

NOTE: This disposition is nonprecedential.

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

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**CAVE CONSULTING GROUP, LLC,**  
*Plaintiff-Appellee*

v.

**OPTUMINSIGHT, INC., FKA INGENIX, INC.,**  
*Defendant-Appellant*

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2017-1060

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Appeal from the United States District Court for the Northern District of California in No. 5:11-cv-00469-EJD, Judge Edward J. Davila.

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Decided: March 21, 2018

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RICHARD L. BROPHY, Armstrong Teasdale LLP, St. Louis, MO, argued for plaintiff-appellee. Also represented by ZACHARY CHARLES HOWENSTINE, MARK A. THOMAS.

PETER MCCREERY LANCASTER, Dorsey & Whitney LLP, Minneapolis, MN, argued for defendant-appellant. Also represented by SHANNON L. BJORKLUND, TIMOTHY J. DROSKE; PAUL D. ACKERMAN, Andrews Kurth Kenyon LLP, New York, NY; EDWARD R. REINES, Weil, Gotshal & Manges LLP, Redwood Shores, CA.

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Before LOURIE, DYK, and TARANTO, *Circuit Judges*.

LOURIE, *Circuit Judge*.

OptumInsight, Inc. (“Optum”) appeals from the final judgment by the United States District Court for the Northern District of California. *See Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 5:11-cv-00469-EJD (N.D. Cal. Apr. 6, 2015), ECF No. 370; J.A. 1. The judgment follows a jury verdict in favor of Cave Consulting Group, LLC (“Cave”) that U.S. Patent 7,739,126 (“the ’126 patent”) is not invalid and was infringed by Optum, awarding Cave \$12,325,000 in damages. *See Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 5:11-cv-00469-EJD (N.D. Cal. Apr. 3, 2015), ECF No. 366; J.A. 81–85.

On appeal, Optum challenges the district court’s various rulings, including a claim construction order, *see Cave Consulting Grp., LLC v. Ingenix, Inc.*, No. 5:11-cv-00469-EJD, 2013 WL 2467930 (N.D. Cal. June 7, 2013) (“*Claim Construction Order*”), orders on summary judgment motions, *see Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 5:11-cv-00469-EJD, 2015 WL 740379 (N.D. Cal. Feb. 20, 2015) (“*SJ Order*”); *Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 5:11-cv-00469-EJD (N.D. Cal. Feb. 23, 2015), ECF No. 293; J.A. 77–79, an order on *Daubert* motions, *see Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 5:11-cv-00469-EJD, 2015 WL 13413389 (N.D. Cal. Feb. 20, 2015) (“*Daubert Order*”), an order on certain pre-trial motions, *see Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 5:11-cv-00469-EJD (N.D. Cal. Mar. 16, 2015), ECF No. 332; J.A. 80, and an order on motion for judgment as a matter of law (“JMOL”) or for a new trial, *see Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 5:11-cv-00469-EJD, 2016 WL 4658979 (N.D. Cal. Sept. 7, 2016) (“*Post-trial Order*”).

Because the district court erred in its claim construction, we reverse *in part*, vacate *in part*, and remand.

#### BACKGROUND

Cave owns the '126 patent, which discloses “[a] method for measuring physician efficiency and patient health risk stratification.” '126 patent Abstract. The '126 patent describes that a physician’s “efficiency,” *i.e.*, the cost of care by a physician compared to that of a peer group, can be determined by analyzing relevant medical claims data. *Id.* col. 1 ll. 13–46, col. 7 l. 4–col. 9 l. 26. Independent claims 22 and 29 are at issue in this appeal; claim 22 reads as follows:

22. A method implemented on a computer system of determining physician efficiency, the method comprising:

obtaining medical claims data stored in a computer readable medium on the computer system;

performing patient analysis using said obtained medical claims data to form episodes of care utilizing the computer system;

performing output process based on performed patient analysis utilizing the computer system, the output process comprising:

assigning episodes of care to physicians; and

applying a first maximum duration rule to identify episodes of care;

assigning at least one physician to a report group utilizing the computer system;

determining eligible physicians and episode of care assignments utilizing the computer system;

calculating condition-specific episode of care statistics utilizing the computer system;

calculating *weighted episode of care statistics* across medical conditions utilizing a predefined set of medical conditions for a specific specialty type utilizing the computer system; and

determining efficiency scores for physicians from said calculated condition-specific episode of care statistics and said *weighted episode of care statistics* calculated across medical conditions utilizing the computer system.

*Id.* col. 111 l. 55–col. 112 l. 14 (emphases added).

Similarly, claim 29 requires “[a] computer program product” that “perform[s] the acts of” the identical steps of the method delineated in claim 22. *Id.* col. 112 ll. 38–67.

The ’126 patent describes its method as employing what it calls a “marketbasket” based on physicians’ specialties and discloses calculating “weighted episode statistics” of a peer group and of a physician to determine the physician’s efficiency score. *Id.* col. 92 l. 27–col. 94 l. 47. In particular, the ’126 patent describes that according to its method of using the “marketbasket,” “regardless of a physician’s (or peer group’s) actual episode work effort, the rule standardizes each physician’s actual work effort to a static set of weight factors,” and that its method “allows for an apples-to-apples comparison of one physician’s marketbasket results to another physician’s marketbasket results.” *Id.* col. 73 ll. 51–53, 57–61. The patent further states that its calculation of “weighted

episode statistics” using the “marketbasket” is “referred to as the indirect standardization rule” and that “[t]he system of the present invention uses an indirect standardization technique for weighting together the episodes within the core group of medical conditions.” *Id.* col. 92 ll. 37–41.

As background, the ’126 patent discusses the prior art methods that “use a physician’s actual episode composition.” *Id.* col. 1 ll. 50–51. The patent further discusses, *inter alia*, a type of measurement error, which “occurs in most if not all current efficiency measurement systems, occurs when the physician’s actual episode composition is used.” *Id.* col. 2 ll. 32–34. On the other hand, the patent states that, in calculating a peer group’s “weighted episode statistics,” its method “does not use the peer group’s actual episode composition to calculate the weighted average. Instead, the predetermined standard marketbasket weights are used.” *Id.* col. 93 ll. 12–14. Similarly, in calculating an individual physician’s “weighted episode statistics,” the patent states that “the same indirect standardization weighting calculations are performed using the physician’s condition-specific utilization and charges per episode and the same specialty-specific marketbasket weights.” *Id.* col. 93 ll. 31–35.

In 2011, Cave filed suit against Ingenix, Inc., Optum’s predecessor, in the Northern District of California, alleging infringement of the ’126 patent. Optum counterclaimed, asserting its own patents against Cave. They were found not to have been infringed and that issue is not before us in this appeal. It is undisputed that Cave and Optum both develop and market software and services that are used to measure efficiency of healthcare providers. Appellant’s Br. 3–4; Appellee’s Br. 2–3.

In August 2012, the district court held a claim construction hearing. In June 2013, the court issued an order construing, *inter alia*, certain claim limitations of

the '126 patent. *See Claim Construction Order*, 2013 WL 2467930. The court construed “weighted episode of care statistics” in claims 22 and 29 as “cost or length of care statistics for a group of medical conditions calculated using the relative importance of each condition to the others of the group,” adopting Cave’s proposed construction. *Id.* at \*2–4. In so doing, the court rejected Optum’s proposal to construe the limitation as requiring a usage of “predetermined weight factors” rather than the actual episode composition. *Id.* Such requirement would exclude direct standardization from the scope of the claim, and the district court reasoned that doing so would “essentially read out the nine dependent claims that rely on direct standardization.” *Id.* at \*4. The court, however, agreed with Optum and declined to construe the limitation “determining eligible physicians and episode of care assignments” in claims 22 and 29, adopting the plain meaning of the language of the claim limitation. *Id.* at \*5–6. In construing these claim limitations, the district court did not rely on any extrinsic evidence. *See id.* at \*2–6.

In February 2015, the district court issued orders on the parties’ motions, including their respective motions to exclude, *see Daubert Order*, 2015 WL 13413389, and summary judgment motions on infringement and validity, *see SJ Order*, 2015 WL 740379. In its summary judgment order, the district court determined, *inter alia*, that Optum had not shown invalidity or noninfringement of the '126 patent at the summary judgment stage. *SJ Order*, 2015 WL 740379, at \*3–12, \*14–15. The court first rejected Optum’s argument that the '126 patent was invalid for anticipation, being on sale or in public use under § 102(b),

or due to prior invention by Optum under § 102(g).<sup>1</sup> *Id.* at \*3–12.

As for Optum’s noninfringement arguments, the court rejected them. It determined that they were either an attempt to relitigate the claim limitations already construed, or dependent upon the plain meaning of the limitations not construed by the court and must be understood by the jury from the viewpoint of a skilled artisan. *Id.* at \*14–15. Thus, the court ruled that, beyond the limitation specifically construed, namely, “weighted episode of care statistics,” the remaining language of “calculating weighted episode of care statistics across medical conditions utilizing a predefined set of medical conditions,” which Optum argued it did not meet, should be understood by the jury according to how a person of ordinary skill in the art would read the limitation. *Id.* The court also rejected Optum’s noninfringement argument regarding other limitations, including “determining eligible physicians and episode of care assignments,” which the court had decided not to construe. *Id.* at \*15.

Thereafter, the court issued an order clarifying its *SJ Order*, and granted “[Cave’s] motion for summary judgment of validity of the ’126 patent under § 102(a), (b), and (g) for the same reasons set forth in the Order.” J.A. 77–79. The court also granted Cave’s motion to exclude from trial Optum’s arguments on whether a certain order of steps should be required to meet the “determining eligible physicians and episode of care assignments” limitation. J.A. 80.

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<sup>1</sup> The ’126 patent was filed before the effective date of the Leahy-Smith America Invents Act (“AIA”), Pub. L. 112-29, 125 Stat. 284 (2011), and is governed by the prior versions of certain sections of Title 35, including §§ 102 and 112, *see id.*, Pub. L. 112-29, §§ 3(n)(1), 4(e), 125 Stat. at 293, 297.

A jury trial was held in March 2015, and, as relevant to this appeal, the jury was instructed on the meaning of the claim limitations as construed in the *Claim Construction Order* and presented with the questions of invalidity of the '126 patent for inadequate written description of “weighted episode of care statistics” under § 112 and infringement of claims 22 and 29 by Optum’s Impact Intelligence software product. *Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 5:11-cv-00469-EJD (N.D. Cal. Apr. 1, 2015), ECF No. 357; J.A. 13444–50. In addition to the claim limitations construed in the *Claim Construction Order*, the jury was also instructed on the meaning of “predefined set of medical conditions.” J.A. 13446–47; *see also Post-trial Order*, 2016 WL 4658979, at \*5. At the conclusion of the trial, the jury found, *inter alia*, that the limitation “weighted episode of care statistics” does not lack adequate written description support, and that claims 22 and 29 were infringed by Optum. J.A. 82. The jury awarded Cave \$12,325,000 in damages. J.A. 83.

Following the jury trial, the parties filed post-trial motions. The district court denied all but part of Cave’s motion to amend the judgment, awarding prejudgment interest, supplemental damages, and post judgment interest. *Post-trial Order*, 2016 WL 4658979, at \*25–26.

As relevant here, the district court denied Optum’s motion for JMOL of noninfringement, noting that Optum did not seek construction of the “calculating weighted episode of care statistics across medical conditions utilizing a predefined set of medical conditions for a specific specialty type” limitation or make any argument before the jury on its plain and ordinary meaning. *Post-trial Order*, 2016 WL 4658979, at \*4–5. The court concluded that the jury’s infringement verdict was supported by the substantial evidence of Cave’s expert testimony that Optum performed that limitation. *Id.* The court further determined that the jury reasonably found that the limitation “weighted episode of care statistics” construed as



covering both direct and indirect standardizations was supported by adequate written description because the '126 patent's critical description of direct standardization was not an express disclaimer of direct standardization. *Id.* at \*7–9.

Optum timely appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

#### DISCUSSION

On appeal, Optum challenges the district court's claim construction, denial of summary judgment of noninfringement, and, after the jury trial, denial of JMOL of noninfringement. Optum alternatively argues that the district court erred in granting summary judgment when it concluded that the '126 patent is not invalid for being in public use or on sale under § 102(b) or due to prior invention by Optum under § 102(g), which were raised as affirmative defenses. Appellant's Br. 56; Oral Argument at 1:56–2:38, *Cave Consulting Grp., LLC v. OptumInsight, Inc.*, No. 17-1060 (Fed. Cir. Feb. 12, 2018), <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2017-1060.mp3>. Optum also challenges the calculation of the damages award.

We conclude that the district court erred in its construction of “weighted episode of care statistics,” which resulted in an erroneous finding of infringement based on undisputed facts. As such, we need not evaluate Optum's challenge to the damages determination, which is now moot. Moreover, because the issue of invalidity under § 102(b) and (g) were raised only as affirmative defenses and because neither party is seeking an adjudication on those issues in case of a finding of noninfringement, we do not reach the invalidity issues under § 102(b) or (g). See *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 99–102 (1993). As the Supreme Court noted in *Cardinal Chemical*, “[a]n unnecessary ruling on an affirmative defense is not the same as the necessary resolution of a

counterclaim for a declaratory judgment.” *Id.* at 93–94. Invalidity was not raised here as a counterclaim.

Furthermore, because our construction of the “weighted episode of care statistics” limitation is dispositive of the infringement issue based on undisputed facts, we need not discuss the proper construction of the “determining eligible physicians and episode of care assignments” limitation, or whether Optum has waived its claim construction argument for that limitation, as Cave has argued.

We will discuss the construction of “weighted episode of care statistics” and infringement issues in turn. We apply the law of the regional circuit in patent appeals “unless the issue pertains to or is unique to patent law.” *AbbVie Deutschland GmbH & Co. v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1295 (Fed. Cir. 2014) (internal quotation marks and citation omitted). We review a district court’s denial of a motion for JMOL under the law of the regional circuit in which it sits, here, the Ninth Circuit. *See SimpleAir, Inc. v. Sony Ericsson Mobile Commc’ns AB*, 820 F.3d 419, 424 (Fed. Cir. 2016). The Ninth Circuit reviews a denial of JMOL *de novo*, viewing “the evidence in the light most favorable to the nonmoving party” and “draw[ing] all reasonable inferences in that party’s favor,” and a jury’s verdict for substantial evidence. *EEOC v. Go Daddy Software, Inc.*, 581 F.3d 951, 961 (9th Cir. 2009) (internal quotation marks and citation omitted). A grant of post-verdict JMOL is proper only if “there is no legally sufficient basis for a reasonable jury to find for that party on that issue.” *Winarto v. Toshiba Am. Elecs. Components, Inc.*, 274 F.3d 1276, 1283 (9th Cir. 2001) (quoting *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 149 (2000)) (internal quotation marks and citation omitted).

“The ultimate construction of claim language is a question of law reviewed *de novo*, based upon underlying

factual determinations reviewed for clear error.” *SimpleAir*, 820 F.3d at 425 (citing *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837–39 (2015)). In construing claims, courts follow the principles set forth in *Phillips v. AWH Corp.*, starting with the language of the claims “read in view of the specification, of which they are a part.” 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (1995) (en banc), *aff’d*, 517 U.S. 370 (1996)) (internal quotation marks omitted). Accordingly, if a district court’s claim construction was based only on intrinsic evidence, and was reached without making any underlying factual findings relying on extrinsic evidence, as the court did here, we review the court’s claim construction without deference. *SimpleAir*, 820 F.3d at 425 (citing *Teva*, 135 S. Ct. at 842; *CardSoft, LLC v. VeriFone, Inc.*, 807 F.3d 1346, 1350 (Fed. Cir. 2015)).

“Where an infringement verdict relies on an incorrect claim construction, and no reasonable jury could have found infringement under the proper claim construction, this court may reverse the district court’s determination with respect to JMOL without remand.” *Id.* (citing *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1333 (Fed. Cir. 2008)).

#### I. Construction of “weighted episode of care statistics”

Optum argues that the district court erred in its claim construction because this limitation when read in light of the specification excludes direct standardization. Optum contends that the patentee distinguished his invention from, and disparaged the prior art methods that use, direct standardization, and repeatedly referred to his invention as using indirect standardization. Optum notes that at the time of filing, the specification, including the original claims, did not purport to claim direct standardization as part of the invention, and that only after five years following the filing date, did the patentee add

dependent claims reciting “direct standardization.” According to Optum, the district court erred in relying on these later-added dependent claims in construing the independent claims. Optum further argues that the district court’s construction cannot stand because, if the claim limitation is interpreted to include direct standardization, it would lack adequate written description.

Cave responds that the district court did not err in its claim construction because the method using indirect standardization described in the specification is merely a preferred embodiment, as demonstrated in the patent itself and prosecution history. Cave argues that because the language of the independent claims itself is not limiting and because direct standardization is one way of “weight[ing],” the limitation should be construed to include direct standardization. Cave further contends that the dependent claims that specifically recite “direct standardization” support its reading of the independent claims, as noted by the district court. Cave also urges that the description of the prior art methods using direct standardization, which in some cases may lead to error according to the specification, does not amount to a disclaimer, which must be clear and unmistakable. According to Cave, because direct standardization was a known weighting technique, the written description requirement was met under the court’s claim construction despite the patent’s critical reference to direct standardization.

We agree with Optum that the district court erred in construing “weighted episode of care statistics” as including direct standardization. The district court first discussed that the critical description of direct standardization in the patent does not necessarily amount to a disclaimer. *Claim Construction Order*, 2013 WL 2467930, at \*4. In reaching the conclusion that the claim limitation should include direct standardization, however, the district court’s only support was from the dependent claims, based on the reasoning that the court should

differentiate the scope of the dependent claims from that of the independent claims to preserve the validity of the dependent claims. *Id.* The error underlying this analysis is the district court's presumption of a broad and non-limiting reading of "weighted episode of care statistics" with respect to direct versus indirect standardization.

Claim language is not read in isolation. *Phillips*, 415 F.3d at 1315. Here, the claim limitation when read in light of the specification elucidates the meaning of the claim language as used by the patentee. As both parties agree, the '126 patent describes its method as one that employs indirect standardization. Cave characterizes this undisputed fact as the patent's description of merely *one embodiment*, presumably one out of many. However, this contention is unpersuasive. The patent in its specification affirmatively limits its method to one that uses one particular technique, namely, indirect standardization, as opposed to another used in prior art methods.

Cave does not identify, nor do we find, *any* indication in the '126 patent's description that its invention employs direct standardization, and, other than the dependent claims, Cave's support for including direct standardization comes exclusively from the description of the prior art methods in the background section. *See* Appellee's Br. 31–32. Indeed, the '126 patent repeatedly and consistently describes that the calculation of "weighted episode statistics" according to its method uses indirect standardization. '126 patent col. 92 ll. 39–41, col. 93 ll. 12–14, 31–35. Moreover, the patent's distinguishing its method that uses indirect standardization from the purportedly error-generating prior art methods that use direct standardization further demonstrates that the scope of this "weighted" feature of the invention is affirmatively limited to indirect standardization. *Compare id.*, with *id.* col. 1 ll. 50–51, col. 2 ll. 32–34; *see also Retractable Techs., Inc. v. Becton, Dickinson & Co.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011) (construing the claim limitation in question to

“tether the claims to what the specifications indicate the inventor actually invented”).

Cave’s argument that finding a disclaimer through a “clear and unmistakable” disavowal is required for Optum’s argument to prevail is also unpersuasive. Contrary to Cave’s contention, although “[i]n general, statements about the difficulties and failures in the prior art, *without more*, do not act to disclaim claim scope,” *Retractable Techs.*, 653 F.3d at 1306 (emphasis added), “[o]ur case law does not require explicit redefinition or disavowal” when *the description itself* is affirmatively limiting, *Trs. of Columbia Univ. in City of N.Y. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016). Here, the specification does more than discuss certain disadvantages of the prior art methods. It distinguishes its invention from them, particularly pointing out what the invention does not use. Thus, we conclude that a finding of a disclaimer is not correct when, as here, the description of the invention itself is affirmatively limiting, and is without *any indication* that direct standardization is within the scope of the invention.

Furthermore, certain canons of claim construction apparently employed by the district court also do not compel a contrary result. Canons of claim construction, such as the doctrine of claim differentiation and the canon of interpreting claims to preserve their validity, are not absolute. *See, e.g., Howmedica Osteonics Corp. v. Zimmer, Inc.*, 822 F.3d 1312, 1323 (Fed. Cir. 2016) (noting that the doctrine of claim differentiation merely creates “a rebuttable presumption that may be overcome by a contrary construction dictated by the written description or prosecution history”) (citation omitted). Although generally not dispositive, the fact that the dependent claims relied upon by Cave were added after the filing of the original application is significant here. It is true that the written description and the originally filed claims are part of the specification. *In re Koller*, 613 F.2d 819, 823 (CCPA

1980). And, had the originally filed application, including the original claims, in *any* way indicated that its invention included direct standardization, the later-added dependent claims specifically claiming “direct standardization” could have lent support to Cave’s contention that the independent claims cover direct standardization. However, in view of the specification’s consistently limiting description, we conclude that these interpretive canons, despite the later-added dependent claims, cannot overcome the claim scope that is unambiguously prescribed by the specification.

The prosecution history also does not require a different conclusion. Cave’s only reference in the prosecution history is a single passing remark by the applicant that states that the disclosed calculation that uses indirect standardization is “[o]ne embodiment of the present invention.” J.A. 850. This remark alone, with no substantive elaboration on what the patented invention is, has little value. As discussed above, we decline to adopt Cave’s argument relying on its post-hoc characterization of the entirety of what is disclosed in the patent as only “one embodiment.”

We therefore conclude that the district court erred in construing “weighted episode of care statistics” and that that limitation does not encompass direct standardization. We also conclude that the jury verdict that there was no lack of written description support in the patent cannot stand to the extent that it relied on the erroneous claim construction.

## II. Infringement

It is undisputed that Optum’s method performs direct standardization. Appellant’s Br. 37 (quoting J.A. 13185–86 (Cave’s closing argument)). Furthermore, Cave does not argue that any factual dispute remains if “weighted episode of care statistics” is interpreted to exclude direct

standardization. Oral Argument at 29:10–23, *Cave Consulting Grp.*, No. 17-1060 (Fed. Cir. Feb. 12, 2018).

The jury’s infringement verdict was based on the district court’s erroneous construction of “weighted episode of care statistics,” J.A. 13444–50, applied to the undisputed fact that Optum performs direct standardization. As such, the infringement verdict cannot stand as a matter of law because no reasonable jury could find that Optum infringes claims 22 and 29 of the ’126 patent under the correct construction of “weighted episode of care statistics,” which excludes direct standardization. *See SimpleAir*, 820 F.3d at 425.

We therefore conclude that Optum does not infringe claims 22 and 29 of the ’126 patent as a matter of law.

#### CONCLUSION

For the foregoing reasons, we reverse the district court’s claim construction in part, vacate the jury verdict to the extent that it was based on the district court’s incorrect claim construction, and vacate the judgment of infringement and award of damages. We remand with instructions to enter judgment of noninfringement in favor of Optum.

#### **REVERSED IN PART, VACATED IN PART, AND REMANDED**

#### COSTS

Costs to Optum.