# Northern District of California

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## UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA

CAVE CONSULTING GROUP, INC.,

Plaintiff,

v.

TRUVEN HEALTH ANALYTICS INC.,

Defendant.

Case No. <u>15-cv-02177-SI</u>

EMENTAL CLAIM NSTRUCTION FOR THE

Re: Dkt. Nos. 179, 180, 186, 188

On April 19, 2017, the Court held a supplemental *Markman* hearing. The Court adopts the constructions set forth below.

#### **BACKGROUND**

On May 14, 2015, plaintiff Cave Consulting Group, Inc. filed this lawsuit alleging that directly infringes U.S. Patent No. 8,768,726 defendant Truven Health Analytics Inc. ("the '726 patent"), titled "Method, System, and Computer Program Product for Physician Efficiency Measurement and Patient Health Risk Stratification Utilizing Variable Windows for Episode Creation," by making, importing, using, selling, and/or offering for sale its physician efficiency measurement software and services. The '726 patent relates to evaluating medical information to provide measurements of physician efficiency. '726 Patent 1:29-31.

The Court held a *Markman* hearing on April 11, 2016, regarding the disputed '726 patent term "calculating weighted episode of care statistics across medical conditions for a specialty type

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utilizing a predefined set of medical conditions for a specific specialty type." construed that term to mean "calculating cost or length of care statistics for a group of medical conditions, using the relative importance of each condition to others of the group, using only medical conditions within a set defined in advance of processing for a specific specialty type."

On February 15, 2017, the Court granted CCGroup leave to amend its complaint to include allegations that Truven indirectly infringes the '726 patent. In its third amended complaint, CCGroup alleges infringement of claims 1-5, 9, and 10 (the "asserted claims"). The Court granted the parties a supplemental Markman hearing for disputed terms arising from the additional indirect infringement allegations.

The parties dispute two terms: (1) "assigning complete (non-partial) episodes of care to physicians" and (2) "consists of a subset of most prevalent medical conditions related to that specialty type."<sup>2</sup>

#### LEGAL STANDARD

Claim construction is a matter of law. Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996). Terms contained in claims are "generally given their ordinary and customary meaning." Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." Id. at 1312. In determining the proper construction of a claim, a court begins with the intrinsic evidence of record, consisting of the claim language, the patent specification, and, if in evidence, the prosecution history. *Id.* at 1313; see also Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). "The

At that Markman hearing, the Court also construed two terms contained in U.S. Patent No. 8,340,981 ("the '981 patent"). CCGroup subsequently removed the '981 patent from this lawsuit, and only the '726 patent remains.

<sup>&</sup>lt;sup>2</sup> Truven originally contended that it and CCGroup disputed two additional terms: "stable efficiency scores" and "predefined set of medical conditions for a specific specialty type." After determining that no dispute on claim scope existed, the Court requested that the parties submit a joint stipulation concerning their issues with those two terms, and the parties have done so. See Dkt. No. 200.

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appropriate starting point . . . is always with the language of the asserted claim itself." Comark Comm'ns, Inc. v. Harris Corp., 156 F.3d 1182, 1186 (Fed. Cir. 1998); see also Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1023 (Fed. Cir. 1997).

Accordingly, although claims speak to those skilled in the art, claim terms are construed in light of their ordinary and accustomed meaning, unless examination of the specification, prosecution history, and other claims indicates that the inventor intended otherwise. See Electro Med. Sys., S.A. v. Cooper Life Scis., Inc., 34 F.3d 1048, 1053 (Fed. Cir. 1994). The written description can provide guidance as to the meaning of the claims, thereby dictating the manner in which the claims are to be construed, even if the guidance is not provided in explicit definitional format. SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1344 (Fed. Cir. 2001). In other words, the specification may define claim terms "by implication" such that the meaning may be "found in or ascertained by a reading of the patent documents." Vitronics, 90 F.3d at 1582, 1584 n.6.

Additionally, the claims must be read in view of the specification. Markman, 52 F.3d at 978. Although claims are interpreted in light of the specification, this "does not mean that everything expressed in the specification must be read into all the claims." Raytheon Co. v. Roper Corp., 724 F.2d 951, 957 (Fed. Cir. 1983). For instance, limitations from a preferred embodiment described in the specification generally should not be read into the claim language. See Comark, 156 F.3d at 1187. However, it is a fundamental rule that "claims must be construed so as to be consistent with the specification." *Phillips*, 415 F.3d at 1316. Therefore, if the specification reveals an intentional disclaimer or disavowal of claim scope, the claims must be read consistently with that limitation. Id.

Finally, the Court may consider the prosecution history of the patent, if in evidence. Markman, 52 F.3d at 980. The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution. See Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1576 (Fed. Cir. 1995). In most situations, analysis of this intrinsic evidence alone will resolve claim construction disputes. See Vitronics, 90 F.3d at 1583.

Courts should not rely on extrinsic evidence in claim construction to contradict the

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meaning of claims discernable from examination of the claims, the written description, and the prosecution history. See Pitney Bowes, Inc. v. Hewlett Packard Co., 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583). However, it is entirely appropriate "for a court to consult trustworthy extrinsic evidence to ensure that the claim construction it is tending to from the patent file is not inconsistent with clearly expressed, plainly apposite, and widely held understandings in the pertinent technical field." Id. Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317. All extrinsic evidence should be evaluated in light of the intrinsic evidence. *Id.* at 1319.

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#### DISCUSSION

Claims 1 and 10 are representative of the asserted claims for purposes of the Court's Markman analysis:

> 1. A method implemented on a computer system of determining physician efficiency, the method comprising:

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

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

assigning complete (non-partial) episodes of care to **physicians** utilizing an assignment rule that allows assignment of an episode of care to more than one physician;

assigning at least one physician to a report group based on geographic area designation utilizing the computer system, each physician assigned to no more than one report group;

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.

**10**. The method of claim **1** wherein:

# the predefined set of medical conditions for a specific specialty type consists of a subset of most prevalent medical conditions related to that specialty type.

*Id.* at 110:8-34, 111:1-4 (parties dispute the bold-underlined terms).

## I. "Assigning Complete (Non-Partial) Episodes of Care to Physicians" (all asserted claims)

| Claim Language  | CCGroup's Proposed<br>Construction   | Truven's Proposed<br>Construction  |
|---|--|--|
| "Assigning complete<br>(non-partial) episodes of<br>care to physicians" | Plain and ordinary meaning  OR  For acute conditions:  "An acute episode is complete if it is representative of all healthcare services provided to a patient for an instance of a particular medical condition"  For chronic conditions:  "A chronic episode of care is complete if it is representative of all healthcare services provided to a patient for a particular medical condition during the duration of the chronic episode." | "Assigning to physicians only episodes of care for which a patient was enrolled for the entire study period" |

Previously, the parties agreed to construe "episodes of care" as "a group of all healthcare services provided to a patient for the diagnosis, treatment, and aftercare of a specific medical condition within a time frame of interest." Dkt. No. 56 at 2:3-7. The parties dispute what it means for an episode of care to be "complete (non-partial)."

Truven contends that the specification provides an express definition for "complete (non-partial) episodes of care." Truven contends that the specification defines "complete (non-partial) episodes of care" when it provides "[a] reason partial episodes often slip through the cracks and

<sup>&</sup>lt;sup>3</sup> The parties filed a stipulation agreeing that the claim term "assigning complete (non-partial) episodes of care to physicians" requires that only complete episodes of care be used to analyze physician performance. Dkt. No. 200. However, this stipulation does not resolve the parties' dispute regarding how to define "complete."

into an efficiency analysis is because the methodologies do not use a membership eligibility file to ensure the member is present for the entire study period." *See* '726 Patent 6:29-32. Truven also contends based on *O2 Micro* that the Court must reject CCGroup's construction of plain and ordinary meaning because it does not resolve the parties' dispute. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d. 1351, 1362 (Fed. Cir. 2008) ("When the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it.). Finally, Truven contends that CCGroup's alternate constructions must be rejected because they contradict the specification's express definitions.

CCGroup contends that "assigning complete (non-partial) episodes of care" is clear on its face and does not require any construction. CCGroup disagrees with Truven's assertion that the specification provides an express definition for the disputed term. CCGroup contends that Truven's construction reads out every single embodiment described in the specification and ignores the specification's call for separate tests to determine partial episodes of care for acute and chronic conditions. In the alternative to plain and ordinary meaning, CCGroup argues the two constructions in the chart above.

The Court construes "complete (non-partial) episodes of care" by plain and ordinary meaning, but the Court holds that a person of ordinary skill in the art ("POSITA") would not interpret a "complete" episode of care to require the patient to be enrolled for the entire study period.

The Court disagrees with Truven that the language it relies on offers an explicit definition of "complete (non-partial) episodes of care." Truven's excerpt from the '726 patent's Background section does not demonstrate that the patentee has acted as his or her own lexicographer. *See Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citation and internal quotation marks omitted) ("To act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning."). The '726 patent contains no such "clearly express[ed] [] intent" to redefine "complete (non-partial) episodes of care." *See id.* In fact, the intrinsic evidence favors the opposite conclusion when one compares Truven's evidence with instances in the '726 specification where the patentee does act

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as its own lexicographer. *See, e.g.*, '726 Patent 13:21-25 ("Physicians are professionals delivering medical care services, not just physicians. This provider type includes physicians, chiropractors, acupuncturists, podiatrists, nurse practitioners, physical therapists, and other professionals delivering medical care services.").

"[C]laims must be construed so as to be consistent with the specification, of which they are a part." Merck & Co. v. Teva Pharm. USA, Inc., 347 F.3d 1367, 1371 (Fed. Cir. 2003). The Court agrees with CCGroup that Truven's construction is inappropriate because it is inconsistent with the '726 specification. For example, the preferred embodiment contemplates separate tests to identify partial episodes of care for acute and chronic medical conditions. See '726 Patent 65:37-39 ("[T]he system of the present invention uses different analytical approaches to identify partial episodes for acute and chronic medical conditions . . . . "). Truven's construction, by contrast, provides one definition of partial episodes of care for both acute and chronic medical conditions. The patent also provides examples of the separate tests that can be used to identify partial episodes of care for acute and chronic medical conditions. See '726 Patent Table 23, 66:15-20, 52:14-16. For example, the specification states that "[i]n an embodiment, all chronic medical condition episodes begin during the first half of the study period to be considered complete episodes of care. Chronic episodes beginning in the second half of the study period are treated as partial." 726 Patent 66:15-17. The specification also states that "[a]cute condition episodes are considered complete (or end) if an amount of time (equal to the window period) elapses in which no ICD.9 codes for that condition are present." Id. at 52:14-17. These examples focus on when the episode is first diagnosed or when treatment ends, not whether a patient is enrolled for an entire study period. Because "claims must be construed so as to be consistent with the specification," the Court cannot adopt Truven's proposed construction. See Merck, 347 F.3d at 1371.

The Court agrees with Truven that *O2 Micro* requires the Court to resolve the "dispute regarding on the scope of [a complete (non-partial) episode of care]." *See O2 Micro*, 521 F.3d at 1362. However, the Court disagrees with Truven that *O2 Micro* requires the Court to provide an express definition of "complete (non-partial)" episodes of care. The Federal Circuit in *Eon Corp*. elaborated on *O2 Micro* and clarified that "a district court's duty at the claim construction stage is,

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simply, . . . to resolve a dispute about claim scope that has been raised by the parties." *Eon Corp.* IP Holdings LLC v. Silver Spring Networks, Inc., 815 F.3d 1314, 1319 (Fed. Cir. 2016). Thus, at this stage of the lawsuit, it is enough for the Court to hold that a POSITA would not interpret a "complete" episode of care to require the patient to be enrolled for the entire study period, and for the Court to allow the parties to otherwise explain to the jury why the accused software does or does not satisfy the plain and ordinary language of this limitation.

For the reasons stated above, the Court adopts plain and ordinary meaning for "assigning complete (non-partial) episodes of care to physicians."

#### II. "Consists of a Subset of Most Prevalent Medical Conditions Related to That Specialty Type" (claim 10)

| Claim Language   | CCGroup's Proposed<br>Construction  | Truven's Proposed<br>Construction |
|--|---|-----------------------------------|
| "Consists of a subset of most prevalent medical conditions related to that specialty type" | Plain and ordinary meaning  OR  "Consists of medical conditions that generally account for 60% to 80% of the episodes treated by that specialty type" | Indefinite                        |

Truven contends that "consists of a subset of most prevalent medical conditions related to that specialty type" is indefinite for three reasons. CCGroup disagrees and contends that plain and ordinary meaning should govern that claim language.

Section 112 requires that a patent specification "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C. § 112 ¶ 2 (2006 ed.) To prove the claim term indefinite and therefore claim 10 invalid, Truven needs to demonstrate by clear and convincing evidence that the claim, when read in light of the specification and prosecution history, "fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention." See Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2124 (2014).

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#### A. The Language of the Disputed Term as a Whole

Truven first contends that the term "consists of a subset of most prevalent medical conditions related to that specialty type" is indefinite because it has at least two possible meanings: "1) a predefined set that consists of a subset, where this subset includes all of the most prevalent medical conditions or 2) a predefined set that consists of a subset, where this subset is a subset of the most prevalent medical conditions." Truven Opening Brief at 14:24-27.

CCGroup contends that the well-established meaning of "consists of" in patent law makes clear that "'predefined set' can <u>only</u> include medical conditions from the "subset of most prevalent medical conditions related to that specialty type." CCGroup Responsive Brief at 13:14-16 (emphasis in original). Thus, CCGroup contends, any process that includes a medical condition not among the "most prevalent medical conditions related to that specialty type" is not within the scope of the claim.

"The phrase 'consisting of' is a term of art in patent law signifying restriction and exclusion, while, in contrast, the term 'comprising' indicates an open-ended construction." *Vehicle Tech. Corp. v. Titan Wheel Int'l*, 212 F.3d 1377, 1382 (Fed. Cir. 2000). By using the patent law term of art "consisting of," the language of the disputed term indicates "with reasonable certainty" to a POSITA that the "predefined set" can only include medical conditions among those most prevalent in that specialty type, and that any "predefined set" including a medical condition not among the most prevalent in that specialty type is outside the scope of the claim. *See Nautilus*, 134 S. Ct. at 2124. The Court holds that Truven has not demonstrated by clear and convincing evidence that the claim, when read in light of the specification and prosecution history, "fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Id.* 

### **B.** "Related to that Specialty Type"

Next, Truven contends that the phrase "related to that specialty type" renders "consists of a subset of most prevalent medical conditions related to that specialty type" indefinite because the phrase requires a POSITA practicing the invention "to apply subjective factors" in deciding what medical conditions are "related" to a particular specialty type. Truven provides expert testimony

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stating that such determinations under "related to that specialty type" are "subjective and context-dependent." *See* Adams Decl. at ¶ 6.

CCGroup contends that primary care physicians send their patients to specialists every day based on specific medical conditions and therefore that a POSITA could readily classify a medical condition by specialty type. CCGroup also contends that two prior art patents listed in the '726 patent illustrate that matching medical conditions to specific specialties is standard practice. CCGroup provides expert testimony supporting its contentions. *See* Bergeron Decl. ¶¶ 32-38.

The Court holds that Truven has not demonstrated by clear and convincing evidence that a POSITA could not map a medical condition to a particular specialty type "with reasonable certainty." Nautilus, 134 S. Ct. at 2124. The test for indefiniteness involves whether a POSITA can ascertain the boundaries of an invention with reasonable certainty. See Nautilus, 134 S. Ct. at Some subjectivity and context-dependency in and of itself does not render a claim indefinite, as "[s]ome modicum of uncertainty . . . is the price of ensuring appropriate incentives for innovation." Id. at 2128 (citations and internal quotation marks omitted). "Related to that specialty type" in the context of this patent is not a "facially subjective claim term," as the term does not inherently turn on a person's taste or opinion. Cf. Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1350-52 (Fed. Cir. 2005) (finding "aesthetically pleasing" indefinite because "it [wa]s completely dependent on a person's subjective opinion); Interval Licensing LLC v. AOL, Inc., 766 F.3d. 1364, 1373-74 (Fed. Cir. 2014) (holding "in an unobtrusive manner that does not distract a user" indefinite where the one specification example did not inform a skilled artisan "what other forms of display are unobtrusive and nondistracting"). Moreover, a court must analyze definiteness "in light of the teachings of the prior art," and CCGroup provides unrebutted evidence that objective, prior art methods existed for mapping medical conditions to specialty types using standardized medical condition classification codes. Energizer Holdings, Inc. v. Int'l Trade Comm'n, 435 F.3d 1366, 1370 (Fed. Cir. 2006); see Bergeron Decl. Exs. 1, 2.

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#### C. "Most Prevalent Medical Conditions"

Finally, Truven contends that the phrase "most prevalent medical conditions" is an indefinite, facially subjective phrase because there is no objective definition for "most prevalent medical conditions" that would inform a POSITA of the invention's boundaries. Truven admits that "[i]n the context of this claim, it appears that 'most prevalent' has something to do with how common particular medical conditions are with a specific specialty type." Truven Opening Brief 15:20-21. But Truven argues that there is no single, objective way to define "prevalent," and provides expert testimony that a POSITA, depending on her goals, might consider factors such as cost, frequency of occurrence at a physician's office, and/or duration of treatment in making the determination regarding a "prevalent medical condition[]." *See* Adams Decl. ¶ 5. Truven's expert also argues that a POSITA would not know how many "prevalent medical conditions" constitute "most prevalent medical conditions." *Id.* 

CCGroup contends that "most prevalent" is a term of degree and not a facially subjective term. CCGroup also contends that a POSITA would recognize that "most prevalent medical conditions" refers to the most commonly occurring conditions treated by each physician type, and CCGroup provides supportive expert testimony. *See* Bergeron Decl. ¶¶ 29-30. As intrinsic support, CCGroup points to the discussion of how to construct a "marketbasket" in the preferred embodiment. *See* '726 Patent 70:47-55 ("A marketbasket consists of the most common conditions treated by each physician specialty type . . . ."). CCGroup contends that the '726 patent provides more than 30 examples of such marketbaskets and therefore provides enough certainty to a POSITA regarding claim scope. *See id.* at 74:57-87:62 (Tables 29-60). Finally, CCGroup provides expert testimony that a POSITA could readily derive sets of "most prevalent medical conditions" using databases of medical claims data. *See* Bergeron Decl. ¶¶ 36-48.

The Court holds that Truven has not demonstrated by clear and convincing evidence that the phrase "most prevalent medical conditions" renders claim 10 indefinite. Truven concedes that "[i]n the context of this claim, it appears that 'most prevalent' has something to do with how common particular medical conditions are with a specific specialty type." Truven Opening Brief 15:20-21. In doing so, Truven admits that the '726 patent uses the term "most prevalent" to refer

to the frequency at which a particular medical condition is encountered within a specific specialty, and not to factors such as cost or acute exacerbations of chronic conditions. Frequency of occurrence can be objectively measured and does not depend on a person's taste or opinion. Therefore, the Court finds that "most prevalent" is a term of degree and not a "facially subjective" term as Truven argues.

The Federal Circuit has held that "claims involving terms of degree are not inherently indefinite." *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377-79 (Fed. Cir. 2017) (holding that the language "visually negligible" in a patent for a "graphical indicator" was not indefinite where the written description provided guidance on how to create visually-negligible indicators and two specific examples for comparison); *see also Invitrogen Corp. v. Biocrest Mfg.*, L.P., 424 F.3d 1374, 1384 (Fed. Cir. 2005) ("[A] patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.") (citation omitted). In deciding the question of indefiniteness on a term of degree, a court closely examines the written description of the invention. *See Sonix Tech.*, 844 F.3d. at 1378 ("[T]he written description is key to determining whether a term of degree is indefinite."). A term of degree does not make a claim indefinite if the written description and other intrinsic evidence provide enough objective detail to render the claim scope reasonably certain. *See id.* at 1377-79.

Here, CCGroup's expert testifies that a POSITA would understand "most prevalent medical conditions" to mean the "most frequently encountered medical conditions related to a specialty type." Bergeron Decl. ¶¶ 29-30. CCGroup's expert testifies that a POSITA could determine which medical conditions are "most prevalent" within a particular specialty by using databases of medical claims data. CCGroup's expert further testifies that a POSITA would understand the marketbaskets of Tables 29-60 to be exemplary "subsets of most prevalent medical conditions related to that specialty type." *Id.* at ¶ 31; *see* '726 Patent 74:57-87:62. Given CCGroup's expert testimony and the 32 examples in the written description from which a skilled artisan could compare a potentially infringing product, the Court cannot conclude that Truven's evidence meets the high standard of clear and convincing.

The Court construes "consists of a subset of most prevalent medical conditions related to that specialty type" according to plain and ordinary meaning. **CONCLUSION** IT IS SO ORDERED. Dated: April 25, 2017 

For the foregoing reasons, the Court hereby adopts the claim constructions provided above.

SUSAN ILLSTON United States District Judge