United States Court of Appeals for the Federal Circuit

NATERA, INC.,
Plaintiff-Appellee

v.

NEOGENOMICS LABORATORIES, INC.,
Defendant-Appellant

2024-1324, 2024-1409

Appeals from the United States District Court for the Middle District of North Carolina in No. 1:23-cv-00629-CCE-JLW, Chief Judge Catherine C. Eagles.

Decided: July 12, 2024

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Before MOORE, *Chief Judge*, TARANTO and CHEN, *Circuit Judges*.

MOORE, *Chief Judge*.

NeoGenomics Laboratories, Inc. (NeoGenomics) appeals the United States District Court for the Middle District of North Carolina's grant of a preliminary injunction barring NeoGenomics from making, using, selling, advertising, or distributing the RaDaR assay. We affirm.

BACKGROUND

Natera, Inc. (Natera) and NeoGenomics are research-focused healthcare companies operating in the oncology testing industry. Both companies manufacture products used for early detection of cancer relapse.

One method of assessing potential relapse involves detecting small amounts of a specific type of DNA fragments in the body. Cells naturally shed DNA fragments into the bloodstream. These fragments are referred to as cell-free DNA (cfDNA). A subset of cfDNA, shed by cancerous cells, is called circulating tumor DNA (ctDNA). The presence of small amounts of ctDNA in the body after treatment is called molecular residual disease (MRD) and can indicate cancer relapse. Early detection of MRD supports better patient outcomes.

Natera owns two relevant patents, U.S. Patent No. 11,519,035 and U.S. Patent No. 11,530,454, both issued in December 2022. The '035 patent claims methods for amplifying targeted genetic material, such as cfDNA, while reducing amplification of non-targeted genetic material. The

'454 patent claims methods for detecting variations in genetic material indicative of disease or disease recurrence, such as ctDNA. Claim 1 of the '035 patent recites:

> 1. A method for amplifying and sequencing DNA, comprising:
>
> tagging isolated cell free DNA with one or more universal tail adaptors to generate tagged products, wherein the isolated cell-free DNA is isolated from a blood sample collected from a subject who is not a pregnant women;
>
> amplifying the tagged products one or more times to generate final amplification products, wherein one of the amplification steps comprises targeted amplification of a plurality of single nucleotide polymorphism (SNP) loci in a single reaction volume, wherein one of the amplifying steps introduces a barcode and one or more sequencing tags; and
>
> sequencing the plurality of SNP loci on the cell free DNA by conducting massively parallel sequencing on the final amplification products, wherein the plurality of SNP loci comprises 25-2,000 loci associated with cancer.

Natera uses the methods claimed in the '035 and '454 patents in its Signatera product. NeoGenomics offers a competing product under the brand name RaDaR. Signatera and RaDaR identify ctDNA within the bloodstream to assess the efficacy of cancer treatment and the risk of cancer recurrence. Both RaDaR and Signatera are tumor-informed MRD tests, as opposed to tumor-naïve MRD tests, because they are designed from a patient's genetic information based on a tissue biopsy of the patient's tumor. Doctors often prefer to use tumor-informed tests because their personalized nature can make them more sensitive than tumor-naïve tests. J.A. 7310, 7323; J.A. 2440–41 ¶¶ 34–35.

Natera sued NeoGenomics alleging RaDaR infringed the '035 and '454 patents and moved for a preliminary injunction. The district court granted the preliminary injunction because it determined Natera satisfied the requirements for injunctive relief, including likelihood of success on the merits of its '035 patent infringement claim. J.A. 1–21 (Order Granting Mot. for Prelim. Inj.). The district court did not reach the likelihood of success of Natera's '454 patent infringement claim.

The preliminary injunction bars NeoGenomics from making, using, selling, or offering for sale its accused RaDaR assay. J.A. 22–24 (Prelim. Inj.). The injunction also prohibits NeoGenomics from promoting, advertising, marketing, servicing, distributing, or supplying the RaDaR assay to allegedly induce infringement. The injunction carves out exceptions for patients already using RaDaR and for finalized or in-process research projects, studies, and clinical trials. J.A. 23 (Prelim. Inj.).

After the preliminary injunction issued, NeoGenomics timely moved for modification or clarification of the injunction. J.A. 20783–84. NeoGenomics presented evidence that several potential research contracts were finalized or nearly finalized such that enjoining performance under the contract would cancel or delay research. J.A. 20804–10. NeoGenomics requested the district court clarify whether the injunction applies to those potential research contracts and to testing of already-collected patient samples. J.A. 20791–96.

The district court issued multiple orders responding to NeoGenomics' motion to modify or clarify the injunction. J.A. 20911–17; J.A. 20945–48; J.A. 21327–31. The district court acknowledged three of NeoGenomics' clinical testing contracts under which testing of samples had not yet begun but for which third parties had designed experimentation and testing protocols around RaDaR. J.A. 20915. The district court clarified that the injunction does not bar

RaDaR's use under these contracts because it is not in the public interest to delay potentially meaningful research and negatively impact third parties who had designed experimentation protocols around RaDaR's use. J.A. 20915–16. The district court also clarified the injunction does not bar RaDaR's use on patient blood samples that were collected but not yet received by NeoGenomics when the injunction issued. J.A. 20916. The district court explained the injunction does not bar RaDaR's use in three negotiation-stage research contracts that had finalized protocols and approvals because RaDaR's removal would cause delay and hardship. J.A. 20945–48. One potential contract, about which NeoGenomics provided only a conclusory statement that the sponsoring organization had done significant work designing the study, remains barred by the injunction. J.A. 20946–47.

NeoGenomics appeals the district court's grant of the preliminary injunction. We have jurisdiction under 28 U.S.C. § 1292(c)(1).

DISCUSSION

We review the grant or denial of a preliminary injunction under the law of the regional circuit, here the Fourth Circuit. *Murata Mach. USA v. Daifuku Co.*, 830 F.3d 1357, 1363 (Fed. Cir. 2016) (citing *Trebro Mfg., Inc. v. Firefly Equip., LLC*, 748 F.3d 1159, 1165 (Fed. Cir. 2014)). "However, the Federal Circuit has itself built a body of precedent applying the general preliminary injunction considerations to a large number of factually variant patent cases, and gives dominant effect to Federal Circuit precedent insofar as it reflects considerations specific to patent issues." *Id.* (quoting *Trebro*, 748 F.3d at 1165). Both the Fourth Circuit and the Federal Circuit review the grant or denial of a preliminary injunction for abuse of discretion. *Abbot Lab'ys v. Sandoz, Inc.*, 544 F.3d 1341, 1345 (Fed. Cir. 2008); *Safety-Kleen, Inc. v. Wyche*, 274 F.3d 846, 859 (4th Cir. 2001). "An abuse of discretion may be established by

showing that the court made a clear error of judgment in weighing relevant factors or exercised its discretion based upon an error of law or clearly erroneous factual findings." *Novo Nordisk of N. Am., Inc. v. Genentech, Inc.*, 77 F.3d 1364, 1367 (Fed. Cir. 1996).

To obtain a preliminary injunction, a party must establish likelihood of success on the merits, likelihood it will suffer irreparable harm absent preliminary relief, the balance of equities tips in its favor, and an injunction is in the public interest. *Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1363 (Fed. Cir. 2017); *see Starbucks Corp. v. McKinney*, 2024 WL 2964141, at *4 (S. Ct. June 13, 2024) (repeating general rule stating these four requirements). NeoGenomics challenges the district court's analysis on each requirement.

A. Likelihood of Success

To show likelihood of success on the merits, a patentee must show "(1) it will likely prove infringement and (2) its infringement claim will likely withstand challenges to the validity and enforceability of the patents." *Purdue Pharma L.P. v. Boehringer Ingelheim GMBH*, 237 F.3d 1359, 1363 (Fed. Cir. 2001) (cleaned up). The district court concluded Natera made a strong showing that the RaDaR test infringes the '035 patent and NeoGenomics did not raise a substantial question of validity. J.A. 5–13 (Order Granting Mot. for Prelim. Inj.).

1. Likelihood of Infringement

Infringement is a question of fact we review for clear error. *AstraZeneca LP v. Apotex, Inc.*, 633 F.3d 1042, 1056 (Fed. Cir. 2010). We review claim construction de novo except for subsidiary fact findings, which we review for clear error. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 331–33 (2015).

NeoGenomics appeals the district court's conclusion that Natera demonstrated a likelihood of prevailing on its

'035 patent infringement claim. NeoGenomics argues the district court failed to resolve a key claim construction dispute and the district court's implied claim construction was erroneous.

The district court did not err by not engaging in explicit claim construction before evaluating the likelihood of infringement. A district court has no obligation to definitively construe claims at the preliminary injunction stage. *Sofamor Danek Grp., Inc. v. DePuy-Motech, Inc.*, 74 F.3d 1216, 1221 (Fed. Cir. 1996). This is undoubtedly true here, where the parties did not present a claim construction dispute. NeoGenomics did not point to a claim construction dispute in its opposition brief before the district court, at the technology tutorial, or at the preliminary injunction hearing. NeoGenomics raised its claim construction argument for the first time in its motion to stay the preliminary injunction pending appeal. J.A. 20770–72 (Def.'s Mot. to Stay). Under these circumstances, NeoGenomics' newly raised claim construction dispute does not establish that the district court abused its discretion.

Nor did the district court implicitly construe the claims incorrectly. Claim 1 of the '035 patent claims a method of amplifying and sequencing DNA. '035 patent at claim 1. The method includes the steps "tagging isolated cell free DNA with one or more universal tail adaptors to generate tagged products" and "amplifying the tagged products one or more times to generate final amplification products." *Id.* The district court found that separate cycles of RaDaR's multi-cycle polymerase chain reaction (PCR) process likely practice the tagging and amplifying steps of claim 1. J.A. 6–7 (Order Granting Mot. for Prelim. Inj.).

NeoGenomics relies on *Amgen Inc. v. Sandoz Inc.*, 923 F.3d 1023 (Fed. Cir. 2019), to argue that RaDaR's PCR process cannot satisfy both the tagging and amplification steps. In *Amgen*, we affirmed summary judgment of non-infringement, reasoning the accused process, which only

involved one step, could not infringe the claimed method because it required multiple discrete steps. *Id.* at 1028–31. Unlike *Amgen*, where there was no dispute that the accused process consisted of a single step, here, Natera presented evidence that RaDaR tags DNA with a first adaptor sequence and then performs targeted amplification with a second adaptor sequence through a series of PCR cycles. J.A. 19195–96 (Pl.'s Prelim. Inj. Reply Br.). The district court did not clearly err in finding that Natera's proffered evidence likely met the tagging and amplifying limitations.

For these reasons, we see no legal error in the district court's handling of claim construction or in the claim scope applied in its likelihood of infringement analysis.

2. Substantial Question of Invalidity

Obviousness is a question of law based on underlying factual determinations, which we review for clear error. *Metalcraft of Mayville*, 848 F.3d at 1366. A claim is invalid for obviousness "if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains." 35 U.S.C. § 103. In determining whether there would have been a motivation to combine prior art references to arrive at the claimed invention, a challenger must show a reason why a skilled artisan would have made the combination. Whether a skilled artisan would have been motivated to combine references is a question of fact. *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1051 (Fed. Cir. 2016) (en banc).

NeoGenomics argues the district court applied an incorrect legal standard in evaluating NeoGenomics' obviousness challenge. NeoGenomics asserts "mere 'vulnerability'" of the patent to an invalidity challenge suffices to defeat a preliminary injunction. Appellant's Opening Br. 21 (quoting *Amazon.com, Inc. v.*

Barnesandnoble.com, Inc., 239 F.3d 1343, 1358–59 (Fed. Cir. 2001)). NeoGenomics argues it met this burden and the district court, in determining NeoGenomics did not raise a substantial question of obviousness, demanded a greater showing than required at the preliminary injunction stage. We do not agree.

An accused infringer "need not make out a case of actual invalidity" to avoid a preliminary injunction but need only show a substantial question of invalidity. *Amazon.com*, 239 F.3d at 1359. If challenged, a patentee must show it will likely withstand the challenges to the validity of the patent to obtain a preliminary injunction. *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1377 (Fed. Cir. 2009). The relevant inquiry is therefore whether the patentee has shown it is more likely than not to prevail over an invalidity challenge. There is no lower "mere vulnerability" standard, as NeoGenomics argues. We see no error in the district court's articulation or application of this test.

NeoGenomics argued claim 1 of the '035 patent would have been obvious in light of knowledge in the field and a 2010 prior art publication by Kaper.[1] Kaper discloses the Fluidigm Access Array, a system for tagging, amplifying, and adding barcodes to DNA locations of interest. J.A. 13113. NeoGenomics argued it would have been obvious for a skilled artisan to modify Kaper's Fluidigm Access Array system for use with cfDNA to practice the claimed invention because cfDNA was well-known at the time for use with cancer analyses.

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[1] Fiona Kaper et al., Poster, *Parallel Preparation of Targeted Resequencing Libraries From 480 Genomic Regions Using Multiplex PCR on the Access Array System*, PROC. OF THE 101ST ANN. MEETING OF THE AM. ASS'N FOR CANCER RES. (2010) (J.A. 13113).

The district court did not apply an incorrect legal standard in assessing NeoGenomics' obviousness challenge. NeoGenomics' argument before the district court consisted of four paragraphs, in which it put forth little more than conclusory argument with no meaningful supporting documentation. J.A. 10489–90 (Def.'s Prelim. Inj. Opp'n Br.). Specifically, NeoGenomics asserted it would have been obvious to a skilled artisan to use Kaper's Fluidigm Access Array system with cfDNA because cfDNA "was well-known by 2010 for use with cancer analyses and there is no special challenge identified for its use in the claimed invention." J.A. 10489–90 (Def.'s Prelim. Inj. Opp'n Br.). It is not sufficient to merely allege that the individual elements of the claimed invention were each known in the prior art. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418–19 (2007). NeoGenomics failed to articulate a reason why a skilled artisan would have been motivated to use the Fluidigm Access Array system with cfDNA for cancer detection as claimed by the '035 patent. In rejecting NeoGenomics' argument, the district court did not demand more than required at the preliminary injunction stage. *See BlephEx, LLC v. Myco Indus., Inc.*, 24 F.4th 1391, 1403–04 (Fed. Cir. 2022) (finding no substantial question of validity where a challenger failed to identify a motivation to combine).

Based on evidence of well-known barriers to successfully amplifying and sequencing cfDNA, the district court found it was unlikely a skilled artisan would have been motivated to use cfDNA with the Fluidigm Access Array system for the claimed cancer detection and unlikely a skilled artisan would have anticipated success in doing so. J.A. 9–10 (Order Granting Mot. for Prelim. Inj.). NeoGenomics argues the district court's findings on motivation to combine and reasonable expectation of success constituted clear error. NeoGenomics contends a skilled artisan would have been motivated to use cfDNA with the Fluidigm

Access Array system because using cfDNA in cancer monitoring was undisputedly well-known.

NeoGenomics has not shown clear error in the district court's findings on motivation to combine or reasonable expectation of success. In reply to NeoGenomics' rather limited obviousness presentation, Natera put forth significant evidence of obstacles to using cfDNA in the present setting that would have been known to a skilled artisan. J.A. 18752–60 (citing scientific articles to explain that cell-free DNA is fragmented, exists in low yield within the body, and was difficult to consistently detect, noting particular challenges for the claimed cancer context). Based on this evidence of barriers to successfully amplifying and sequencing cfDNA as claimed, the district court found it was unlikely a skilled artisan would have been motivated to use cfDNA with the Fluidigm Access Array system as claimed for cancer detection and would have anticipated success in doing so. J.A. 9–10 (Order Granting Mot. for Prelim. Inj.). NeoGenomics attempts to make additional arguments on appeal regarding motivation to combine that it did not present below. *See* Appellant's Opening Br. 27–28. We will not decide arguments raised for the first time on appeal.

NeoGenomics argues the district court legally erred by failing to tether its obviousness analysis to the claims. Specifically, NeoGenomics challenges the district court's reliance on evidence of obstacles to amplifying and sequencing ctDNA "with precision." *See* J.A. 10 (Order Granting Mot. for Prelim. Inj.). Because the '035 patent claims no level of precision, NeoGenomics argues, the district court improperly evaluated motivation to combine and reasonable expectation of success with reference to something other than the claimed invention. Appellant's Opening Br. 25–27 (citing *Allergan, Inc. v. Apotex Inc.*, 754 F.3d 952, 962–63 (Fed. Cir. 2014)). We do not agree.

Unclaimed factors relevant to the feasibility of creating a useful claimed invention can impact the motivation to

combine analysis if a skilled artisan would reasonably consider them. *See Auris Health, Inc. v. Intuitive Surgical Operations, Inc.*, 32 F.4th 1154, 1159 (Fed. Cir. 2022) (considering evidence that combination of elements would come at the expense of precision required for surgery as relevant to motivation to combine, even though claims did not require precision). The district court was well within its discretion to consider whether a skilled artisan would have reasonably expected to perform the claimed method with some level of precision.

For these reasons, we see no clear error in the district court's findings on motivation to combine or reasonable expectation of success. We see no legal error in the claim scope considered by the district court or its conclusion that NeoGenomics failed to raise a substantial question of obviousness.

B. Irreparable Harm

A party seeking a preliminary injunction must show it is likely to suffer irreparable harm if the injunction is not granted and establish a causal nexus between the alleged infringement and the alleged harm. *Luminara Worldwide, LLC v. Liown Elecs. Co.*, 814 F.3d 1343, 1352 (Fed. Cir. 2016). Where the alleged injury is not quantifiable, the harm cannot be adequately compensated and is irreparable. *Metalcraft of Mayville*, 848 F.3d at 1368. Evidence of head-to-head competition and lost market share can support a showing of irreparable harm. *TEK Glob., S.R.L. v. Sealant Sys. Int'l, Inc.*, 920 F.3d 777, 793 (Fed. Cir. 2019).

The district court determined Natera showed a likelihood of irreparable harm in the absence of a preliminary injunction based on its finding of direct competition between Natera and NeoGenomics. J.A. 14–16 (Order Granting Mot. for Prelim. Inj.) (citing *Douglas Dynamics, LLC v. Buyers Prods. Co.*, 717 F.3d 1336, 1345 (Fed. Cir. 2013)). The district court found Natera and NeoGenomics directly compete in a two-player market for tumor-informed MRD

testing products. Because any growth experienced by NeoGenomics would therefore result in lost sales to Natera, the district court identified irreparable harm to Natera in the form of lost "potential customers, profits, business relationships, and clinical opportunities." J.A. 14–15 (Order Granting Mot. for Prelim. Inj.). Because biopharmaceutical relationships are key to success in the MRD testing industry, the district court reasoned, the potential harm to Natera is "challenging to quantify." J.A. 15 (Order Granting Mot. for Prelim. Inj.).

NeoGenomics argues the district court legally erred by misreading *Presidio Components, Inc. v. American Technical Ceramics Corp.*, 702 F.3d 1351 (Fed. Cir. 2012), to endorse a universal rule that irreparable harm is evident in any scenario of direct competition with an alleged infringer. Because *Presidio*'s holding is more modest, stating direct competition is one factor suggesting potential for irreparable harm, *id.* at 1363, NeoGenomics argues the district court's irreparable harm analysis was legally erroneous. We do not agree.

The district court did not impose such a categorial rule. The district court considered direct competition between Natera and NeoGenomics in the tumor-informed market, a finding supported by the record, *see* J.A. 2502–04 ¶ 131, among other factors. It also considered Natera's unwillingness to license the '035 patent and potential for lost biopharmaceutical partnerships, business relationships, clinical opportunities, and market share. J.A. 15–17. This analysis accords with our precedent. *Presidio*, 702 F.3d at 1363 (finding unwillingness to license supported irreparable injury); *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 861–62 (Fed. Cir. 2010) (harm to patentee's market share, revenues, and brand recognition is relevant to irreparable injury).

We see no error in the district court's irreparable harm analysis. Evidence shows that patients using MRD

therapies require continuity of care, making it impractical to transition to a different diagnostic test. *See* J.A. 21; J.A. 11280–87 ¶¶ 30–34, 37, 39, 42–43. This supports a finding of irreparable harm because patients who begin using RaDaR now will likely not switch to Signatera in the future. The potential harm to Natera includes not only a quantifiable number of current lost sales, but also lost repeat business from patients tied to a single testing methodology.

The district court concluded Natera established a sufficient causal nexus between the alleged infringement and the alleged irreparable injury. The district court found RaDaR's accused method allows NeoGenomics to offer RaDaR as a tumor-informed test, and RaDaR's tumor-informed testing ability drives consumer demand for it. J.A. 17–18 (Order Granting Mot. for Prelim. Inj.).

NeoGenomics argues the district court legally erred in its causal nexus analysis by tying the alleged harm to an unclaimed feature. Specifically, NeoGenomics argues the district court erred by considering the tumor-informed testing market because tumor-informed testing is not claimed in the '035 patent. Because the district court tied Natera's alleged harm to direct competition between Natera and NeoGenomics in the tumor-informed market, NeoGenomics argues the alleged harm is attributable to an unpatented feature and therefore lacks a causal nexus with the alleged infringement.

"Sales lost to an infringing product cannot irreparably harm a patentee if consumers buy that product for reasons other than the patented feature." *Apple, Inc. v. Samsung Elecs. Co.*, 678 F.3d 1314, 1324 (Fed. Cir. 2012). For example, a battery does not necessarily drive demand for a laptop merely because its removal would render the laptop ineffective as a portable computer. *Apple Inc. v. Samsung Elecs. Co.*, 695 F.3d 1370, 1376 (Fed. Cir. 2012). If a particular patented battery, however, lasted significantly

longer than other batteries and its removal would decrease demand for the laptop, it may be reasonable to conclude the patented battery drives consumer demand for the laptop. *Apple Inc. v. Samsung Elecs. Co.*, 735 F.3d 1352, 1364–65 (Fed. Cir. 2013).

The district court did not legally err by considering tumor-informed testing in its irreparable harm analysis. The district court was presented with evidence that the '035 patented method is tied to consumer demand for RaDaR. Natera argued that RaDaR's driver of demand, highly sensitive tumor-informed testing, would be impossible to achieve without practicing the particular methods claimed in the '035 patent. J.A. 920 (Pl.'s Prelim. Inj. Br.). Natera also presented evidence that the method claimed in the '035 patent was critical to overcoming challenges associated with successfully amplifying and sequencing cfDNA in the claimed ctDNA context. *See, e.g.*, J.A. 7598–603 ¶¶ 94–101. The district court did not err by crediting Natera's argument that the allegedly infringing method is key to RaDaR's tumor-informed testing. *Apple Inc. v. Samsung Elecs. Co.*, 809 F.3d 633, 642 (Fed. Cir. 2015) (patentee need not show the infringing features are the exclusive drivers of demand, but only that the infringing features impact consumers' decisions to purchase the accused products). We therefore see no error in the district court's causal nexus analysis.

NeoGenomics argues Natera unreasonably delayed in bringing suit and the district court's contrary finding constitutes clear error. Natera sued NeoGenomics for infringement seven months after the '035 patent issued. NeoGenomics argues this delay suggests Natera is not likely to suffer irreparable harm absent an injunction. *See Apple*, 678 F.3d at 1325–26.

The district court rejected NeoGenomics' unreasonable delay argument based on Natera's explanation that it was involved in ongoing infringement litigation over related

patents during the seven-month interim. The district court also credited Natera's arguments that it timely brought suit four days after RaDaR was approved for Medicare coverage and within four months of RaDaR becoming commercially available, events which would significantly increase the harm to Natera. Based on Natera's arguments below, we see no clear error in the district court's finding that Natera's delay was reasonable.

For these reasons, we see no error in the district court's consideration of harm in the tumor-informed testing market or in its causal nexus analysis and no clear error in its factual findings.

C. Public Interest

Before granting an injunction, the district court must balance the patentee's rights with any adverse effects on the public. *i4i*, 598 F.3d at 863. In evaluating whether the public interest favors the grant of an injunction, "the district court should focus on whether a critical public interest would be injured by the grant of injunctive relief." *Metalcraft of Mayville*, 848 F.3d at 1369 (citing *Hybritech Inc. v. Abbott Lab'ys*, 849 F.2d 1446, 1458 (Fed. Cir. 1988)).

The district court concluded the public interest weighs in favor of the preliminary injunction. Because Signatera is clinically validated for use with the same cancers as RaDaR, the district court reasoned, any patients in need of a tumor-informed MRD test will be able to access one through Natera. The district court found Natera has the capacity to take on more customers to satisfy increased demand for MRD tests. J.A. 20 (Order Granting Mot. for Prelim. Inj.). Based on its finding that RaDaR likely infringes the '035 patent, the district court rejected NeoGenomics' argument that a public interest in consumer choice justifies denial of a preliminary injunction. *Id.* (citing *Douglas Dynamics*, 717 F.3d at 1346 (competition from infringing product did not benefit the public)). To avoid disruption to ongoing treatment and research, the district court did not

enjoin use of RaDaR for existing patients or in ongoing clinical trials and research projects. J.A. 23 (Prelim. Inj.).

NeoGenomics argues the district court erred by overlooking harm to cancer patients absent access to RaDaR's MRD test. NeoGenomics asserts no cancer test can substitute for RaDaR due to its high sensitivity and ability to detect small numbers of certain mutations. Therefore, NeoGenomics argues, the public interest supports reversal of the injunction.

The district court's public interest analysis did not overlook harm to cancer patients. NeoGenomics' arguments challenge the district court's factual findings that Signatera can satisfy patient need for MRD tests and that Signatera is validated for the same cancers as RaDaR. But each piece of evidence on which NeoGenomics relied below to support claims of RaDaR's increased sensitivity was controverted by Natera, and the district court drew reasonable conclusions from those disputed facts. For these reasons, detailed below, we reject NeoGenomics' arguments that the district court clearly erred in its factual findings and failed to give appropriate weight to the public interest.

NeoGenomics challenges the district court's finding that RaDaR and Signatera are approved to detect the same cancers. NeoGenomics contends "evidence that RaDaR is the *only* option for certain cancers . . . stands unrebutted," Appellant's Opening Br. 51 (emphasis in original), and renders the district court's contrary finding clearly erroneous. In support of this argument, NeoGenomics cites a letter from Dr. Peter Beitsch, a prominent oncologist. Dr. Beitsch opines that "RaDaR is more sensitive than Signatera to detect ctDNA levels because of its established analytical sensitivity, especially in low shedding cancers such as melanoma and certain breast cancers" and strongly recommends that the RaDaR MRD test remain in the marketplace. J.A. 11264–65. But the letter provides no scientific basis for its broad and conclusory assertions. Nor does it

point to any evidence that RaDaR is effective for more types of cancers than Signatera. Conversely, in reply, Natera presented evidence that Signatera is approved for all cancer indications for which RaDaR is approved. J.A. 2445–48 ¶¶ 44, 48.

In support of RaDaR's claimed higher sensitivity, NeoGenomics cites testimony of Vishal Sikri, President of NeoGenomics' Advanced Diagnostics Division. Appellant's Opening Br. 49–50 (citing J.A. 11287–88 ¶ 44). Mr. Sikri asserts that RaDaR is more sensitive than Signatera based on analytical validation data from studies performed on contrived DNA, which shows RaDaR can detect lower amounts of ctDNA than Signatera. Natera presented evidence that this claim of superior sensitivity was unsupported by clinical data, from studies on actual patient DNA, and undermined by the lack of head-to-head studies comparing the two tests. J.A. 924 n.26 (Pl.'s Prelim. Inj. Br.) (citing J.A. 7931–32 ¶¶ 21–22; and then citing J.A. 7565 ¶ 47). Natera also presented evidence that any analytical validation data supporting NeoGenomics' claims of increased sensitivity would not make a difference in patient outcomes because oncologists rely not on analytical data but on clinical utility, where RaDaR and Signatera perform comparably. J.A. 2512 ¶ 145. Given the conflicting evidence, NeoGenomics has not shown the district court clearly erred in finding Signatera could meet the needs of patients who will require tumor-informed MRD tests.

NeoGenomics cites Mr. Sikri's testimony for the proposition that certain clinical studies "cannot proceed" without access to RaDaR because other tests lack comparable capabilities. Appellant's Opening Br. 50 (citing J.A. 20805–07 ¶¶ 3–5). Mr. Sikri's declaration asserts that removing RaDaR from finalized clinical studies would prevent or significantly delay these studies by requiring redesigned protocols and new approvals. J.A. 20805–07 ¶¶ 3–5. In response to this testimony, the district court clarified that

RaDaR's use is not barred in six clinical trials that each have signed contracts or approved procedures in place. J.A. 20915–16 (Order on Mot. to Modify/Clarify Prelim. Inj.); J.A. 20946–47 (Order on Mot. to Modify/Clarify Prelim. Inj.). The declaration therefore does not support NeoGenomics' argument that the district court's injunction, as currently crafted, ignores harms to cancer patients. To the extent NeoGenomics cites Mr. Sikri's declarations for the proposition that potential future studies cannot proceed without RaDaR due to its claimed sensitivity, NeoGenomics cites no supporting evidence. *See* J.A. 11279–84 ¶¶ 28–36; J.A. 20805–07 ¶¶ 3–5.

NeoGenomics cites a "presentation from a key opinion leader," which, it argues, reports positive results from using RaDaR and advising against use of Signatera. Appellant's Opening Br. 50 (citing J.A. 11679–93). It is unclear whether the study used Signatera at all, as Natera argued below that the study used only the RaDaR assay and the presentation's reference to Signatera was mistaken. J.A. 20220–22. More importantly, the presentation does not directly compare RaDaR and Signatera. It notes the association of certain chemotherapies with difficulty detecting ctDNA and discourages use of Signatera to inform treatment decisions for certain patients. J.A. 11692. This does not amount to uncontroverted evidence of RaDaR's superiority or show clear error in the district court's finding that Signatera is an option for patients in need of an MRD test.

NeoGenomics also cites a market report, which states that RaDaR "has a differentiated chemistry and targets up to 48 tumor-specific variants and has a sensitivity profile that can offer advantages over existing players." J.A. 7311. While this statement provides information about potential advantages of RaDaR, it is far from evidence that "RaDaR is irreplaceable for certain biopharmaceutical partners and clinical studies" as NeoGenomics argues. Appellant's Opening Br. 51. The market report does not assert RaDaR's irreplaceability, detail the potential advantages of

RaDaR, or cite supporting evidence. For these reasons, it does not show clear error in the district court's finding that Signatera can meet patient needs.

NeoGenomics emphasizes the importance of patient choice.[2] NeoGenomics points to Dr. Beitsch's statement that "there is a need for multiple different MRD tests on the market" "to choose the best fit on a patient by patient basis." J.A. 11264–65. Because doctors and patients benefit from access to different tests, NeoGenomics argues, the injunction goes against the public interest. We do not agree.

NeoGenomics has not shown that access to RaDaR will improve patient outcomes or that Natera is unable to satisfy the need for tests. The record does not establish that RaDaR has superior sensitivity in a way that impacts patient outcomes or that RaDaR applies to more types of cancer than Signatera. Taken to its logical extent, NeoGenomics' argument would preclude a preliminary injunction for any medical or healthcare-related product because such an injunction would narrow the field of products available to patients. The district court did not overlook public harm in the form of patient choice.

Based on the arguments and evidence presented to the district court, we cannot agree with NeoGenomics that the district court legally erred in weighing Natera's patent rights against harm to the public. In light of the evidence presented, the district court did not clearly err in its assessment regarding claimed superior sensitivity. The district court was entitled to weigh all evidence presented by the parties, and its findings on public interest do not constitute clear error or show an abuse of discretion.

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[2] Oral Arg. at 42:05–42:11, available at https://oralarguments.cafc.uscourts.gov/default.aspx?fl=24-1324_03292024.mp3.

The district court carefully crafted and repeatedly clarified this injunction to balance potential adverse effects on cancer patients and clinical research. J.A. 21 (Order Granting Mot. for Prelim. Inj.) (finding public interest does not support enjoining use of RaDaR by current patients and in-process clinical trials and research projects). As a result, the preliminary injunction does not apply to patients who were using RaDaR before entry of the injunction, as access to RaDaR is vital for their continued care, or to clinical trials and research projects that were in process or obtained final approvals before entry of the injunction. J.A. 23 (Prelim. Inj.).

For these reasons, we see no legal error in the weight afforded to the public interest by the district court and no clear error in its factual findings.

On June 9, 2024, NeoGenomics filed a Rule 28(j) Letter indicating that on June 6, 2024, Medicare coverage for RaDaR was approved for a new indication. It argues that this approval for Medicare coverage amounts to a public harm. Natera filed a response indicating, quite correctly, that this court is not the appropriate forum for raising this new evidence. NeoGenomics can raise this argument with the district court and seek modification of the injunction. The district court has quite ably balanced potential public harm in crafting the scope of this preliminary injunction. It is the proper forum for addressing NeoGenomics' new development.

CONCLUSION

We have considered NeoGenomics' remaining arguments and find them unpersuasive. The district court has acknowledged the subject matter of this case is highly technical and noted both parties' "kitchen-sink" litigation approach, which unnecessarily complicated its task of resolving the issues before it fairly and efficiently. J.A. 21330–31 (Order on Mot. to Modify Prelim. Inj.). The district court deftly parsed through excessive arguments

and the evidence and minimized the preliminary injunction's negative impact on the public interest. NeoGenomics has not shown abuse of discretion in the district court's decision to grant Natera's motion for a preliminary injunction.

AFFIRMED