polyzen's subsequent application for and procurement of the '845 patent that covers "RADIADYNE PRODUCT"; and, (3) the legal effect of Lucent's "holding that when a party patents subject matter that it previously agreed would be owned or shared with another party, that other party owns or co-owns the resulting patent." Id. \*5; see Lucent Techs., Inc., 543 F.3d at 717–22; Israel Bio-Eng'g, 475 F.3d at 1264, 1268; Ethicon, Inc., 135 F.3d at 1468; Bushberger, 2008 WL 725189, at \*5.

Third, Polyzen argues that Lucent is distinguishable. See Polyzen I, 2016 WL 536056, at \*9. Although Polyzen correctly notes that the agreements between Polyzen and RadiaDyne did not have the identical "New Work" clause (including the reference to joint ownership) described in Lucent, the claims of the '845 patent are directed to the specific design of the medical balloon device within the definition of "RADIADYNE PRODUCT." See id. Moreover, the 2008 DCA makes clear that "RADIADYNE PRODUCT" will remain the property of RadiaDyne. Therefore, RadiaDyne is at least a partial owner of the '845 patent under Lucent and Bushberger. See id.; see also Bushberger, 2008 WL 725189, at \*5.

Fourth, Polyzen argues that Waterman v. Mackenzie, 138 U.S. 252 (1891), and its progeny defeat RadiaDyne's standing argument because Waterman teaches that the owner of a patent cannot split up its ownership rights and assign different claims to different parties. See id. In Waterman, however, the Supreme Court analyzed transactions that occurred after the patent issued. See Waterman, 138 U.S. at 255–61. Here, unlike in Waterman, this court is analyzing joint ownership of the '845 patent based on events that took place before the '845 patent issued and whether those events created at least joint ownership when the '845 patent issued. See Lucent Techs., Inc., 543 F.3d at 720–21; Bushberger, 2008 WL 725189, at \*5. Thus, Lucent controls, and Waterman and its

progeny do not. See Polyzen I, 2016 WL 536056, at \*9.


Finally, the factual question concerning whether the scope of the '845 patent is broader than the definition of 'RADIADYNE PRODUCT,' does not legally change whether RadiaDyne at least jointly owns the '497 patent or '845 patent. See Lucent Techs., Inc., 543 F.3d at 721–22; Bushberger, 2008 WL 725189, at \*5. Even if a jury were to determine the scope of some claims were broader than "RADIADYNE PRODUCT" and included subject matter unrelated to the balloon design, Lucent teaches that the '845 patent still would at least be jointly owned by Polyzen and RadiaDyne. See Lucent Techs., Inc., 543 F.3d at 717–22; see also Israel Bio-Eng'g, 475 F.3d at 1264, 1268; Ethicon, Inc., 135 F.3d at 1468; Bushberger, 2008 WL 725189, at \*5.

In sum, RadiaDyne at least jointly owns the '845 patent, and RadiaDyne does not consent to Polyzen's patent-infringement action against RadiaDyne concerning the '845 patent. Accordingly, the court denies RadiaDyne's supplemental motion for summary judgment, denies Polyzen's motion for summary judgment on ownership, and dismisses without prejudice Polyzen's patent-infringement action for lack of subject-matter jurisdiction. See Fed. R. Civ. P. 12(b)(1); cf. Fed. R. Civ. P. 56.

### III.

In sum, the court DENIES RadiaDyne's supplemental motion [D.E. 98] for summary judgment concerning Polyzen's patent-infringement action, DENIES Polyzen's motion for summary judgment regarding RadiaDyne's claim of ownership [D.E. 92], and DISMISSES without prejudice Polyzen's patent-infringement action for lack of subject-matter jurisdiction. See Fed. R. Civ. P. 12(b)(1); cf. Fed. R. Civ. P. 56. Additionally, the court DISMISSES Polyzen's motion for summary judgment [D.E. 89] regarding laches, waiver, and estoppel and DISMISSES Polyzen's motion for summary judgment regarding RadiaDyne's defense of inventorship [D.E. 95].

SO ORDERED. This 28 day of March 2017.

  
JAMES C. DEVER III  
Chief United States District Judge



NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

---

**POLYZEN, INC., A NORTH CAROLINA COMPANY,**  
*Plaintiff-Appellant*

**v.**

**RADIADYNE, LLC, A TEXAS LIMITED LIABILITY  
CORPORATION,**  
*Defendant-Appellee*

---

2017-1934, 2017-2022, 2017-2138

---

Appeals from the United States District Court for the  
Eastern District of North Carolina in Nos. 5:11-cv-00662-  
D, 5:14-cv-00323-D, Chief Judge James C. Dever, III.

---

**JUDGMENT**

---

JOSEPH J. ZITO, DNL ZITO, Washington, DC, argued  
for plaintiff-appellant. Also represented by LUIZ FELIPE  
OLIVEIRA.

CHRISTOPHER JOHNSON, Yetter Coleman LLP, Hou-  
ston, TX, argued for defendant-appellee. Also represented  
by COLLIN COX, THOMAS M. MORROW.

---

THIS CAUSE having been heard and considered, it is

ORDERED and ADJUDGED:

PER CURIAM (MOORE, CHEN, and HUGHES, *Circuit Judges*).

**AFFIRMED.** See Fed. Cir. R. 36.

ENTERED BY ORDER OF THE COURT

June 7, 2018  
Date

/s/ Peter R. Marksteiner  
Peter R. Marksteiner  
Clerk of Court

**UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT****NOTICE OF ENTRY OF  
JUDGMENT WITHOUT OPINION**

JUDGMENT ENTERED: 06/07/2018

The judgment of the court in your case was entered today pursuant to Rule 36. This Court affirmed the judgment or decision that was appealed. None of the relief sought in the appeal was granted. No opinion accompanied the judgment. The mandate will be issued in due course.

Information is also provided about petitions for rehearing and suggestions for rehearing en banc. The questions and answers are those frequently asked and answered by the Clerk's Office.

Costs are taxed against the appellant in favor of the appellee under Rule 39. The party entitled to costs is provided a bill of costs form and an instruction sheet with this notice.

The parties are encouraged to stipulate to the costs. A bill of costs will be presumed correct in the absence of a timely filed objection.

Costs are payable to the party awarded costs. If costs are awarded to the government, they should be paid to the Treasurer of the United States. Where costs are awarded against the government, payment should be made to the person(s) designated under the governing statutes, the court's orders, and the parties' written settlement agreements. In cases between private parties, payment should be made to counsel for the party awarded costs or, if the party is not represented by counsel, to the party pro se. Payment of costs should not be sent to the court. Costs should be paid promptly.

If the court also imposed monetary sanctions, they are payable to the opposing party unless the court's opinion provides otherwise. Sanctions should be paid in the same way as costs.

Regarding exhibits and visual aids: Your attention is directed to FRAP 34(g) which states that the clerk may destroy or dispose of the exhibits if counsel does not reclaim them within a reasonable time after the clerk gives notice to remove them. (The clerk deems a reasonable time to be 15 days from the date the final mandate is issued.)

FOR THE COURT

/s/ Peter R. MarksteinerPeter R. Marksteiner  
Clerk of Courtcc: Collin Cox  
Christopher Johnson  
Thomas M. Morrow  
Luiz Felipe De Oliveira  
Joseph J. Zito17-1934, -2022, -2138: Polyzen, Inc. v. Radiadyne, LLC  
United States District Court for the Eastern District of North Carolina, Case Nos. 5:14-cv-00323-D, 5:11-cv-00662-D



**UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT**717 MADISON PLACE, N.W.  
WASHINGTON, D.C. 20439PETER R. MARKSTEINER  
CLERK OF COURT

202-275-8000

**Information Sheet****Petitions for Rehearing and Petitions for Hearing and Rehearing En Banc****1. When is a petition for rehearing appropriate?**

The Federal Circuit grants few petitions for rehearing each year. These petitions for rehearing are rarely successful because they typically fail to articulate sufficient grounds upon which to grant them. Of note, petitions for rehearing should not be used to reargue issues previously presented that were not accepted by the merits panel during initial consideration of the appeal. This is especially so when the court has entered a judgment of affirmance without opinion under Fed. Cir. R. 36. Such dispositions are entered if the court determines the judgment of the trial court is based on findings that are not clearly erroneous, the evidence supporting the jury verdict is sufficient, the record supports the trial court's ruling, the decision of the administrative agency warrants affirmance under the appropriate standard of review, or the judgment or decision is without an error of law.

**2. When is a petition for hearing/rehearing en banc appropriate?**

En banc consideration is rare. Each three-judge merits panel is charged with deciding individual appeals under existing Federal Circuit law as established in precedential opinions. Because each merits panel may enter precedential opinions, a party seeking en banc consideration must typically show that either the merits panel has (1) failed to follow existing decisions of the U.S. Supreme Court or Federal Circuit precedent or (2) followed Federal Circuit precedent that the petitioning party now seeks to have overruled by the court en banc. Federal Circuit Internal Operating Procedure #13 identifies several reasons when the Federal Circuit may opt to hear a matter en banc.

**3. Is it necessary to file either of these petitions before filing a petition for a writ certiorari in the U.S. Supreme Court?**

No. A petition for a writ of certiorari may be filed once the court has issued a final judgment in a case.

**For additional information and filing requirements, please refer to Fed. Cir. R. 40 (Petitions for Rehearing) and Fed. Cir. R. 35 (Petitions for Hearing or Rehearing En Banc).**

**UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT**

717 MADISON PLACE, N.W.  
WASHINGTON, D.C. 20439

PETER R. MARKSTEINER  
CLERK OF COURT

202-275-8000

**Information Sheet****Filing a Petition for a Writ of Certiorari**

There is no automatic right of appeal to the Supreme Court of the United States from judgments of the Federal Circuit. Instead, a party must file a petition for a writ of certiorari which the Supreme Court will grant only when there are compelling reasons. *See* Supreme Court Rule 10.

**Time.** The petition must be filed in the Supreme Court of the United States within 90 days of the entry of judgment in this Court or within 90 days of the denial of a timely petition for rehearing. The judgment is entered on the day the Federal Circuit issues a final decision in your case. The time does not run from the issuance of the mandate. *See* Supreme Court Rule 13.

**Fees.** Either the \$300 docketing fee or a motion for leave to proceed in forma pauperis with an affidavit in support thereof must accompany the petition. *See* Supreme Court Rules 38 and 39.

**Authorized Filer.** The petition must be filed by a member of the bar of the Supreme Court of the United States or by the petitioner as a self-represented individual.

**Format of a Petition.** The Supreme Court Rules are very specific about the content and formatting of petitions. *See* Supreme Court Rules 14, 33, 34. Additional information is available at [https://www.supremecourt.gov/filingandrules/rules\\_guidance.aspx](https://www.supremecourt.gov/filingandrules/rules_guidance.aspx).

**Number of Copies.** Forty copies of a petition must be filed unless the petitioner is proceeding in forma pauperis, in which case an original and ten copies of both the petition for writ of certiorari and the motion for leave to proceed in forma pauperis must be filed. *See* Supreme Court Rule 12.

**Filing.** Petitions are filed in paper at *Clerk, Supreme Court of the United States, 1 First Street, NE, Washington, DC 20543.*

Effective November 13, 2017, electronic filing is also required for filings submitted by parties represented by counsel. *See* Supreme Court Rule 29.7. **Additional information about electronic filing at the Supreme Court is available at** <https://www.supremecourt.gov/filingandrules/electronicfiling.aspx>.

No documents are filed at the Federal Circuit and the Federal Circuit provides no information to the Supreme Court unless the Supreme Court asks for the information.