IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MINERVA SURGICAL, INC. Plaintiff and Counterdefendant, vs. HOLOGIC, INC. and CYTYC SURGICAL PRODUCTS, LLC, Defendants and Counterclaimants.	**C.A. NO. 18-00217-JFB-SRF** **MEMORANDUM AND ORDER**

This matter is before the Court on the parties' motions to preclude expert testimony under *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 597 (1993). Defendants Cytyc Surgical Products, LLC, and Hologic, Inc. (collectively, "Hologic") moves to exclude certain opinions and testimony of Dr. Paul L. Briant (D.I. 217); Blake Inglish (D.I. 219), and Dr. Robert Tucker (D.I. 221). Plaintiff Minerva Surgical, LLC ("Minerva") moves to preclude certain opinions of James E. Pampinella (D.I. 196); and Karl R. Leinsing (D.I. 202). This is an action for patent infringement brought pursuant to 35 U.S.C. § 271 *et seq.*

I. FACTS

A. Background

The facts are set out in earlier orders and will be repeated herein only as necessary to this opinion. D.I. 80, D.I. 130, D.I. 194, Orders. Plaintiff Minerva and defendant Hologic are competing suppliers of endometrial ablation devices. D.I. 34-4 at 1; D.I. 80, Order.

These devices treat abnormally heavy menstrual bleeding by destroying the uterine lining. D.I. 80, Order at 1. Both parties' devices—Hologic's ADVANCED and Minerva's Endometrial Ablation System ("Minerva EAS") are designed to insert an expandable and contractible frame into the patient's uterus through the cervical canal. *Id.* The frame consists of "inner" and "outer" elements (also called flexures or struts in the parties' papers) that expand to bring a membrane into contact with the uterine cavity. *Id.* Once in place, the membrane is used to apply energy sufficient to destroy the uterine lining. *Id.* The Minerva EAS generates heat by ionizing argon gas, while ADVANCED and its predecessor, the NovaSure CLASSIC ("CLASSIC"), use radio-frequency energy. *Id.*

In February 2017, Hologic began U.S. distribution of a new device called the NovaSure ADVANCED ("ADVANCED"). *Id.* Minerva alleges that Hologic infringes several claims of its U.S. Patent No. 9,186,208 ("the '208 patent") by selling, and offering for sale, the NovaSure ADVANCED uterine ablation device.

Almost from the outset of this case, the parties have agreed that Minerva's infringement case turns on Claim 13 of the '208 patent. *Id.* at 2. Claim 13 describes, in relevant part, a system for endometrial ablation with a frame "wherein the inner and outer elements have substantially dissimilar material properties [SDMP]." *Id.* (quoting D.I. 35-3, Ex. 1, '208 patent at 22). In proceedings on Minerva's motion for preliminary injunction, the parties initially agreed that SMDP should be construed to mean that "the inner and outer frame elements have different thickness or width and different composition or treatment." D.I. 80, Order at 8. Minerva stated that interpretation was "the most natural reading of the term as used in the '208 patent." *Id.* Hologic accepted Minerva's construction for purposes of the preliminary injunction motion. *Id.* at 3; *see also* D.I. 51-

4, Hologic Opposition Brief at 5. Under that construction, the parties agreed that the frame elements should satisfy both requirements, that is, the inner and outer frame elements should have different thickness or width, and the frame elements should also have different composition or treatment. D.I. 80, Order at 3. The parties also agreed that ADVANCED's inner and outer elements have different thickness or width and have the same composition. *Id.* As such, Minerva's infringement claim at that time turned on whether the ADVANCED's inner and outer elements underwent different "treatments." D.I. 80, Order at 3.

Minerva later proffered a new construction of SDMP: "different thickness or width and different composition or treatment that provide different spring characteristics to influence the expandable planar triangular shape of the energy delivery surface." *Id.* On the basis of that revised proposed construction, Minerva argued that while the previous iteration of Hologic's uterine ablation device, the CLASSIC, had inner and outer elements that did not possess "different spring characteristics to influence the expandable planar triangular shape of the energy delivery surface," the ADVANCED's inner and outer elements did. *Id.*

In denying Minerva's motion for a preliminary injunction, the Court rejected that construction, finding, *inter alia*, that Minerva's proposal breached the basic principles of claim construction by importing a limitation into the claim that was not required by the specification, i.e., that the inner and outer elements should possess "different spring characteristics to influence the expandable planar triangular shape of the energy delivery surface." *Id.* at 4. Further, the Court considered and rejected Minerva's argument that a person of ordinary skill in the art would know that processes such as a photochemical

etching procedure amounted to a "treatment" under the patent because that sort of procedure could "change material properties by merely removing material from the surface of a physical thing[,]" noting "that spring characteristics are 'component-level' properties that depend not only on the material's intrinsic properties but also on the geometry of the component."[1] *Id.* at 6. The Court concluded that

> The '208 patent specification only describes embodiments where the inner and outer components possess different spring characteristics by virtue of being constructed from dissimilar materials. Dkt. No. 35-3 [the '208 patent] at 19:48. But the converse does not follow—those examples do not show that two components have "substantially different material properties" whenever they have different spring characteristics. As a whole, the record does not support a finding that "material properties" includes spring characteristics.

Id. at 6-7. Although the Court stopped short of finding that Minerva's infringement claim was a "completely lost cause," it found Minerva had not shown a likelihood of success on the merits and denied injunctive relief. *Id.* at 8.

Minerva again pursued its failed argument during claim construction proceedings under *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977-78 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370, 388-90 (1996)), in front of the Magistrate Judge. Minerva again proposed construing the term "SDMP" as "different thickness or width and different composition or treatment that provide different spring characteristics to influence the expandable planar triangular shape of the energy delivery surface." D.I. 130, Report and Recommendation ("R&R") at 5. The Magistrate Judge rejected Hologic's argument that the word

[1] The parties agree a person of ordinary skill in the art in this case is "someone with the equivalent of a bachelor's degree in biomedical engineering, electrical engineering, mechanical engineering, or a related field and at least two years of work experience developing or implementing electrosurgical devices." D.I. 80, Order at 5 n.1.

"substantially" rendered the term indefinite and recommended that the Court construe the SMDP language to mean "the inner and outer frame elements have different thickness and different composition." *Id.* at 5-6. The Magistrate Judge explained:

> The specification of the '208 patent identifies two characteristics qualifying as "substantially dissimilar" characteristics in the context of claim 13: (1) thickness, and (2) composition. ('208 patent, col. 19:32-48) The specification discloses an outer frame element made of 304 SS or 316 SS, with a thickness ranging from 0.004 to 0.012 inches, and distinguishes it from the inner frame element, which is made of Nano Flex®, with a thickness ranging from 0.012 to 0.020 inches. *Id*. These boundaries, as illustrated in Figure 21, are sufficient to inform a person of ordinary skill as to the scope of the word "substantially" in the context of the invention.

Id. at 6. The Magistrate Judge also recommended that the Court "reject Minerva's attempt to import 'spring characteristics' into the claim." *Id.* at 9. Further, the Magistrate Judge rejected Minerva's argument that a "different composition" was optional because the "dissimilar material properties" could also refer to different treatments, finding that "[r]eferences to 'dissimilar frame materials' in the specification signify a difference in composition.'" *Id.* at 10. Notably, the concept of "treatment" was not included in the Court's construction of SMDP. *Id.* Also, the parties agreed to construction of the phrase "the inner elements have a higher spring constant than the outer elements" in claim 15 as "the inner elements need more force per unit distance bent than the outer elements." *Id.* at 12.

This Court overruled both parties' objections to Magistrate Judge's R&R and adopted her claim construction in its entirety. D.I. 194, Memorandum and Order.

B. Hologic's Motions

1. Dr. Paul L. Briant

Paul L. Briant, Ph.D., is one of Minerva's technical experts. Dr. Briant rendered opinions regarding infringement under the doctrine of equivalents, Hologic's state of mind, the '208 patent's alleged technological contributions to the accused product, non-infringing alternatives, validity of the asserted claims, and ensnarement. D.I. 224, Declaration of Marc Cohn ("Cohn Decl.") Vol. II, D.I. 224-3, Ex. 31, Expert Report of Dr. Paul L. Briant Regarding Infringement; Ex. 32, Expert Invalidity Rebuttal Report of Dr. Paul L. Briant; Ex. 33, Expert Reply Report of Dr. Paul L. Briant Regarding Infringement. Hologic moves to preclude Dr. Briant's opinions regarding: (1) infringement under the doctrine of equivalents; (2) apportionment; (3) ensnarement; (4) Hologic's state of mind, and (5) non-infringing alternatives.[2] It argues Dr. Briant fails to apply the Court's construction of SMDP and also contends Dr. Briant's opinions are based on an improper product-to-product comparison of the accused product to the prior art NovaSure CLASSIC ("CLASSIC"), rather than to the asserted claims of the '208 patent.

In response, Minerva contends Hologic's criticisms go to the weight of the evidence rather than to admissibility. It argues that Dr. Briant's comparison of the prior art CLASSIC to the accused ADVANCED illustrates his theory that the ADVANCED frame elements are equivalent to SDMP under the doctrine of equivalents because the combination of the ADVANCED's different bulk thickness between inner and outer elements and the "living

[2] Specifically, Hologic moves to exclude the following: Ex. 31, ¶¶ 34 (third bullet point), ¶¶ 87-117, ¶ 237 (third bullet point); Ex. 33, ¶ 12 (first bullet point), ¶¶ 15-70, ¶ 120 (first bullet point); and any testimony based thereon.

hinge" in the inner elements is equivalent to different thickness and different composition.[3] Minerva argues that Dr. Briant's analysis does not remove the "different composition" requirement of SMDP, but rather explains that the combination of different bulk thickness and the living hinge is a combination of dissimilar material properties that is equivalent to different thickness and a different composition. Dr. Briant relied on his experience as a Ph.D. in Mechanical Engineering, his experience in characterizing materials, computer modeling known as finite element analysis ("FEA"), mechanical and materials engineering concepts and equations, Hologic's design and development documents, and the deposition testimony of Hologic's design engineers to arrive at his conclusion.

In his infringement report, Dr. Briant stated that he followed the Court's claim construction in formulating his opinion. D.I. 224-3, Ex. 31 at 18. He states that in his opinion "the properties of the ADVANCED frame elements perform substantially the same function, in substantially the same way, to achieve substantially the same result as the claimed inner and outer elements having substantially dissimilar material properties." *Id.* at 57. He explained, "[t]he design differences between the ADVANCED inner and outer elements (e.g., the difference in overall bulk thickness and variation in bending properties) perform substantially the same function described above for inner and outer frame elements with SDMP, (namely, influencing the plan shape of the expanded energy-delivery surface)." *Id.* at 58. With respect to SMDP, Dr. Briant concluded,

> [a]ccordingly, the inner and outer frame elements perform substantially the same function as the claimed invention in substantially the same way to achieve substantially the same result as the claimed SDMP. Therefore, since the ADVANCED frame elements meets the function/way/result test,

[3] Dr. Briant testified that the "living hinge" is a thin region of the inner flexure of the ADVANCED. D.I. 225-1, Cohn Decl. Vol. III, Ex. 38, Dr. Briant Dep. at 126.

> the ADVANCED meets the SDMP requirement under the doctrine of equivalents.

Id. at 74.[4]

2. Blake Inglish

Blake Inglish is Minerva's damages expert. D.I. 224, Cohn Decl. Vol II, D.I. 224-4, Ex. 35, Expert Report of Blake Inglish; D.I. 225, Cohn Decl. Vol. III, D.I. 225-1, Ex. 36, Reply Report of Blake Inglish. He provided opinions on apportionment, the incremental value of the ADVANCED over the CLASSIC, and a proposed royalty rate. *Id.* Hologic contends Mr. Inglish's opinions regarding incremental value and his ultimate royalty rate are unreliable because they are conclusory and unsupported. It argues that Mr. Inglish paid lip service to the fifteen factors that frame the reasonable royalty analysis but did not provide a reasoned and supported analysis of each step that is actually tied to the facts of the case.

3. Dr. Robert D. Tucker

Robert D. Tucker, Ph.D., M. D., is a professor of Biomedical Engineering at the University of Iowa. D.I. 224, Cohn Decl. Vol II, (D.I. 224-3, Ex. 34, Opening Expert Report of Dr. Robert Tucker, M.D., Ph.D. He has a Ph.D. in Biophysics from the University of Minnesota and an M.D. from the University of Nebraska. *Id.*, Ex. A, Curriculum Vitae). He specializes in the study, research and development of electrosurgical procedures and

[4] Interestingly, Dr. Briant arrived at a similar conclusion when he construed SMDP to mean "different thickness or width and different composition or treatment that provide different spring characteristics to influence the expandable planar triangular shape of the energy delivery surface" during preliminary injunction and claim construction proceedings. *See, e.g.*, D.I. 107, Declaration of Paul Briant at 17. He stated, "This definition encompasses differences in component geometry, material, and treatment processing that together lead to differences in spring characteristics that influence the functionality of the device." *Id.*

instrumentation. *Id.*, Ex. 34, Expert Report at 3. He has written extensively in the area of radio frequency ("RF") electrosurgery and associated technologies. *Id.* Minerva characterizes Dr. Tucker as a technical rather than economic expert. He was asked to provide professional opinions related to the design of the NovaSure ADVANCED handpiece, including the benefits of Hologic's use and incorporation of the '208 invention into the NovaSure ADVANCED. D.I. 224—3, Ex. 34, Expert report of Robert D. Tucker.

Hologic moves to exclude the portion of Dr. Robert Tucker's opinion that addresses apportionment. Hologic contends that Dr. Tucker's opinion that the ADVANCED's smaller diameter accounts for 90% of its incremental value is unsupported. It argues the apportionment opinion is particularly unreliable because Dr. Tucker has never treated a patient, practiced gynecology, or observed a gynecological procedure. Further, Hologic argues that Dr. Tucker's methodology is inconsistent with the contemporaneous documentary record.

C. Minerva's Motions

1. Karl Leinsing

Karl Leinsing is Hologic's infringement/invalidity expert. D.I. 224, Cohn Decl. Vol. II., D.I. 224-1, Ex. 27, Expert Report of Karl Leinsing, MSME, PE, Regarding Invalidity; D.I. 224-2, Ex. 28, Rebuttal Expert Report of Karl R. Leinsing, MSME, PE, Regarding Non-Infringement. He states the opinions that the asserted claims are invalid as anticipated by the NovaSure CLASSIC and/or Gen 2 NovaSure; and/or rendered obvious by U.S. Patent No. 6,813,520 ("the '520 patent") and by public display of the Minerva Aurora EAS at a trade show in NOVEMBER 2009. D.I. 224-1, Ex. 27, Expert Report at 2-3. Further, he rebuts Dr. Briant's doctrine-of-equivalents opinions under the function-

way-result test. D.I. 224-2 Ex. 28, Rebuttal Expert Report at 49-51. Leinsing opines that a person of ordinary skill in the art would understand that the differences between the accused flexures and the claimed frame elements are more than insubstantial and, therefore, a person of ordinary skill in the art would not find them to be equivalent. *Id.* at 19. He states that "the internal and external flexures of the NovaSure® ADVANCED having the same composition are the opposite of the claim limitation wherein the inner and outer frame elements have different composition." *Id*.

Minerva does not dispute that Mr. Leinsing is qualified to be an expert on noninfringement, but attacks Mr. Leinsing's methodology. Minerva argues that Dr. Leinsing did not consider the Court's claim construction and applied the wrong legal standard. Hologic counters that Leinsing did not express a legal opinion, but opined as a factual matter about why a person of ordinary skill in the art would have disagreed with Dr. Briant's doctrine-of-equivalents theory

2. Dr. James E. Pampinella

Dr. James E. Pampinella is Hologic's damages expert. D.I. 224, Cohn Decl. Vol II, D.I. 224-3, Ex. 29, Expert Report of James E. Pampinella. Minerva seeks to exclude his opinions as to an appropriate reasonable royalty. Minerva argues that Mr. Pampinella improperly relies on a third-party vendor's analysis to support his proffered reasonably royalty rate. It contends that Pampinella's reliance on comparison of Technology Relevance ("TR") scores generated by the third-party vendor for the asserted '208 patent to TR scores for two unasserted Hologic patents—U.S. Patent No. 9,095,348 ("the '348 Patent") and U.S. Patent No. 9,693,890 ("the '890 Patent")—is not appropriate and not tied to the facts of the case. Minerva also contends that Mr. Pampinella makes several

references to the previous litigation between the parties but fails to analyze the technological or economic comparability of those cases to the present case, rendering his corresponding opinions unreliable. Minerva next argues that Mr. Pampinella misapplies the "book of wisdom" doctrine insofar as he relies on Hologic's ex post sales data and not to information available at the time of the hypothetical negotiation.

II. LAW

Rule 702 of the Federal Rules of Evidence governs the admissibility of expert witnesses. Rule 702 provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. District court judges are to perform a screening function with respect to expert testimony. *Daubert*, 509 U.S. at 597. Daubert requires courts to conduct an inquiry into the reliability and relevance of the proposed expert testimony. *Yazujian v. PetSmart*, 729 Fed. App'x 213, 214-16 (3d Cir. 2018). To be admissible, expert testimony must be connected to the inquiry at hand. *Id.*; *see Daubert*, 509 U.S. at 591-92.

The Court of Appeals for the Third Circuit identifies the following non-exhaustive factors to be taken into consideration when evaluating the reliability of a particular methodology: (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to

methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put. *Elcock v. Kmart Corp.*, 233 F.3d 734, 745–46 (3d Cir. 2000). The expert's opinion must be based on the methods and procedures of science rather than on subjective belief or unsupported speculation. *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 742 (3d Cir. 1994). *Daubert* applies to the other expert matters described in Rule 702, even when the proposed expert is offering non-scientific, but specialized, testimony. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 149 (1999).

"The focus, of course, must be solely on principles and methodology, not on the conclusions that they generate." *Daubert*, 509 U.S. at 595. "When the methodology is sound, and the evidence relied upon sufficiently related to the case at hand, disputes about the degree of relevance or accuracy (above this minimum threshold) may go to the testimony's weight, but not its admissibility." *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 852 (Fed. Cir. 2010), *aff'd*, 564 U.S. 91 (2011).

Patent infringement requires that an accused product practices every limitation of a properly construed claim. *See Tessera, Inc. v. Int'l Trade Comm'n*, 646 F.3d 1357, 1364 (Fed. Cir. 2011). "Under the all-elements rule, 'an accused product or process is not infringing unless it contains each limitation of the claim, either literally or by an equivalent.'" *PSN Illinois, LLC v. Ivoclar Vivadent, Inc.*, 525 F.3d 1159, 1167–68 (Fed. Cir. 2008) (quoting *Freedman Seating Co. v. Am. Seating Co.*, 420 F.3d 1350, 1358 (Fed. Cir. 2005)). An expert's opinion that applies a legally erroneous or irrelevant analysis is inadmissible. *See Intellectual Ventures I LLC v. Xilinx, Inc.*, No. 10-1065-LPS, 2014 WL

1814384, at *3-4 (D. Del. Apr. 14, 2014) (Stark, C.J.) (striking expert's opinion because expert's "understanding of the law is incorrect" and "renders his opinion unreliable").

The doctrine of equivalents must not expand to eliminate a claim element entirely. *Warner–Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997). "[A]n element of an accused product or process is not, as a matter of law, equivalent to a limitation of the claimed invention if such a finding would entirely vitiate the limitation." *PSN Illinois, LLC,* 525 F.3d at 1168. To determine whether finding infringement under the doctrine of equivalents would vitiate a claim limitation, courts consider the totality of the circumstances, evaluating "whether the alleged equivalent can be fairly characterized as an insubstantial change from the claimed subject matter without rendering the pertinent limitation meaningless." *Freedman Seating*, 420 F.3d at 1359; *see also Planet Bingo v. GameTech Int'l, Inc.*, 472 F.3d 1338, 1344-45 (Fed. Cir. 2006) (affirming summary judgment of no infringement under doctrine of equivalents because "after" is the "antithesis" of "before"); *Asyst Techs., Inc. v. Emtrak, Inc.*, 402 F.3d 1188, 1195 (Fed. Cir. 2005) (affirming summary judgment of no infringement under the doctrine of equivalents because "unmounted" is the opposite of "mounted on"); *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091, 1106 (Fed. Cir. 2000) (finding "it would defy logic to conclude that a minority—the very antithesis of a majority—could be insubstantially different from a claim limitation requiring a majority, and no reasonable juror could find otherwise).

The opinions of a patent infringement expert who applies an erroneous claim construction are inadmissible. *See, e.g., Liquid Dynamics Corp. v. Vaughan Co.*, 449 F.3d 1209, 1224 n.2 (Fed. Cir. 2006) (affirming exclusion of expert testimony as

"irrelevant because it was based on an impermissible claim construction" and "could prejudice and confuse the jury"); *Sprint Commc'ns Co. L.P. v. Cox Commc'ns Inc.*, 302 F. Supp. 3d 597, 619-21, 624 (D. Del. 2017) (excluding expert testimony "contrary to the court's claim constructions" and "likely to mislead and confuse a jury"); *Kraft Foods Grp. Brands LLC v. TC Heartland, LLC*, 232 F. Supp. 3d 632, 634-35 (D. Del. 2017) (excluding "expert testimony that is inconsistent with the Court's claim construction [as] unreliable and unhelpful to the finder of fact"); *EMC Corp. v. Pure Storage, Inc.*, 154 F. Supp. 3d 81, 109 (D. Del. 2016). No party may contradict the court's construction to a jury. *Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1321 (Fed. Cir. 2009) (stating that "[o]nce a district court has construed the relevant claim terms, and unless altered by the district court, then that legal determination governs for purposes of trial.").

Further, the opinions of a patent infringement expert who applies a doctrine of equivalents theory with added narrowing limitations to avoid ensnaring prior art are also inadmissible. *See Inline Connection Corp. v. AOL Time Warner Inc.*, No. 02-272MPT, 2007 WL 275928, at *4-5 (D. Del. Jan. 29, 2007) ("Because [the expert] did not conduct a proper enablement analysis, his opinion is not reliable and is not admissible on enablement.").

On a finding of infringement, the patentee is entitled to "damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court." 35 U.S.C. § 284. The burden of proving damages falls on the patentee. *Lucent Techs., Inc. v. Gateway*, 580 F.3d 1301, 1324 (Fed. Cir. 2009). A reasonable royalty is based not on the infringer's profit, but on the royalty that a willing licensor and a willing

licensee would have agreed to at the time the infringement began. *Id.* at 1324-25 (describing the hypothetical negotiation or the "willing licensor-willing licensee" approach). The factors discussed in *Georgia-Pac. Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970) *modified sub nom. Georgia-Pac. Corp. v. U.S. Plywood-Champion Papers, Inc.*, 446 F.2d 295 (2d Cir. 1971), frame the reasonable royalty analysis.[5]

[5] Those factors are:

> 1) the royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty; 2) the rates paid by the licensee for the use of other patents comparable to the patent in suit; 3) The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold; 4) the licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly; 5) the commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter; 6) the effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales; 7) The duration of the patent and the term of the license; 8) the established profitability of the product made under the patent, its commercial success, and its current popularity; 9) the utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results; 10) the nature of the patented invention, the character of the commercial embodiment of it as owned and produced by the licensor, and the benefits to those who have used the invention; 11) the extent to which the infringer has made use of the invention; and any evidence probative of the value of that use; 12) the portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions; 13) the portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer; 14) the opinion testimony of qualified experts; and 15) the amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

See Georgia-Pac. Corp. v. U.S. Plywood Corp., 318 F. Supp. at 1120.

When a patented invention adds incremental value to an end product, the patent owner must apportion or separate the damages between the patented improvement and the conventional components of the multicomponent product. *Exmark Mfg. Co. Inc. v. Briggs & Stratton Power Prod. Grp., LLC*, 879 F.3d 1332, 1348 (Fed. Cir. 2018). Such apportionment can be done through a through a proper analysis of the *Georgia-Pacific* factors. *Id.* at 1348-49. An infringer's sales as the royalty base "is consistent with the realities of a hypothetical negotiation and accurately reflects the real-world bargaining that occurs, particularly in licensing." *Id.* at 1349. A damages expert must "adequately tie the expert's proposed reasonable royalty rate to the facts" of the case. *Id.* If the patentee fails to tie the theory to the facts of the case, the testimony must be excluded. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1315 (Fed. Cir. 2011).

III. DISCUSSION

The Court agrees with Hologic that Dr. Briant's testimony fails to conform to the Court's claim construction. Though Dr. Briant states that he adopts and follows the Court's claim construction, the record shows that he in fact disregards the Court's construction of SMDP and instead follows the claim construction Minerva earlier proposed and the Court rejected. All of the asserted claims require inner and outer elements having "substantially dissimilar material properties" ("SDMP"), which the Court construed as requiring both "different thickness" and "different composition." Asserted claim 13 includes the SDMP limitation and the remaining asserted claims all spawn from Claim 13. In his report, Dr. Briant characterizes the "different composition" requirement as just "one non-limiting example" of an infringing device. D.I. 224-3, Ex. 31, Dr. Briant Infringement

Rep't at 61. The Court rejected that argument when it ruled that an infringing device must have a different composition. D.I. 130 at 10.

The Court construed SDMP to mean "the inner and outer frame elements have different thickness and different composition." *Id.* Dr. Briant concedes that the ADVANCED does not literally satisfy the SDMP limitation because its internal and external flexures are made of the same composition. D.I. 225-1, Cohn Decl. Vol. III, Ex. 38, Deposition of Paul Briant at 22, 115. Dr. Briant's conclusion that the accused device infringes under the doctrine of equivalents is based on the premise—that the same material can be equated with a "different composition" if the material functions the same way—that necessarily requires a different construction of SMDP than that adopted by the Court. In fact, it invites the construction of SMDP, including concepts of spring characteristics and "treatment," that the Court expressly rejected. His theory relies on concepts of stiffness or flexibility when the claims do not recite those limitations. The Court expressly rejected the language "different spring characteristics," which relates to stiffness and/or flexibility during claim construction. D.I. 130 at 9-10.

Also, Dr. Briant's doctrine of equivalents analysis relies on the SMDP limitation having the result of increasing "the surface area of the energy-delivery surface and optimize energy delivery to engaged tissue." D.I. 224-3, Ex. 31, Dr. Briant Expert Report at 74. No limitation that relates to increasing surface area or energy optimization is recited in the claims.

The record shows, and Dr. Briant admits, that the only difference between the internal and external flexures of the ADVANCED is their thickness. D.I. 225-1, Ex. 38 Briant Dep. at 125-26. Thus, Dr. Briant's analysis relies only on the "different thickness"

prong of SDMP and ignores the required limitation that the inner and outer frame elements also have a "different composition," in contravention of the court's claim construction. D.I. 224-3, Ex. 31, Dr. Briant Expert Report at 70-71 (explaining that the reason why there can be equivalency between frame elements with the same composition and those having different composition is because a person of ordinary skill in the art could "tune[]" the "geometry (length, width, and thickness) of the element[s]" and "achieve the desired function and result of the claimed invention")). Dr. Briant's doctrine of equivalents analysis regarding SDMP would completely vitiate the claim limitation of SMDP having frame elements with a different composition.

Dr. Briant's opinions and conclusions that are based on a faulty claim construction are irrelevant would confuse the jury. Accordingly, the Court finds that Hologic's motion to exclude the testimony of Dr. Paul Briant should be granted as to opinions or testimony that rely on improper claim construction. To the extent that Dr. Briant's methodology and conclusions fail to conform to the Court's SDMP claim construction, the testimony will not be allowed. Hologic's other criticisms of Dr. Briant's testimony go more to the weight to be afforded to the testimony than to its admissibility. Essentially, Dr. Briant will not be allowed to testify that Hologic's product infringes the relevant claims of Minerva's '208 patent based on the doctrine of equivalents. *See infra.* Footnote 2.

The Court further finds the parties' other *Daubert* motions should be denied in all other respects. The parties' criticisms generally go to the weight of the testimony, not to its admissibility. The experts' qualifications are not at issue. All of the experts are sufficiently qualified to render opinions on the topics they consider. Both parties agree that testimony on the topic of "treatment" is irrelevant in view of the Court's claim

construction. Those portions of the parties' respective expert reports using "different treatment" as part of the claim construction are moot.

Minerva's argument that Dr. Leinsing's testimony is inadmissible because it is based on an incorrect understanding of the law is unavailing. Leinsing refuted Dr. Briant's doctrine of equivalents theory because defining a "different composition" to include a material that was of the same composition would vitiate the claim limitation. The Court finds Dr. Leinsing's testimony and opinions are properly based on the Court's claim construction and any criticisms of his methodology go to weight of the evidence, not its admissibility.

The damages experts' opinions on reasonable royalty are sufficiently tied to the facts of the case to withstand scrutiny. The damages experts' reports appear to contain more than a superficial recitation of the *Georgia-Pacific* factors and any shortcoming in the application of those factors can be addressed in cross-examination. The Court finds each expert's methodology is reliable and is consistent with much of the opposing party's experts' analyses on the same topic. Because any reasonable royalty analysis necessarily involves an element of approximation and uncertainty, the Court is unable to find, at this point in the litigation, that the experts' opinions are unreliable and/or irrelevant. The experts appear to do more than merely pluck a royalty rate out of nowhere. To the extent any testimony is shown at trial to be irrelevant or otherwise infirm, the parties can reassert their objections and move to strike the testimony. Accordingly, the Court finds the parties' motions to exclude evidence should be denied at this time without prejudice to reassertion at trial.

IT IS ORDERED that:

1. Defendant Hologic's motion to preclude the testimony of Dr. Paul Briant (D.I. 217) is sustained in part as set forth in this order.
2. Defendant Hologic's motion to preclude the testimony of Blake Inglish (D.I. 219) and Dr. Robert Tucker (D.I. 221) are denied.
3. Plaintiff Minerva's motions to preclude testimony of James E. Pampinella (D.I. 196) and Karl R. Leinsing (D.I. 202) are denied.

DATED this 20th day of July 2021.

BY THE COURT:

s/ Joseph F. Bataillon
Senior United States District Judge