

APPENDIX

APPENDIX A

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

G. DAVID JANG, M.D.,
Plaintiff-Appellant

v.

BOSTON SCIENTIFIC
CORPORATION, SCIMED LIFE
SYSTEMS, INC., NKA BOSTON
SCIENTIFIC SCIMED, INC.

Defendants-Cross-Appellants.

No. 2016-
1275, 2016-
1575

Appeals from the United States District Court for the
Central District of California in No. 5:05-cv-00426-
VAP-MRW, Judge Virginia Anne Phillips.

Decided: September 29, 2017

DARYL JOSEFFER, King & Spalding LLP, Washing-
ton, DC, argued for plaintiff-appellant. Also repre-
sented by JED I. BERGMAN, Kasowitz, Benson, Torres
& Friedman LLP, New York, NY; MARCUS BARBER,
DARCY L. JONES, HEATHER KIM, JONATHAN K. WAL-
DROP, Redwood Shores, CA; JEFFREY J. TONEY, PAUL
GUNTER WILLIAMS, Atlanta, GA.

MATTHEW WOLF, Arnold & Porter Kaye Scholer
LLP, Washington, DC, argued for defendants-cross-
appellants. Also represented by EDWARD HAN, JOHN
NILSSON.

Before PROST, *Chief Judge*, O'MALLEY and CHEN,
Circuit Judges.

CHEN, *Circuit Judge*.

This dispute between G. David Jang, M.D. (Dr. Jang) and Boston Scientific Corp. and Scimed Life Systems, Inc. (collectively, BSC), more than a decade old, returns to us for a fourth time. In the latest appeal of this case involving U.S. Patent No. 5,922,021 ('021 Patent) and BSC's sales of several coronary stents (collectively, Express stent), Dr. Jang challenges the district court's denial of his motion for judgment as a matter of law (JMOL) on the ground that no reasonable jury could have found that BSC's Express stent did not literally infringe claims 1 and 8 (the asserted claims) of the '021 Patent. Dr. Jang also challenges the district court's vacatur of the jury's finding that the Express stent infringed the asserted claims under the doctrine of equivalents, as well as the entry of judgment of non-infringement in favor of BSC, on the ground that the district court incorrectly held that he failed to provide an acceptable hypothetical claim for an ensnarement analysis, and thereby failed to prove that his doctrine of equivalents theory did not ensnare the prior art. Dr. Jang's appeal is accompanied by a purported cross-appeal from BSC, which assigns error to the district court's holding that BSC was contractually obligated to pay royalties for past sales of the Express stent if it infringed the asserted claims, notwithstanding the U.S. Patent and Trademark Office's (PTO) eventual cancellation of them in an *ex parte* reexamination.

Because we *affirm* the district court's denial of Dr. Jang's motion for JMOL, its vacatur of the jury verdict of infringement under the doctrine of equivalents, and its entry of judgment of non-infringement, we *dismiss*

BSC's cross-appeal and need not reach the arguments it raised.

INTRODUCTION

A. The '021 Patent

Dr. Jang is the named inventor of the '021 Patent, which is generally directed to a coronary stent. A representative embodiment of the claimed stent is below.

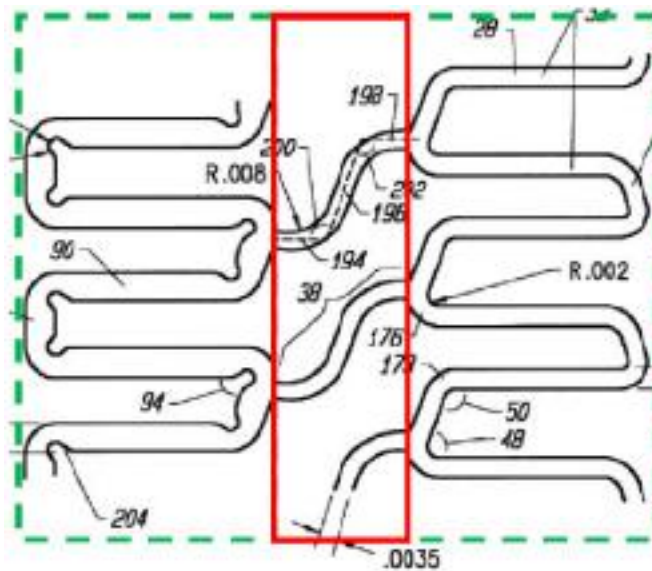


FIG. 9D

'021 Patent fig. 9D (annotated). Inside the dotted boxes are expansion columns made up of a plurality of pairs of expansion struts. The solid box outlines a connecting strut column made up of connecting struts. Each connecting strut has: (i) a section at the “proximal” end that connects to an expansion strut pair in one expansion column; (ii) a section at the “distal” end that connects to an expansion strut pair in another

expansion column; and (iii) an intermediate section that is not parallel to the two end sections. *See, e.g., id.* col. 13 ll. 5–18, 38–48. Given the connecting strut's proximal and distal connections, each connecting strut links expansion strut pairs from two expansion columns in a “peak-to-peak” configuration. The connecting struts are designed to increase the longitudinal flexibility of the stent. *See id.* col. 6 ll. 29–36; *id.* col. 8 ll. 45–47.

Independent claim 1 is representative of the asserted claims:

1. A stent in a non-expanded state, comprising:

a first expansion strut pair including a first expansion strut positioned adjacent to a second expansion strut and a joining strut of the first expansion strut pair that couples the first and second expansion struts at a distal end of the first expansion strut pair, *a plurality of the first expansion strut pair forming a first expansion column;*

a second expansion strut pair including a first expansion strut positioned adjacent to a second expansion strut and a joining strut of the second expansion strut pair that couples the first and second expansion struts of the second expansion strut pair at a proximal end of the second expansion strut pair, *a plurality of the second expansion strut pair forming a second expansion column;*

a first connecting strut including a first connecting strut proximal section, a first connecting strut distal section and a first connecting

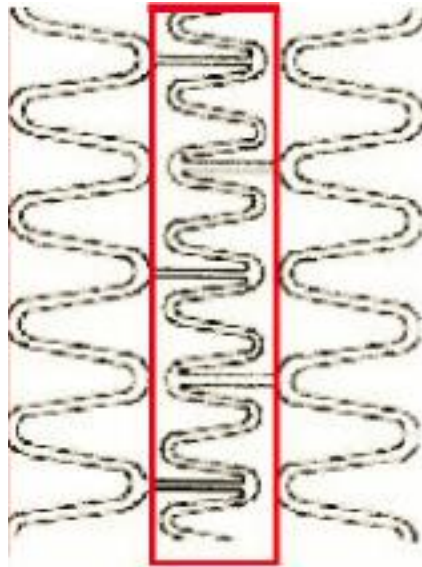
strut intermediate section, the first connecting strut proximal section being coupled to the distal end of the first expansion strut pair in the first expansion column and the first connecting strut distal section being coupled to the proximal end of the second expansion strut pair of the second expansion column, *a plurality of the first connecting strut forming a first connecting strut column that couples the first expansion column to the second expansion column, the first connecting strut intermediate section being nonparallel to the first connecting strut proximal and distal sections*, wherein the first expansion strut of the first expansion strut pair in the first expansion column has a longitudinal axis offset from a longitudinal axis of the first expansion strut of the second expansion strut pair in the second expansion column.

Id. col. 18 ll. 9–40 (emphases added).¹

¹ As our previous opinion recognized, the PTO cancelled asserted claims 1 and 8 on February 11, 2014 in a second ex parte reexamination. *Jang v. Boston Sci. Corp.*, 767 F.3d 1334 (Fed. Cir. 2014). Because we affirm the district court’s non-infringement determination, and therefore need not address BSC’s cross appeal, the PTO’s cancellation of claims 1 and 8 has no bearing in our decision.

B. BSC's Express Stent

The Express stent comprises two types of alternating columns or “elements”—referred to as “macroelements” and “microelements”—that are joined together. Microelements, depicted inside the box in the schematic below, are smaller and narrower than the macroelements on either side of the microelements. The microelements include horizontal bars that join the microelements and the macroelements together in a “peak-to-valley” configuration.



C. Litigation History

In 2002, Dr. Jang executed an agreement assigning the '021 Patent (and another related patent) to BSC, and in return, BSC agreed to pay Dr. Jang about \$50 million. Pursuant to the agreement, under certain conditions, Dr. Jang was entitled to certain royalty payments (up to about \$110 million), if BSC ever

developed and sold a coronary stent that was covered by, i.e., would infringe,² Jang's patented technology.

In May 2005, Dr. Jang commenced this case against BSC, asserting that BSC's Express stent was one such stent and consequently BSC owed royalties associated with the sales of the Express stent that BSC had already made. Many years after Dr. Jang filed suit, in October 2013, BSC requested an ex parte reexamination of the asserted claims before the PTO.

In conjunction with its reexamination request, BSC sought leave to amend its answer to include invalidity defenses, under the theory that the assignment agreement should be interpreted so as to relieve BSC of any obligation to pay royalties for already-made sales of its Express stent, if the asserted claims were determined to be invalid or unpatentable. *See* J.A. at 6091. The district court denied BSC leave to amend, deeming any invalidity defenses "irrelevant" as to whether BSC owed Dr. Jang royalties for past sales under the terms of the assignment agreement. *Id.* The district court reasoned that BSC's interpretation of the assignment agreement "would lead to an absurd result, namely, that BSC could avoid payment . . . under the [a]greement, even if the ['021 Patent] [were] declared invalid years after the [royalty] payments were due." *Id.*

BSC then moved for summary judgment using the same tack after the PTO cancelled the asserted claims as unpatentable in the ex parte reexamination. *See*

² We are mindful that this is not a typical patent case where, for example, the plaintiff patentee is asserting a patent against a defendant accused infringer. For convenience, however, we will use "infringe," and the like, when discussing whether the Express stent is covered by the '021 Patent.

id. at 50–56. BSC contended that it owed Dr. Jang no royalties under the assignment agreement even if they had accrued well before the cancellation because unpatentable claims cannot be infringed. *See id.* at 50. The district court denied summary judgment, holding that BSC still owed royalties to Dr. Jang for any past sales of stents covered by the asserted claims under the assignment agreement, despite the PTO’s subsequent cancellation of those claims. *See id.* at 50–56.

The parties then proceeded to trial as to whether the Express stent infringed the asserted claims of the ’021 Patent. Before trial, BSC moved in limine to preclude Dr. Jang from presenting a doctrine of equivalents theory to the jury, accusing him of merely rehashing his literal infringement theory in the guise of a doctrine of equivalents theory, and thus, failing to provide particularized testimony as to how the Express stent is insubstantially different than the asserted claims. *See id.* at 66–69. The district court denied the motion, finding that Dr. Jang’s experts, Michael J. Lee and Nicolas A.F. Chronos, M.D., sufficiently explained his doctrine of equivalents theory in their expert reports. *See id.* at 68–69.

Collateral to this motion in limine was BSC’s invocation of an ensnarement defense. *See id.* at 9–12. BSC insisted that Dr. Jang’s doctrine of equivalents theory would ensnare the prior art, referencing three prior art patents. *See id.* at 11. The district court decided to conduct a post-trial ensnarement hearing, if the jury returned a verdict of infringement under the doctrine of equivalents. *See id.* at 12207.

The jury ultimately found no literal infringement, but found infringement under the doctrine of equivalents. Following through on its earlier decision, the district court conducted an evidentiary hearing on ensnarement. Dr. Jang objected, asserting that BSC belatedly raised ensnarement, and thus waived it. *See id.* at 9–12; *see also id.* at 34. The district court found no waiver. *See id.* at 9–12.

On the merits of the ensnarement inquiry, Dr. Jang elected to use a hypothetical claim analysis to establish a range of equivalents to which he believed he was entitled, above and beyond the actual scope of his asserted claims. *See id.* at 12–19. In other words, he attempted to construct a hypothetical claim—predicated on representative claim 1—that would be broad enough to literally cover BSC’s Express stent, yet not so broad that it would be unpatentable over the prior art. *See, e.g., Intendis GmbH v. Glenmark Pharm. Inc., USA*, 822 F.3d 1355, 1363–64 (Fed. Cir. 2016). In the course of trying to draft such a hypothetical claim, Dr. Jang constructed approximately ten different claims, and ultimately chose to assert two of them: hypothetical claim three and hypothetical claim five. *See J.A.* at 14–19. The district court concluded, however, that Dr. Jang failed, as a threshold matter, to draft a proper hypothetical claim for the ensnarement analysis. *See id.* The district court rejected hypothetical claim three because it impermissibly narrowed claim 1 and hypothetical claim five because it failed to broaden claim 1 at all. *See id.* Because Dr. Jang did not meet his burden of persuasion, which includes providing a proper hypothetical claim that does not ensnare the prior art, the district court vacated the jury verdict of infringement under the doctrine of equivalents and entered judgment of non-infringement in favor of BSC. *See id.* at 18–19.

Dr. Jang then moved for JMOL with respect to, inter alia, literal infringement. *See id.* at 23–32. The district court found substantial evidence to support the jury’s verdict of no literal infringement, concluding that the jury could have reasonably found either that the Express stent’s microelements corresponded to the claimed expansion columns rather than the claimed connecting strut columns or that the Express stent’s macroelement (first expansion column) was connected to the microelement (second expansion column) in a “peak-to-valley” configuration instead of a “peak-to-peak” configuration. *See id.* at 27. Dr. Jang also moved for a new trial, asserting several bases, all of which the district court rejected. *See id.* at 33–35.

Dr. Jang appeals the district court’s denial of his JMOL for literal infringement, as well as his motion for a new trial, and its vacatur of the jury verdict of infringement under the doctrine of equivalents. BSC purports to cross-appeal the district court’s denial of its summary judgment motion. We have jurisdiction over Dr. Jang’s appeal pursuant to 28 U.S.C. § 1295(a)(1) (2012).

DISCUSSION

A. Literal Infringement

The parties do not dispute that the Express stent’s macroelements literally meet all expansion column-related limitations of claim 1, leaving them to contest only whether the jury had a reasonable basis to find that the Express stent’s microelements do not meet all connecting strut-related limitations in the claim. Dr. Jang maintains that a reasonable jury could not have found no literal infringement in this limited context because the undisputed facts showed otherwise and

BSC’s non-infringement arguments were legally erroneous. At the very least, according to Dr. Jang, he is entitled to a new trial that is not tainted with the legally erroneous arguments. We disagree with Dr. Jang’s arguments.

Denials of motions for JMOL or a new trial are reviewed according to the law of the regional circuit—here, the Ninth Circuit. *See, e.g., TVIIM, LLC v. McAfee, Inc.*, 851 F.3d 1356, 1362 (Fed. Cir. 2017). A district court’s denial of a motion for JMOL is reviewed de novo. *See, e.g., id.* (citing *Harper v. City of Los Angeles*, 533 F.3d 1010, 1021 (9th Cir. 2008)). A grant of a motion for JMOL is proper only when “the evidence, construed in the light most favorable to the nonmoving party, permits only one reasonable conclusion, and that conclusion is contrary to that of the jury.” *White v. Ford Motor Co.*, 312 F.3d 998, 1010 (9th Cir. 2002) (quoting *Forrett v. Richardson*, 112 F.3d 416, 419 (9th Cir. 1997)). That is, the district court must uphold a jury’s verdict “if it is supported by substantial evidence, which is evidence adequate to support the jury’s conclusion, even if it is also possible to draw a contrary conclusion.” *Harper*, 533 F.3d at 1021 (quoting *Pavao v. Pagay*, 307 F.3d 915, 918 (9th Cir. 2002)). Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Theme Promotions, Inc. v. News Am. Mktg. FSI*, 546 F.3d 991, 1000 (9th Cir. 2008) (quoting *Syufy Enters. v. Am. Multicinema, Inc.*, 793 F.2d 990, 992 (9th Cir. 1986)).

The Ninth Circuit reviews the denial of a motion for a new trial for abuse of discretion. *Incalza v. Fendi N. Am., Inc.*, 479 F.3d 1005, 1013 (9th Cir. 2007). It reverses the denial only if the record lacks any evidence supporting the verdict or if the district court

made a mistake of law. *Molski v. M.J. Cable, Inc.*, 481 F.3d 724, 729 (9th Cir. 2007).

Dr. Jang contends that the district court erred in denying his motion for JMOL because it failed to consider whether Dr. Jang proved that the Express stent's microelements were connecting strut columns, notwithstanding the fact that they may also be expansion columns. In other words, that there was sufficient evidence for the jury to find that the Express stent's microelements were expansion columns is irrelevant to the resolution of his motion for JMOL, Dr. Jang argues, so long as he showed that the microelements were connecting strut columns. *See* Appellant Br. at 55 ("If the [microelements] satisfy the claim terms of a connecting-strut column, then they *are* connecting-strut columns for literal infringement purposes, regardless of whether they might *also* be considered something else (such as expansion columns)."). Dr. Jang also maintains that the district court erred in denying his motion for JMOL because BSC's arguments rest on legally erroneous premises and so they cannot support the jury's verdict of no literal infringement.

The issue of literal infringement was a question of fact for the jury. The jury heard Dr. Jang's theory of infringement and his supporting evidence but nevertheless found that the Express stent did not literally infringe. The district court did not fail to consider Dr. Jang's theory of infringement and it correctly found substantial evidence to support the jury's finding that the Express stent's microelements do not literally meet the connecting-strut-column-related limitations in claim 1. *See* J.A. at 25–28. BSC's expert, James Moore, Ph.D., testified that the Express stent's macroelements *and* the microelements were more akin to

the claimed expansion columns than the claimed connecting strut columns in the asserted claims because both elements expand the Express stent when needed, which causes foreshortening of the stent. *See id.* at 9330–43, 9389–90. These elements stood in contrast to the claimed connecting strut columns that do not expand when the claimed stent expands, and instead, compensate for the foreshortening caused by the expansion of the claimed expansion columns. *See id.* Moreover, the Express stent’s macroelements and microelements are joined together in a “peak-to-valley” configuration by a connecting strut with a parallel intermediate section, i.e., a straight, horizontal connector—as opposed to the claimed expansion columns that are joined in a “peak-to-peak” configuration by a connector with a nonparallel intermediate section.³ *See id.* Dr. Jang’s experts conceded as much. *See id.* at 8877–79 (Mr. Lee acknowledging that the Express stent’s microelements could be expansion columns); *id.* at 8869–73 (Mr. Lee recognizing that the Express stent’s microelements and macroelements could be viewed as being joined by straight connectors); *id.* at 9260–61 (Dr. Chronos acknowledging that the Express stent’s microelements behave like expansion columns); *id.* at 9284–85 (Dr. Chronos recognizing that if the Express stent’s microelements and macroelements are viewed as expansion columns, then they are joined by a straight connector). The jury’s verdict of no literal infringement, therefore, is supported by substantial evidence.

³ Despite the fact that the asserted claims do not use the term “peak-to-peak,” the parties agree that this is an inherent limitation of the asserted claims.

Dr. Jang failed to persuade the district court that BSC's non-infringement arguments were legally erroneous. We are similarly unpersuaded. Dr. Jang characterizes BSC's position as one of mutual exclusivity and argues that this purported "either/or" position effectively imported a negative limitation into the definition of "connecting strut column." Appellant Reply Br. at 33. Dr. Jang misrepresents BSC's non-infringement arguments. BSC did not argue, as Dr. Jang contends, that microelements could only be deemed either exclusively expansion columns or exclusively connecting strut columns. Rather, BSC fairly argued at trial that the microelements, like the macroelements, simply are expansion columns. J.A. at 8413–14, 10573. In particular, BSC argued that there was no literal infringement because those two expansion columns are joined by straight connectors in a peak-to-valley configuration. *Id.* at 10570, 11366.

Dr. Jang also contends that BSC misled the jury to find no literal infringement because BSC told the jury that the Express stent's microelements could not be the claimed connecting strut columns due to the presence of "extra metal" in the microelements that is not recited in the asserted claims. This was erroneous according to Dr. Jang because the asserted claims use the transitional phrase "comprising," i.e., open-ended claim language, and so the addition of "extra metal" in the Express stent cannot preclude a finding of literal infringement. But this was not one of BSC's non-infringement positions at trial. To the extent that BSC introduced this "extra metal" concept to the jury, BSC did so, not as an alternative non-infringement position, but as an explanation that Dr. Jang's experts ignored certain structural features of the Express stent in their infringement analyses, thereby undermining the strength of their testimony on whether the

microelements were connecting strut columns. *See id.* at 9343, 10579–80.

In sum, a reasonable jury could have returned a verdict of no literal infringement based on the evidence presented at trial. We consequently have no basis to order a new trial.

B. Ensnarement in View of a Hypothetical Claim

In an appeal relating to the doctrine of equivalents, a party often challenges the fact finding made below of infringement (or no infringement) under that doctrine, which is usually analyzed under the well-established “substantially the same function-way-result” or “insubstantial differences” inquiry. Here, however, the jury’s finding that the Express stent satisfies each claim element of the asserted claims under the doctrine of equivalents is not on appeal. Instead, this appeal centers on the district court’s application of a limitation on the reach of the doctrine, known as “ensnarement.”

Dr. Jang insists that the district court erred in several respects in overturning the jury’s verdict of infringement under the doctrine of equivalents based on BSC’s ensnarement defense. Dr. Jang argues that his hypothetical claims three and five are properly broader in scope than representative claim 1, and if they were flawed, the district court was required to proceed with an ensnarement analysis, even if that meant the district court would have to devise an acceptable hypothetical claim for Dr. Jang that was broader in scope than representative claim 1. Dr. Jang is wrong on both counts.

A doctrine of equivalents theory cannot be asserted if it will encompass or “ensnare” the prior art. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*,

567 F.3d 1314, 1322 (Fed. Cir. 2009). “This limitation is imposed even if a jury has found equivalence as to each claim element.” *Id.* at 1323 (citing *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 683, 687 (Fed. Cir. 1990), *overruled in part on other grounds*, *Cardinal Chem. Co. v. Morton Int’l, Inc.*, 508 U.S. 83, 92 n.12 (1993)). A “[h]ypothetical claim analysis is a practical method to determine whether an equivalent would impermissibly ensnare the prior art.”⁴ *Intendis*, 822 F.3d at 1363–64 (citing *Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co.*, 204 F.3d 1360, 1364 (Fed. Cir. 2000)). We have explained:

Hypothetical claim analysis is a two-step process. The first step is “to construct a hypothetical claim that literally covers the accused device.” Next, prior art introduced by the accused infringer is assessed to “determine whether the patentee has carried its burden of persuading the court that the hypothetical claim is patentable over the prior art.” In short, [the court] ask[s] if a hypothetical claim can be crafted, which contains both the literal claim scope and the accused device, without ensnaring the prior art.

Id. at 1363 (quoting *DePuy*, 567 F.3d at 1324, 1325); *see also Ultra-Tex Surfaces*, 204 F.3d at 1364–65 (“Under a hypothetical claim analysis, a patentee proposes

⁴ The hypothetical claim analysis is not the only method in which a district court can assess whether a doctrine of equivalents theory ensnares the prior art. *See Conroy v. Reebok Int’l, Ltd.*, 14 F.3d 1570, 1576–77 (Fed. Cir. 1994); *Int’l Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 772 (Fed. Cir. 1993). We note that Dr. Jang never asked the district court to assess the scope of his doctrine of equivalents theory using a method other than the hypothetical claim analysis.

a hypothetical claim that is sufficiently broad in scope to *literally* encompass the accused product or process. If that claim would have been allowed by the PTO over the prior art, then the prior art does not bar the application of the doctrine of equivalents.” (citations omitted)). “The burden of producing evidence of prior art to challenge a hypothetical claim rests with an accused infringer, but the burden of proving patentability of the hypothetical claim rests with the patentee.”⁵ *Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371, 1380 (Fed. Cir. 2001) (citing *Streamfeeder, LLC v. Sure-Feed, Inc.*, 175 F.3d 974, 984 (Fed. Cir. 1999)). “We review a district court’s conclusion that a hypothetical claim does not encompass the prior art de novo and resolution of underlying factual issues for clear error.” *Intendis*, 822 F.3d at 1363 (citing *DePuy*, 567 F.3d at 1324).

The district court correctly concluded that Dr. Jang’s hypothetical claims three and five were flawed and properly declined to conduct any hypothetical claim analysis as a result. See J.A. at 12–19. Dr. Jang’s hypothetical claim three reads:

~~the first connecting strut intermediate section being non-parallel to the first connecting strut proximal and distal sections~~ *column configured to provide increased flexibility compared to the first and second expansion columns.*

⁵ We have described the ensnarement inquiry as one of determining the *patentability* of the hypothetical claim, rather than its validity. That is because “[t]he pertinent question” is “whether that hypothetical claim could have been allowed by the PTO over the prior art” as the PTO has never actually issued it. *Wilson Sporting Goods*, 904 F.2d at 684.

Id. at 14 (strikethrough and emphasis to reflect amendments to claim 1).⁶ Although hypothetical claim three is broader than claim 1 by deleting the non-parallel intermediate section limitation (thereby encompassing connecting struts with a parallel intermediate section), it also is narrower by adding the requirement that the connecting strut column must provide more flexibility as compared to the expansion columns. Our precedent has been clear, however, that a patentee's hypothetical claim may not add any narrowing limitations. *See Streamfeeder*, 175 F.3d at 983 (“While use of a hypothetical claim may permit a minor extension of a claim to cover subject matter that is substantially equivalent to that literally claimed, one cannot, in the course of litigation and outside of the PTO, cut and trim, expanding here, and narrowing there, to arrive at a claim that encompasses an accused device, but avoids the prior art. Slight broadening is permitted at that point, but not narrowing.”). Whereas claim 1 previously covered embodiments where the connecting strut column has the *same or lesser* degree of flexibility when compared to the first and second expansion columns, hypothetical claim three narrows claim 1 so that the connecting strut column must have an *increased* degree of flexibility when compared to the first and second expansion columns. *See* J.A. at 16. The district court thus correctly rejected Dr. Jang's hypothetical claim three.

Dr. Jang contends that the combination of the added comparative flexibility limitation with the deletion of the non-parallel intermediate section limitation results in an overall broader claim scope than

⁶ We will not recite the other limitations of claim 1 that remain unchanged in Dr. Jang's hypothetical claims three and five.

claim 1, because, in his view, the comparative flexibility limitation recites the function that the non-parallel intermediate section of the connecting strut is designed to achieve. In other words, Dr. Jang argues that he simply is replacing a structural limitation for a functional limitation that encompasses the structural limitation, as well as all other structures that perform that function. But this argument is problematic because nothing in the '021 Patent or elsewhere in the record indicates that the claimed connecting strut columns provide increased flexibility in comparison to the claimed expansion columns. Although the specification explains that the connecting strut columns improve a particular form of flexibility (i.e., longitudinal) of the stent as a whole, *see* '021 Patent col. 6 ll. 29–36; *id.* col. 8 ll. 45–47, it never discusses the flexibility of the connecting strut columns vis-à-vis the expansion columns. We thus cannot agree with Dr. Jang that the limitation he added in hypothetical claim three is merely a broader version of the limitation he deleted from claim 1.

As for Dr. Jang's hypothetical claim five, it reads:

a first connecting strut including *at least* a first connecting strut proximal section, a first connecting strut distal section and a first connecting strut intermediate section[.]

J.A. at 17 (emphasis to reflect amendment to claim 1). This hypothetical claim does not broaden claim 1 at all. Claim 1 already uses the transitional phrase “comprising” to establish an open-ended claim. *See, e.g., Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc.*, 212 F.3d 1377, 1383–84 (Fed. Cir. 2000) (“A drafter uses the term ‘comprising’ to mean ‘I claim at least

what follows and potentially more.”). Thus, the addition of “at least” to hypothetical claim five is redundant with claim 1’s recitation of “comprising.” In short, hypothetical claim five and claim 1 have the same claim scope.

Following Dr. Jang’s troubles in drafting a proper hypothetical claim that encompassed the Express stent yet was also patentable in the face of seemingly crowded prior art (a venture that began with generating approximately ten different hypothetical claims), the district court was under no obligation to undertake a hypothetical claim analysis on his behalf. A patentee, like Dr. Jang, bears the burden of proving that it is entitled to “the range of equivalents which it seeks.” *Wilson Sporting Goods*, 904 F.2d at 685. And, when utilizing the hypothetical claim tool, that burden starts with proposing a proper hypothetical claim that only broadens the issued asserted claims. See *Streamfeeder*, 175 F.3d at 983. Dr. Jang cannot effectively transfer the responsibility of defining the range of equivalents to which he is entitled to the district court.⁷ See *Ultra-Tex Surfaces*, 204 F.3d at 1364 (“Under a hypothetical claim analysis, a patentee proposes a hypothetical claim” (emphasis added)). Because, as a threshold matter, Dr. Jang failed to submit a proper hypothetical claim for consideration, he was unable to meet his burden of proving that his doctrine

⁷ In *Streamfeeder*, after we rejected the patentee’s hypothetical claim for impermissibly narrowing the patent claim in one respect while also broadening it in another, we additionally explained why a proper hypothetical claim in that case—one without the narrowing limitation—was unpatentable over the prior art. See 175 F.3d at 983–84. Nothing in *Streamfeeder*, however, requires courts to engage in this additional inquiry when the patentee fails to come forward with a proper hypothetical claim.

of equivalents theory did not ensnare the prior art. The district court thus correctly vacated the jury verdict of infringement under the doctrine of equivalents.

Failing on the merits, Dr. Jang turns to several purported procedural infirmities in the district court's handling of BSC's ensnarement defense. Dr. Jang specifically argues that BSC waived its ensnarement defense because: (1) BSC failed to raise the defense in a motion for either summary judgment or JMOL; (2) the defense was a proxy for invalidity defenses that were excluded by the district court earlier in the case; (3) BSC's belated notice to Dr. Jang of the defense was prejudicial because it deprived him of any pre-trial discovery related to the defense; and (4) the defense was never listed in the pretrial order as required by Ninth Circuit law. We address each of these unpersuasive arguments in turn.

First, Dr. Jang argues that in *DePuy* we held that ensnarement must be raised in a motion for either summary judgment or JMOL. *See* Appellant Br. at 30 (citing *DePuy*, 567 F.3d at 1324). But that is an unduly narrow reading of *DePuy*. We considered in that case whether ensnarement is a factual question that must be tried to the jury. 567 F.3d at 1323. To answer that question, we turned to precedent, which has treated ensnarement and prosecution history estoppel on equal footing. *See id.* (“We have called ensnarement and prosecution history estoppel, collectively, ‘two policy oriented limitations’ on the doctrine of equivalents, both of which are ‘applied as questions of law.’” (quoting *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 870 (Fed. Cir. 1985), *overruled in part on other grounds*, *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1068 (Fed. Cir. 1998) (en banc))). Because prosecution history estoppel was a legal

question for a district court to consider, we concluded that ensnarement was one as well. *See id.* (“We see no reason why ensnarement should be treated differently, for procedural purposes, than prosecution history estoppel.”). We held that

[E]nsnarement, like prosecution history estoppel, is “to be determined by the court, either on a pretrial motion for partial summary judgment or on a motion for judgment as a matter of law at the close of the evidence and after the jury verdict.” As a practical matter, both legal limitations may be readily addressed in the same set of motions.

Id. at 1324 (quoting *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n.8 (1997)). Our “holding” in *DePuy* was not that these two motions were the only vehicles by which to raise ensnarement. Instead, when read in context, *DePuy* is most fairly understood as holding that ensnarement is a legal question for the district court to decide and that the district court *could*, but did not have to, decide that question through particular types of motions. *See id.* This is especially so because the district court in *DePuy* conducted a separate ensnarement proceeding after a jury verdict of infringement under the doctrine of equivalents, just as the district court did here. *See id.* at 1321–22. We see nothing legally unsound in BSC raising ensnarement through its pretrial motion in limine, and the district court conducting a post-trial hearing on the defense contingent on an infringement verdict under the doctrine of equivalents. Moreover, based on a review of the record, we are satisfied that Dr. Jang received sufficient notice of BSC’s ensnarement argument.

Second, Dr. Jang argues that the district court should have barred BSC from presenting its ensnarement defense as a matter of law because BSC was not allowed to challenge the validity of the asserted claims. Allowing BSC to repackage previously-excluded invalidity defenses in the guise of an ensnarement defense, he argues, is a “camouflaged or backhanded attack” on the validity of the asserted claims and effectively an end run around the right to a jury trial on validity. *See* Appellant Br. at 47, 50 (quoting *Thomas & Betts Corp. v. Litton Sys., Inc.*, 720 F.2d 1572, 1580 (Fed. Cir. 1983)).

We are unpersuaded by Dr. Jang’s attempt to conflate two different concepts. We have explained before that “[t]he ensnarement inquiry . . . has no bearing on the validity of the actual claims” asserted in a case. *DePuy*, 567 F.3d at 1323 (citing *Wilson Sporting Goods*, 904 F.2d at 685). And that is because ensnarement concerns patentability with respect to a hypothetical patent claim as opposed to the validity of an actual patent claim. *See Wilson Sporting Goods*, 904 F.2d at 685 (“Leaving this burden [of proving that the range of equivalents sought does not ensnare the prior art] on [the patentee] does not, of course, in any way undermine the presumed validity of [its] actual patent claims. In the present situation, [the patentee’s] claims will remain valid whether or not [it] persuades us that it is entitled to the range of equivalents sought here.”). Thus, the fact that BSC could not pursue a validity challenge of the asserted claims in this litigation does not somehow mandate that it is likewise barred from challenging a necessarily-broader set of newly-minted, hypothetical claims.

Dr. Jang’s reliance on *Thomas & Betts* is misplaced. There, we stated that “[w]here [the] validity

[of a patent] in view of the prior art has not been challenged, the [district] court is less free to limit the application of the doctrine of equivalents than where invalidity is specifically urged” 720 F.2d at 1580. That observation about the relative application of the doctrine of equivalents in two different factual scenarios, however, is not a license for a patentee to obtain a range of equivalents that ensnares the prior art, even if an alleged infringer does not challenge the validity of the underlying patent claims. *See Wilson Sporting Goods*, 904 F.2d at 684.

Third, Dr. Jang was not prejudiced by any lack of pretrial discovery as to ensnarement. The district court ruled that Dr. Jang could proceed with a doctrine of equivalents theory at trial only shortly before it started. *See* J.A. at 68–69. It also alerted the parties during this time frame that it would conduct an ensnarement hearing if the jury returned a verdict of infringement under the doctrine of equivalents. *Id.* at 12207 (post-verdict Minute Order: “After directing the [c]lerk to enter the jury’s verdict into the record, the [district court] reminded counsel for both parties of *its prior ruling that in the event the jury found in favor of [p]laintiff under the doctrine of equivalents theory*, it would proceed with an evidentiary hearing on the issue of ensnarement.” (emphasis added)). By then there was little to no time to reopen discovery, let alone a motion by Dr. Jang to do so, which could have resulted in a waste of the party’s resources and disrupted the district court’s case management, had the jury not returned a verdict of infringement under the doctrine of equivalents. In between the jury’s verdict and the ensnarement hearing, the parties had “three weeks to develop evidence, expert opinion, and argument . . . [on the ensnarement] defense.” Appellant

Br. at 34. Each party was presumably on a level playing field when they arrived at the hearing. If Dr. Jang deemed otherwise, he could have moved the district court for an enlargement of time to conduct additional discovery on the defense.

Fourth and finally, Dr. Jang argues that “Ninth Circuit law is clear that any defense not listed in the [p]retrial [o]rder is waived,” and that because ensnarement was not listed in the pretrial order, the defense was waived. Appellant Br. at 31–32 (citing *Pierce Cty. Hotel Emps. & Rest. Emps. Health Tr. v. Elks Lodge*, 827 F.2d 1324, 1329 (9th Cir. 1987); *United States v. First Nat’l Bank of Circle*, 652 F.2d 882, 886 (9th Cir. 1981)). But this puts the cart before the horse. Dr. Jang has not adequately articulated why proper preservation of ensnarement required its explicit mention in the pretrial order. The pretrial order governs trial, *see, e.g.*, Fed. R. Civ. P. 16(e), but ensnarement is a legal question for the district court to decide, and the district court here notified the parties before trial that it would resolve that question, if necessary, outside of the trial, *see* J.A. at 12207. We see no reason why the district court should have mentioned ensnarement or the contingent post-trial hearing on ensnarement in the pretrial order under these circumstances.

In sum, the district court permissibly conducted a post-trial ensnarement hearing after finding that BSC timely raised the defense, and it appropriately vacated the jury verdict of infringement under the doctrine of equivalents and entered judgment of non-infringement for BSC when Dr. Jang failed to demonstrate through a proper hypothetical claim analysis that his doctrine of equivalents theory did not ensnare the prior art.

C. Cross-Appeal

BSC cross-appeals the denial of its motion for summary judgment, in which the district court held that it owed royalties to Dr. Jang, if the Express stent were covered by the asserted claims, notwithstanding the PTO's eventual cancellation of those claims. We dismiss the cross-appeal because it does not seek to enlarge the district court's judgment of non-infringement in its favor. Instead, the cross-appeal merely offers an alternative basis to affirm the judgment. *See Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1343 n.2 (Fed. Cir. 2008) (dismissing "cross-appeal as improper because it did not seek to enlarge the judgment but merely asserted an alternative ground to affirm the judgment"); *see also Symantec Corp. v. Computer Assocs. Int'l, Inc.*, 522 F.3d 1279, 1294–95 (Fed. Cir. 2008). When an improper cross-appeal is dismissed, we may nonetheless consider the arguments raised as alternative grounds for sustaining the judgment. *Symantec*, 522 F.3d at 1294. Because we affirm the district court's judgment on other grounds, we need not do so here.

CONCLUSION

Based on the foregoing analyses, the district court correctly denied Dr. Jang's motion for JMOL of literal infringement of claims 1 and 8 of the '021 Patent as substantial evidence supported the jury's verdict of no literal infringement. The district court properly vacated the jury's finding of infringement under the doctrine of equivalents because it correctly concluded that Dr. Jang did not meet his burden of proving that his doctrine of equivalents theory did not ensnare the prior art as he failed to draft a proper hypothetical

27a

claim. The district court consequently entered judgment of non-infringement in favor of BSC, and we *affirm* that entry of judgment. We *dismiss* the cross-appeal and need not reach the arguments it raised.

AFFIRMED.

COSTS

No costs.

APPENDIX B

**UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA**

G. DAVID JANG, M.D.,

Plaintiff,

v.

BOSTON SCIENTIFIC CORPO-
RATION, a Delaware corporation;
SCIMED LIFE SYSTEMS, INC., a
Minnesota corporation,

Defendants.

Case No.
EDCV 05-
426-VAP
(MRWx)

**ORDER GRANTING JUDGMENT IN FAVOR OF
DEFENDANTS**

On July 8, 2015, a duly-empaneled jury in this case delivered its special verdict. The jury found in favor of Defendants Boston Scientific Corporation and Scimed Life Systems, Inc., (collectively, “BSC”), and against Plaintiff G. David Jang, M.D (“Dr. Jang”) on the interrogatories inquiring whether Defendant’s Express stents literally infringed Claims 1 and 8 of U.S. Patent 5,922,021 (“the ’021 Patent”). The jury found in favor of Dr. Jang and against BSC on interrogatories inquiring whether the Express stents infringed Claims 1 and 8 of the ’021 Patent under the doctrine of equivalents. (See Doc. No. 661.)

Following the jury’s findings in favor of Dr. Jang under the doctrine of equivalents, the Court set an ev-

identitary hearing concerning the ensnarement defense, pursuant to DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 567 F.3d 1314 (Fed. Cir. 2009). On August 18, 2015, the Court conducted that evidentiary hearing. (See Doc. No. 711.) In lieu of closing arguments, the Court directed the parties to submit closing briefs, which were filed on August 25, 2015. (See Doc. No. 708 (“Defs.’ Br.”); Doc. No. 710 (“Pl.’s Br.”).) Having considered the evidence and arguments presented at the hearing and the written submissions, the Court rules as follows.

I. BACKGROUND

“Ensnarement bars a patentee from asserting a scope of equivalency that would encompass, or ‘ensnare,’ the prior art.”¹ DePuy, 567 F.3d at 1322 (citing Wilson Sporting Goods Co. v. David Geoffrey & Assoc., 904 F.2d 677, 683 (Fed. Cir. 1990), overruled in part on other grounds, Cardinal Chem. Co. v. Morton Int’l, Inc., 508 U.S. 83, 92 n.12 (1993)). The defense of ensnarement is one of various “legal limitations on the application of the doctrine of equivalents.” Id. at 1323 (quoting Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 39 n.8 (1997)). Ensnarement is a legal limitation that is decided by the court, either

¹ Though the defense of ensnarement was not a theory that was explicitly enumerated by the Supreme Court in Warner-Jenkinson as a legal limitation on the doctrine of equivalents, the Federal Circuit analogized the defense of ensnarement to prosecution history estoppel in DePuy. DePuy, 567 F.3d at 1323 (“Although Warner-Jenkinson did not explicitly mention ‘ensnarement’ as one of the ‘various legal limitations on the application of the doctrine of equivalents’ to be decided by a court, we have consistently treated it as such.”).

on a motion for partial summary judgment, or a motion for judgment as a matter of law at the close of evidence and after the jury verdict. Id.

Once a patentee invokes a theory of infringement under the doctrine of equivalents and the alleged infringer has raised an ensnarement defense, the initial burden rests on the alleged infringer to present “prior art which shows that the asserted range of equivalence would encompass the prior art” Streamfeeder, LLC v. Sure-Feed Sys., Inc., 175 F.3d 974, 983 (Fed. Cir. 1999). After the infringer satisfies this burden, the burden then shifts to the patentee “to show that [his] claim does not cover the prior art.” Id.; see also DePuy, 567 F.3d at 1324 (“The burden of persuasion is on the patentee to establish that the asserted scope of equivalency would not ensnare prior art.”). Where a jury has been empaneled as a finder of fact and has rendered its decision, the court is to “presume that the jury resolved underlying evidentiary conflicts in [patentee’s] favor [given that it prevailed at trial under the doctrine of equivalents].” Wilson Sporting Goods, 904 F.2d at 684.

II. BSC DID NOT WAIVE ITS RIGHT TO RAISE ENSNAREMENT

In Dr. Jang’s opening brief filed before the ensnarement hearing, he argued that BSC’s ensnarement defense should be stricken because it was pled insufficiently, and therefore BSC had not met its initial burden of presenting prior art. (Doc. No. 686.) BSC countered by arguing that ensnarement is not an affirmative defense that can be “waived” in the traditional sense, but instead “is a limitation that always governs the possible range of equivalents that a pa-

tentee may claim.” (Doc. No. 684.) In addition to raising this issue in the opening briefs, the parties also made arguments with respect to waiver during the ensnarement hearing, as well as in their closing briefs.

The Court rejects BSC’s contention that the defense of ensnarement cannot be waived. In Fiskars, Inc. v. Hunt Mfg. Co., 221 F.3d 1318 (Fed. Cir. 2000), the Federal Circuit disallowed an ensnarement defense where the accused infringer “did not allege that its device is in the prior art, or that a hypothetical claim covering its device would be unpatentable.” 221 F.3d at 1323. As the alleged infringer had not met its initial burden to present prior art, “there was nothing for [the patentee] to rebut.” Id.

In connection with the analogous defense of prosecution history estoppel, the Federal Circuit also has held that an alleged infringer’s failure “to timely argue and support its prosecution history estoppel defense in district court” constituted a waiver of that argument. Yeu v. Kim, 904 F.2d 44, at *1 (Fed. Cir. 1990) (Table); see also Teva Pharm. USA, Inc. v. Sandoz, Inc., 876 F. Supp. 2d 295, 347 (S.D.N.Y. 2012) rev’d in part on other grounds, 723 F.3d 1363 (Fed. Cir. 2013) (declining to consider a prosecution history estoppel defense where the alleged infringer “waited until after trial to raise this defense.”). Thus, an alleged infringer’s leeway to assert an ensnarement defense is not unlimited, and certainly must be advanced prior to trial.²

² The Federal Circuit has not held that ensnarement is an affirmative defense that a party must raise at any particular stage of the proceedings. See Pac. Coast Marine Windshields Ltd. v. Malibu Boats, LLC, 739 F.3d 694, 702 (Fed. Cir. 2014) (assuming

The record in this case abounds with accusations of tardiness by both sides: BSC claims Dr. Jang did not raise timely his theory of infringement under the doctrine of equivalents, and Dr. Jang argues BSC failed to disclose its ensnarement defense in a timely fashion. Though the Court has considered the parties' respective arguments, it declines to reverse its prior ruling, *i.e.*, that Dr. Jang's theory of infringement under the doctrine of equivalents was raised timely, and was properly before the jury.³ The Court also declines to find that BSC failed to respond timely with its assertion of the ensnarement defense.

Even assuming, without deciding, that BSC raised the ensnarement defense for the first time after the Court denied the defense's motion for summary judgment in 2014, BSC raised its contention that Dr. Jang's construction of the claim terms ensnared the prior art when it filed its in limine motions.⁴ Ensnarement can be raised after a court has heard summary

for purposes of argument that the analogous theory of prosecution history estoppel was an affirmative defense, but that it did not need to be raised in the defendant's answer). District courts also have not reached consensus on the issue. See Deep9 Corp. v. Barnes & Noble, Inc., 772 F. Supp. 2d 1349, 1351 (W.D. Wash. 2011) (striking affirmative defense of prosecution history estoppel because it was not an affirmative defense, but allowing defendant to raise it later in the case).

³ Indeed, the Court held as much in response to BSC's motion in limine concerning this issue. (See Motion in Limine Order (Doc. No. 554) at 12-13.)

⁴ In fact, BSC filed a motion in limine seeking to preclude Dr. Jang's theory under the doctrine of equivalents and filed its memorandum of contentions of fact and law stating that "the doctrine of equivalents may not be used to capture what was in the prior art," before the Court ruled on its motion for summary judgment. (See Doc. Nos. 491, 498.)

judgment motions. See Juniper Networks, Inc. v. Palo Alto Networks, Inc., 15 F. Supp. 3d 499, 518 n.18 (D. Del. 2014) (denying summary judgment and stating that if the accused infringer wished to move forward with an ensnarement defense, “it [would] need to provide the court with a proffer before trial.”).

The Court finds that BSC’s references to the Lau, Brown, and Wijay patents in its motion in limine regarding the doctrine of equivalents and its pretrial memorandum are sufficient to “go[] forward” with its ensnarement defense. See Streamfeeder, 175 F.3d at 983. Accordingly, the burden now shifts to Dr. Jang “to show that [his] claim does not cover the prior art.” Id.

III. DR. JANG’S HYPOTHETICAL CLAIMS ARE IMPROPER

At the ensnarement hearing BSC argued that, as a threshold matter, Dr. Jang cannot meet his burden of showing that the claims of the ’021 patent, as construed by the court, did not cover the prior art because his hypothetical claims violated principles espoused in Streamfeeder and Int’l Visual Corp. v. Crown Metal Mfg. Co., 991 F.2d 768 (Fed. Cir. 1993). (Ensnarement Hearing A.M. Tr. at 70:25-71:15.)

While “[s]light broadening is permitted” during the drafting of a hypothetical claim, the “[h]ypothetical claim analysis . . . cannot be used to redraft granted claims in litigation by narrowing and broadening a claim at the same time.” Streamfeeder, 175 F.3d at 983. This is because “[w]holesale redrafting of granted claims during litigation by narrowing and expanding the claims at the same time in creating a hypothetical claim is not supported by [Federal Circuit] case law and it avoids the examination process.” Id.

Thus, a “hypothetical claim is only a device for limited, not substantial, inclusion of unclaimed subject matter and not for exclusion of unduly limiting subject matter.” Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co., 204 F.3d 1360, 1366 (Fed. Cir. 2000).

Moreover, as explained by the Federal Circuit in Int’l Visual, where a patentee asserts claims under the doctrine of equivalents, he must put forward a hypothetical claim that is broader than the patented claim. 911 F.2d at 772 (analysis under the doctrine of equivalents “requires a court to visualize a hypothetical claim that enlarges the scope of an issued claim so that it literally covers an accused device and to determine whether that hypothetical claim would have been patentable over the prior art.”); see also Wilson Sporting Goods, 904 F.2d at 685 (“The specific question before us, then, is whether [the patentee] has proved that a hypothetical claim, similar to claim 1 but broad enough to literally cover [the accused infringer’s product], could have been patentable.”).

Dr. Jang has advanced two hypothetical claims, which the parties have referred to as hypothetical claims three and five. The Court discusses each in turn.

1. Hypothetical Claim Three Impermissibly Narrows the Claim

Dr. Jang’s hypothetical claim three reads:

~~the first connecting strut intermediate section being non-parallel to the first connecting strut proximal and distal sections~~ **column configured to provide increased flexibility compared to the first and second expansion columns**

BSC contends this hypothetical claim broadens the original claim by eliminating the requirement regarding the location of the intermediate section, while simultaneously narrowing the claim by adding a requirement of increased flexibility. (Defs.' Br. 3-4.) BSC's expert witness Dr. Moore testified that, because there was nothing in the relevant sections of the original claims that provided for flexibility in this manner, this new requirement of flexibility in hypothetical claim three "narrows the claim down relative to the case where it could be stiffer." (Ensnarement Hearing P.M. Tr. at 65:1-2.) On cross-examination, Dr. Jang's expert Mr. Lee admitted that the addition of the language concerning flexibility in the hypothetical claim three would narrow the original claims of the patent to exclude prior art. (*Id.* at 12:1-4.)

Dr. Jang counters this argument by contending that the flexibility limitation does not narrow the claim, but "instead replaces a limitation in a specific way" thereby broadening the claim. (Pl.'s Br. at 10.) Dr. Jang also argues that Streamfeeder is inapplicable here, because the Streamfeeder court found that it was impermissible only to alter two limitations (one narrowing, one broadening) to add requirements not present in the prior art. (*Id.*) Thus, Dr. Jang argues, Streamfeeder "does not prohibit 'narrowing' *per se*, but the addition of separate modifications that narrow the claim." (*Id.*)

The Court disagrees that Streamfeeder prohibits only a hypothetical claim that simultaneously broadens and narrows an original claim, or that it allows for some amount of narrowing. (*Id.* at 10-11.) As explained in Streamfeeder, and in Ultra-Tex, a case relying on Streamfeeder, a hypothetical claim that narrows the original claim in any way is impermissible.

See Streamfeeder, 175 F.3d at 983; Ultra-Tex, 204 F.3d at 1366 (forbidding a patentee from using a “hypothetical analysis to ‘freely redraft’ its claim by impermissibly broadening and narrowing it at the same time.”); see also 2 Annotated Patent Digest § 13:75.

Moreover, the Court also disagrees that the addition of the language concerning flexibility actually broadens the language of the original claim. (Pl.’s Br. at 11.) As Dr. Moore explained, the original claim here did not describe a connecting strut being more flexible than the expansion columns. Thus, the addition of a flexibility limitation is a narrowing of the claim, thereby preventing the hypothetical claim from covering products that allow the expansion columns to be stiff, rather than flexible.

Accordingly, as Dr. Jang’s proposed hypothetical Claim Three improperly narrows the claims of the original patent, it is impermissible in light of Streamfeeder and must be rejected.

2. Hypothetical Claim Five Impermissibly Fails to Broaden the Claim

Dr. Jang’s hypothetical Claim Five reads:

a first connecting strut including **at least** a first connecting strut proximal section, a first connecting strut distal section and a first connecting strut intermediate section . . .

BSC argues that the sole addition of “at least” to the language of hypothetical claim five is impermissible because it fails to broaden the claims of the original patent, thereby “resulting in a hypothetical claim of exactly the same scope as the original claims.” (Defs.’ Br. at 5.) This is because the supposedly broadened hypothetical claim “does not remove any of the

requirements of [claims of the original patent],” and thus, in other words, “[i]t contains all of the same elements, in exactly the same form, as the original claims” (Id. at 6.)

Dr. Jang contends that hypothetical claim five is broader because it “clarifies that the connecting strut, like the Micro elements, may have additional ‘metal.’” (Pl.’s Br. at 13.)

As noted above, Int’l Visual requires the court to “visualize a hypothetical claim that enlarges the scope of an issued claim so that it literally covers an accused device and to determine whether that hypothetical claim would have been patentable over the prior art.” 991 F.2d at 772. Thus, it follows that if the patentee’s hypothetical claim does not enlarge the scope of the original claim, the hypothetical claim must be rejected.

The Court agrees with BSC that the language of hypothetical claim five does not broaden the language of any claim of the original patent, as it does not remove any requirement of those claims; indeed, adding “at least” in the context of the claim language does not broaden it at all. As BSC argues, even with this addition, the hypothetical claim still “contains all of the same elements, in exactly the same form, as the original claims” (Defs.’ Br. at 6.)

Accordingly, as Dr. Jang’s proposed hypothetical claim five fails to broaden original claims of the patent, it is impermissible in light of Int’l Visual and must be rejected.

IV. CONCLUSION

For the foregoing reasons stated, the Court finds BSC is entitled to entry of judgment in its favor and against Dr. Jang on the claims that the Express stents

38a

infringed Claims 1 and 8 of the '021 Patent under the doctrine of equivalents. The jury having rendered its verdict on the special interrogatories on the theory of liability for literal infringement in favor of BSC, BSC therefore is entitled to a final judgment in its favor on all claims, and shall submit a Proposed Judgment.

Dated: September 29, 2015 s/ Virginia A. Phillips

VIRGINIA A. PHILLIPS
United States District Judge

APPENDIX C

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

G. DAVID JANG, M.D.,

Plaintiff-Appellees,

v.

BOSTON SCIENTIFIC CORPO-
RATION, SCIMED LIFE SYS-
TEMS, INC., NKA BOSTON SCI-
ENTIFIC SCIMED, INC.,

Defendants-Cross-Appellants.

No. 2016-
1275, 2016-
1575

Appeals from the United States District Court for the
Central District of California in No. 5:05-cv-00426-
VAP-MRW, Judge Virginia Anne Phillips.

**ON PETITION FOR PANEL REHEARING AND
REHEARING EN BANC**

Before PROST, Chief Judge, NEWMAN, LOURIE, DYK,
MOORE, O'MALLEY, REYNA, WALLACH, TARANTO,
CHEN, HUGHES, and STOLL, *Circuit Judges.*

PER CURIAM.

ORDER

Appellant G. David Jang, M.D. filed a combined
petition for panel rehearing and rehearing en banc. A
response to the petition was invited by the court and
filed by cross-appellants Boston Scientific Corporation

40a

and Scimed Life Systems, Inc. The petition was referred to the panel that heard the appeal, and thereafter the petition for rehearing en banc was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The petition for rehearing en banc is denied.

The mandate of the court will issue on December 28, 2017.

December 21, 2017

Date

FOR THE COURT

/s/ Peter R. Marksteiner

Peter R. Marksteiner
Clerk of Court

APPENDIX D

U.S. Constitution, Amendment VII

In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law.

35 U.S. Code § 282. Presumption of validity; defenses.

(a) In General.—A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

(b) Defenses.—The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

- (1) Noninfringement, absence of liability for infringement or unenforceability.
- (2) Invalidity of the patent or any claim in suit on any ground specified in part II as a condition for patentability.
- (3) Invalidity of the patent or any claim in suit for failure to comply with—

(A) any requirement of section 112, except that the failure to disclose the best mode shall not be a basis on which any claim of a patent may be canceled or held invalid or otherwise unenforceable; or

(B) any requirement of section 251.

(4) Any other fact or act made a defense by this title.

(c) Notice of Actions; Actions During Extension of Patent Term.—In an action involving the validity or infringement of a patent the party asserting invalidity or noninfringement shall give notice in the pleadings or otherwise in writing to the adverse party at least thirty days before the trial, of the country, number, date, and name of the patentee of any patent, the title, date, and page numbers of any publication to be relied upon as anticipation of the patent in suit or, except in actions in the United States Court of Federal Claims, as showing the state of the art, and the name and address of any person who may be relied upon as the prior inventor or as having prior knowledge of or as having previously used or offered for sale the invention of the patent in suit. In the absence of such notice proof of the said matters may not be made at the trial except on such terms as the court requires. Invalidity of the extension of a patent term or any portion thereof under section 154(b) or 156 because of the material failure—

(1) by the applicant for the extension, or

(2) by the Director,

to comply with the requirements of such section shall be a defense in any action involving the infringement of a patent during the period of the extension of its

43a

term and shall be pleaded. A due diligence determination under section 156(d)(2) is not subject to review in such an action.

APPENDIX E

**UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA
EASTERN DIVISION – RIVERSIDE**

G. DAVID JANG, M.D.,

Plaintiff,

v.

BOSTON SCIENTIFIC CORPO-
RATION, a Delaware corporation;
SCIMED LIFE SYSTEMS, INC., a
Minnesota corporation,

Defendants.

Case No.
EDCV 05-
00426-VAP
(MRWx)

**SPECIAL
VERDICT
FORM**

VERDICT

We, the jury, find as follows:

Question No. 1: Has Dr. Jang proven, by a preponderance of the evidence (*i.e.*, that it is more likely than not), that the Express stent literally infringes claim 1 of U.S. Patent 5,922,021 (*i.e.*, literally includes each and every requirement of claim 1)?

YES _____ NO X

If you answer “YES” to Question No. 1, skip to Question No. 3.

If you answer “NO” to Question No. 1, proceed to Question No. 2.

Question No. 2: For any requirements of claim 1 of U.S. Patent 5,922,021 that are not literally infringed,

has Dr. Jang proven, by a preponderance of the evidence (*i.e.*, that it is more likely than not), that the Express stent meets the requirement(s) under the doctrine of equivalents?

YES X NO

If you answer “YES” to Question No. 2, proceed to Question No. 3.

If you answer “NO” to Question No. 2, STOP. You have completed your deliberations.

Question No. 3: Has Dr. Jang proven, by a preponderance of the evidence (*i.e.*, that it is more likely than not), that the Express stent literally infringes claim 8 of U.S. Patent 5,922,021 (*i.e.*, literally includes each and every limitation of claim 1 and claim 8)?

YES NO X

If you answer “YES” to Question No. 3, skip to Question No. 5.

If you answer “NO” to Question No. 3, proceed to Question No. 4.

Question No. 4: For any requirements of claim 8 of U.S. Patent 5,922,021 that are not literally infringed, has Dr. Jang proven, by a preponderance of the evidence (*i.e.*, that it is more likely than not), that the Express stent meets the requirement(s) under the doctrine of equivalents?

YES X NO

If you answer “YES” to Question No. 4, proceed to Question No. 5.

If you answer “NO” to Question No. 4, STOP. You have completed your deliberations.

Question No. 5: Has Dr. Jang proven, by a preponderance of the evidence (*i.e.*, that it is more likely than not), that he performed all of his obligations under the Assignment Agreement?

YES X NO

If you answer “YES” to Question No. 5, proceed to Question No. 6.

If you answer “NO” to Question No. 5, STOP. You have completed your deliberations.

Question No. 6: Has Dr. Jang proven, by a preponderance of the evidence (*i.e.*, that it is more likely than not), that BSC breached its obligations under the Assignment Agreement by failing to make required payments to Dr. Jang?

YES X NO

The Presiding Juror should now sign and date the verdict form in the spaces below and notify the bailiff that you have reached a verdict. The Presiding Juror should retain possession of the verdict form and bring it when the jury is brought back into the courtroom.

DATED: July 8, 2015

By: REDACTED

Presiding Juror