

Dkt. 220-3

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19
20 **UNITED STATES DISTRICT COURT**
21 **NORTHERN DISTRICT OF CALIFORNIA**

22 AliveCor, Inc.,

23 Plaintiff,

24 v.

25 Apple Inc.,

26 Defendant.

CASE NO. 4:21-CV-03958-JSW-SK

**DEFENDANT APPLE INC.’S COMBINED
CROSS-MOTION FOR SUMMARY
JUDGMENT AND OPPOSITION TO
ALIVECOR, INC.’S MOTION FOR
PARTIAL SUMMARY JUDGMENT**

Date: October 6, 2023
Time: 9:00 a.m.
Place: Courtroom 5, 2nd Floor
The Honorable Jeffrey S. White

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STATEMENT OF ISSUES

1
2 1. Whether Apple is entitled to summary judgment on AliveCor’s Section 2 claims, and
3 AliveCor’s motion for partial summary judgment should be denied, because AliveCor cannot establish
4 Apple engaged in exclusionary conduct.

5 2. Whether Apple is entitled to summary judgment on AliveCor’s Section 2 claims because
6 AliveCor has failed to define all relevant markets and cannot establish Apple’s monopoly power in the
7 relevant markets.

8 3. Whether Apple is entitled to summary judgment on AliveCor’s Section 2 claims because
9 AliveCor cannot establish causal antitrust injury.

10 4. Whether Apple is entitled to summary judgment on AliveCor’s derivative claim under
11 California’s Unfair Competition Law because AliveCor cannot establish that Apple’s conduct was
12 unlawful or unfair.

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FILED UNDER SEAL**I. INTRODUCTION**

1
2 Every day, people glance down at their Apple Watch while working out. They want to see how
3 hard their heart is pumping or how many calories they've burned. The digits that light up are the
4 product of a complex hardware and software system developed by Apple, the fruit of iterative
5 improvements spanning the better part of a decade. This case is about one change Apple made to that
6 software in 2018, when Apple redesigned Workout Mode to integrate a new heartrate algorithm that
7 delivered more accurate and reliable heartrate values.

8 The key facts are not in dispute. The Apple Watch uses an optical photoplethysmography
9 sensor—a PPG sensor for short—to detect the wearer's heartrate. Apple's Workout Mode software
10 then converts that raw information into a variety of useful metrics, including heartrate, burned calories,
11 and the like. An important part of that software is the heartrate algorithm, which translates the sensor
12 data into average heartrate values displayed in Apple's Workout App. Under a license agreement,
13 Apple makes these heartrate values available to developers through the Workout Mode application
14 programming interface ("API"). AliveCor's so-called "heart rhythm analysis app," its SmartRhythm
15 feature, used the Workout Mode API to run Workout Mode continuously to collect heartrate outputs
16 for "medical monitoring" of atrial fibrillation.

17 As part of its 2018 release of watchOS 5, Apple redesigned Workout Mode to integrate a new
18 heartrate algorithm—the Heart Rate Neural Network ("HRNN") algorithm—to replace the Heart Rate
19 Path Optimizer ("HRPO") algorithm, which had previously provided the heartrate data for Workout
20 Mode. Apple spent years developing HRNN to improve on HRPO. Although AliveCor focuses
21 narrowly on "medical monitoring," HRNN identified more accurate heartrate values in almost all
22 circumstances—including during exercise, Workout Mode's intended purpose—and thereby delivered
23 better heartrate readings to millions of consumers and thousands of developers. Apple's conduct was,
24 in short, the very kind of "technological innovation" that antitrust laws try to foster. *Allied Orthopedic*
25 *Appliances Inc. v. Tyco Health Care Group LP*, 592 F.3d 991, 1000 (9th Cir. 2010).

26 As the Court observed, this case began with sweeping accusations that "Apple harmed
27 competition ... in several ways." Dkt. 42 at 4. But put to its proof, AliveCor is left claiming that Apple
28 violated Section 2 of the Sherman Act and the California Unfair Competition Law by removing

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1 developers’ access to HRPO in Workout Mode to the detriment of AliveCor and one other app
2 developer. AliveCor therefore asks this Court to disregard the benefits of HRNN’s integration in place
3 of HRPO. That makes no sense: When a carmaker rolls out a new electric model, one cannot decry
4 only that the V6 was taken out while ignoring the new electric motor that was put in—particularly
5 when it is faster, more reliable, and emits fewer pollutants. Adopting such a pinched view of innovation
6 is contrary to the law of this Circuit, *Allied Orthopedic*, 592 F.3d at 994–1001, and would “deter the
7 development and introduction of those new technologies so essential to the continued progress of our
8 economy,” *Foremost Pro Color, Inc. v. Eastman Kodak Co.*, 703 F.2d 534, 542–43 (9th Cir. 1983).

9 Indeed, there is much about AliveCor’s theory of monopolization that does not make sense.
10 AliveCor posits that Apple removed developers’ HRPO access to monopolize a heart rhythm analysis
11 (“HRA”) apps market, driven by the “enormous value” of data generated by such apps. AliveCor Mot.
12 for Partial Summary Judgment, Dkt. 193, at 1 (hereinafter “Mot.”). But Apple never charged for the
13 product it offered in this alleged market, its irregular heartrate notification (“IRN”) feature. Nor has it
14 ever even attempted to monetize the related consumer health data, which remains free to consumers
15 and developers. In other words, AliveCor alleges a monopolization case without a motive for
16 monopolization.

17 The true story is simpler: Apple wanted to improve its popular workout technology, so it built
18 a better algorithm and has used that software to the benefit of consumers and developers. Prices are
19 down. Output is up. There is not even a whiff that Apple has extracted supracompetitive profits or
20 charged supracompetitive prices. Far from running afoul of the Sherman Act’s “consumer welfare
21 prescription,” *Reiter v. Sonotone Corp.*, 442 U.S. 330, 343 (1979), every indicator says Apple’s design
22 change has been a boon for developers and consumers alike. That is to be expected, for “[p]roduct
23 innovation generally benefits consumers” even though it may “inflict[] harm on competitors.” *New*
24 *York ex rel. Schneiderman v. Actavis PLC*, 787 F.3d 638, 652 (2d Cir. 2015).

25 AliveCor concedes that “courts are properly very skeptical” about cases like this one. Mot. 14.
26 But even that is understatement. The Ninth Circuit has rejected *every* claim like AliveCor’s for the
27 past four-plus decades. See *Allied Orthopedic*, 592 F.3d at 1002–03; *Oahu Gas Serv., Inc. v. Pac.*
28 *Resources, Inc.*, 838 F.2d 360, 369 (9th Cir. 1988); *Foremost*, 703 F.2d at 545–46; *Cal. Comp. Prod.*

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1 *v. Int'l Bus. Mach.*, 613 F.2d 727, 744 (9th Cir. 1979). This case should meet the same fate for at least
2 four independent reasons.

3 *First*, AliveCor cannot prove Apple's change to Workout Mode was "exclusionary conduct."
4 *MetroNet Servs. Corp. v. Qwest Corp.*, 383 F.3d 1124, 1130 (9th Cir. 2004). It is undisputed that
5 Apple's actual product change—integrating HRNN in place of HRPO—improved Workout Mode,
6 meaning it "is 'necessarily tolerated by the antitrust laws.'" *Allied Orthopedic*, 592 F.3d at 1000.
7 While AliveCor searches for "associated anticompetitive conduct" to evade that categorical rule, *id.* at
8 999, it uncorks only unsupported aspersions about Apple's intent that do not suffice as a matter of law.
9 This not only defeats AliveCor's motion for partial judgment but also disposes of the case entirely.
10 And even if AliveCor could circumvent the established law on product improvements, its theories still
11 falter: Withdrawing access to HRPO is at most a refusal to deal that falls far short of the high bar for
12 such claims.

13 *Second*, AliveCor has failed to define all of the relevant markets, let alone establish Apple's
14 monopoly power in them, as required under Section 2 of the Sherman Act. *FTC v. Qualcomm Inc.*,
15 969 F.3d 974, 992 (9th Cir. 2020). In its own words, AliveCor's theory is that Apple "cut[] the artery"
16 of watchOS HRA app developers by "den[ying] third party access to a critical input." Mot. 10, 14. In
17 other words, AliveCor claims conduct in an upstream market (where Apple provides platform services
18 to its developer customers) had purported effects in a downstream market (where developers retail apps
19 to consumers). This two-market theory requires definition of *both* markets as well as proof of power
20 in the upstream market in which the conduct took place. *Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc.*,
21 555 U.S. 438, 449–52 & n.2 (2009). AliveCor's own expert concedes that it has not even attempted to
22 define such a market or prove Apple's power within one here.

23 *Third*, AliveCor cannot establish "causal antitrust injury"—harm flowing from a distortion of
24 competition. *Somers v. Apple Inc.*, 729 F.3d 953, 963 (9th Cir. 2013). All evidence indicates that
25 competition is alive and well, and consumers are better off. AliveCor's decision to discontinue one
26 feature in its own app is not a harm "to *competition itself*." *Qualcomm*, 969 F.3d at 996.

27 *Finally*, the Court should enter summary judgment on AliveCor's unfair competition claim.
28 The UCL affords only equitable relief, and AliveCor has no evidence to support an injunction; its

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1 colossal damages demand presents a more than “adequate remedy at law.” *Sonner v. Premier Nutrition*
 2 *Corp.*, 971 F.3d 834, 837 (9th Cir. 2020). Nor can the UCL be used to enjoin conduct that is lawful
 3 under “a categorical antitrust rule,” *Epic Games, Inc. v. Apple Inc.*, 67 F.4th 946, 1001 (9th Cir. 2023),
 4 much less product improvements with demonstrable procompetitive effects like the one here.

5 The Court should enter summary judgment in favor of Apple on all of AliveCor’s claims and
 6 deny AliveCor’s motion for partial summary judgment.

II. UNDISPUTED FACTS**A. Apple and the Apple Watch**

7
 8
 9 Apple is a technology company that offers a suite of products, including the Apple Watch.
 10 Ex. 1 (Stiroh Rpt.) ¶ 18.¹ Apple’s devices, including the Watch, support software applications (“apps”),
 11 either developed by Apple or by third parties, that enable additional functionality on the devices. *Id.*
 12 ¶¶ 20–21. To that end, Apple also operates the App Store, a virtual storefront where Apple device
 13 customers can download their choice of nearly two million apps supplied by third-party developers.
 14 *Id.* ¶¶ 21–22. The App Store is a two-sided transaction platform. *Epic Games, Inc. v. Apple Inc.*, 559
 15 F. Supp. 3d 898, 1016 (N.D. Cal. 2021). And, as part of its role in operating that platform, Apple
 16 creates and offers to developers extensive proprietary software tools to facilitate their development of
 17 apps, including APIs designed to enable developers’ access to data and functionality from Apple’s
 18 hardware and software. *See* Decl. of Dr. Stephen Waydo ¶ 29; Ex. 1 (Stiroh Rpt.) ¶¶ 23, 26; Ex. 2
 19 (Stultz Rebuttal) ¶ 34. To develop apps using Apple’s intellectual property, developers must join the
 20 Apple Developer Program at a cost of \$99 per year and sign the Developer Agreement (“DA”) as well
 21 as the Developer Program License Agreement (“DPLA”). Waydo Decl. ¶ 29; Ex. 1 (Stiroh Rpt.) ¶ 23.
 22 It is thus undisputed that developers, as customers of Apple, obtain [REDACTED]
 23 [REDACTED] pursuant to this license, which they then use to develop apps that they can
 24 offer downstream to consumers on the App Store. Ex. 34 (Cragg Dep. I) 194:12–195:23; *accord* Ex.
 25 9 (Stiroh Rebuttal) ¶¶ 25–27.

26 Apple first announced the Apple Watch in 2014 and released it the following year in April
 27

28 ¹ Citations to exhibits 1–65 refer to exhibits to the Declaration of Jason Lo and citations to exhibits
 A–Q refer to exhibits to the Declaration of Dr. Stephen Waydo.

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1 2015. Ex. 3 (Press Release – Apple Watch Available in Nine Countries on April 24); Ex. 4 (Press
2 Release – Apple Unveils Apple Watch—Apple’s Most Personal Device Ever); *see also* Waydo Decl.
3 ¶ 3. Described as “an incredibly accurate timepiece, an intimate and immediate communication device
4 and a groundbreaking health and fitness companion,” the Apple Watch has been equipped with an array
5 of health features from its first release. Ex. 3 (Press Release – Apple Watch Available in Nine
6 Countries on April 24); *see also* Ex. 6 (Stultz Rpt.) ¶ 96. Every Apple Watch runs watchOS as its
7 operating system. Waydo Decl. ¶¶ 4–6. Among the features included in every version of the Apple
8 Watch and watchOS are Apple’s Workout App, in which the Watch’s Workout Mode tracks an
9 individual’s average heartrate and other metrics during workout sessions, and an optical
10 photoplethysmography (“PPG”) heart sensor for detecting an individual’s heartrate. *Id.*; *see also* Ex. 6
11 (Stultz Rpt.) ¶ 96; Ex. 7 (Jafari Rpt.) ¶ 56 (“[T]he primary information reported in workout mode is
12 average heartrate, measured in BPM”).

13 Apple has updated and introduced new health and fitness features in subsequent generations of
14 the Apple Watch and watchOS, including in its release of the Series 4 and watchOS 5 in 2018. Waydo
15 Decl. ¶¶ 4–6; Ex. 6 (Stultz Rpt.) ¶¶ 95–118, 181–92; *see also* Ex. 5 (Cragg Rpt.) ¶ 20 (detailing various
16 health and fitness features that Apple has introduced since 2014). For example, Apple introduced the
17 FDA-cleared ECG App in watchOS 5 that used a new electrical heart sensor (part of the Series 4 and
18 above Apple Watches) to record an ECG. It also introduced the FDA-cleared Irregular Rhythm
19 Notification (“IRN”) feature in watchOS 5 (available on Series 1 and up Watches with the upgraded
20 watchOS 5 software). The IRN feature uses tachograms, a list of all heart beats in a given minute that
21 identifies precisely when each heart beat occurred, to determine whether an individual’s heart has an
22 irregular rhythm. Ex. 7 (Jafari Rpt.) ¶¶ 49–50, 54–55; *see also* Ex. 6 (Stultz Rpt.) ¶¶ 32, 111–17, 167–
23 69; Ex. 1 (Stiroh Rpt.) ¶¶ 26–27. Other new features and improvements in Apple’s Series 4 Watch and
24 watchOS 5 included an improved accelerometer, gyroscope, and speakers; a better display; improved
25 processors and chip hardware; and, as discussed below, a redesigned Workout Mode with more
26 accurate heartrate tracking during exercise. Ex. 1 (Stiroh Rpt.) ¶ 44.

27 Apple does not charge consumers for the Workout App or the Watch’s health and heartrate
28 features, including tachograms, the IRN feature, and ECG recordings from the ECG App. Waydo Decl.

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¶ 7; Ex. 34 (Cragg Dep. I) 145:13–18; Ex. 8 (Williams Dep.) 152:17–153:11; Ex. 1 (Stiroh Rpt.) ¶¶ 26–27. And Apple has not monetized the Apple Watch’s heart-related metrics in any other way. Ex. 8 (Williams Dep.) 152:17–153:11. Instead, Apple believes that “the customer really owns” health data generated by the Watch. *Id.*; *see also* Waydo Decl. ¶ 7. If a Watch owner consents to their data being shared, the Watch’s heartrate readings and other metrics tracked during workout sessions, the tachograms (“beat-to-beat” data measured by the Watch), irregular rhythm notifications, ECG recordings from the ECG App, and other data from the Watch are also available to third-party app developers via APIs, such as the Workout Mode API and Tachogram API. Ex. 16 (Waydo Dep.) 34:20–35:11, 73:22–75:5, 84:22–86:1, 98:13–24; Ex. 1 (Stiroh Rpt.) ¶¶ 26–27; Ex. 9 (Stiroh Rebuttal) ¶¶ 39, 52, 171, 181; *see also* Ex. 7 (Jafari Rpt.) ¶ 50 (“The tachograms generated by ██████████ are published to HealthKit for access through the Tachogram API. These tachograms are also consumed by Apple’s irregular rhythm notification (‘IRN’) feature.”).

1. Heartrate Tracking in Workout Mode

When an Apple Watch owner navigates to the Workout App, selects a workout activity type, and starts a workout session, the Watch is placed into “Workout Mode” and will track average heartrate, estimated calorie burn, and other activity-specific metrics for the duration of the workout session. Waydo Decl. ¶ 9; Ex. 6 (Stultz Rpt.) ¶¶ 104, 120. Heartrate data, along with other data collected by the Watch, contributes to the calculation of estimated calorie burn and allows users to monitor their training heart rate zones. Ex. 10 (Monitor Your Heart Rate With Apple Watch Support Page); Ex. 65 (Apple Watch User Guide – View Heart Rate Zones on Apple Watch); Ex. 1 (Stiroh Rpt.) ¶¶ 52, 85. In every version of watchOS since its release, Workout Mode has tracked heartrate with an algorithm specifically designed to estimate and report one average heartrate reading about every five seconds during periods of activity; these heartrate readings are displayed in the Workout App. Waydo Decl. ¶¶ 9–11; Ex. 6 (Stultz Rpt.) ¶¶ 104, 120; Ex. 2 (Stultz Rebuttal) ¶¶ 24–25.

Apple has continually worked to improve the accuracy of its Workout Mode heartrate tracking. When first launched, Workout Mode used the “Heart Rate Path Optimizer,” or “HRPO,” algorithm to detect heartrate. Ex. 2 (Stultz Rebuttal) ¶ 26; Ex. 11 (APL-ALVCOR_00796638); Ex. 12 (Shapiro Dep.) 102:18–105:12, 110:19–112:4 (“[A]s one of the early members of the ... heart rate algorithms

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1 team ... I worked on ... HRPO, intended for the workout or exercise use case.”). HRPO used an
2 algorithm that entailed “a significant amount of manual engineering” and relied on an individual’s
3 selection of a specific workout activity (e.g., “outdoor run”) to predict the wearer’s likely movement
4 during the workout. Ex. 6 (Stultz Rpt.) ¶ 128; *see also* Waydo Decl. ¶¶ 16–19; Ex. 12 (Shapiro Dep.)
5 167:5–168:19. To support heartrate measurement during specified types of workout activities, [REDACTED]
6 [REDACTED]
7 [REDACTED] Ex. 6 (Stultz Rpt.) ¶ 128; *see also* Waydo Decl. ¶¶ 16–19; Ex. 12 (Shapiro Dep.) 167:5–
8 168:19. Apple updated the HRPO algorithm multiple times as it expanded the types of workout
9 activities for which Workout Mode provided heartrate tracking, as well as to reduce the impact of
10 “signal degradation” on the quality of the heartrate readings. *Id.* ¶¶ 12–19; Ex. 2 (Stultz Rebuttal)
11 ¶¶ 26–28; Ex. 6 (Stultz Rpt.) ¶¶ 121–29.

12 Before watchOS 5, Apple received some complaints about the Watch’s heartrate tracking
13 during workouts. Ex. 1 (Stiroh Rpt.) ¶ 76 & Fig. 6. [REDACTED]
14 [REDACTED]
15 *See* Ex. 6 (Stultz Rpt.) ¶¶ 127–28; Ex. 15 (APL-ALVCOR_00610371) at -373. A persistent limitation
16 of HRPO was that its architecture required the user to identify the type of exercise to the Watch before
17 engaging in it, [REDACTED] Waydo
18 Decl. ¶¶ 16–17. This was resource intensive for Apple and had obvious limitations if an individual
19 engaged in multi-exercise sessions (e.g., taking a warm-up run before lifting weights). Waydo Decl.
20 ¶¶ 17–19; *see also* Ex. 12 (Shapiro Dep.) 167:23–169:3. Apple therefore set out to improve this data
21 feed not only to enhance its popular Workout App but also to provide more accurate Workout Mode
22 data to developers of health and fitness apps. Waydo Decl. ¶¶ 18–26 & Ex. F; *see also* Ex. 1 (Stiroh
23 Rpt.) ¶¶ 85–86; Ex. 9 (Stiroh Rebuttal) ¶¶ 39–42, 52 & n.129; Ex. 2 (Stultz Rebuttal) ¶¶ 36–37. Chief
24 among these efforts was the development of a new, neural network-based algorithm utilizing advanced
25 machine learning techniques: the Heart Rate Neural Network (“HRNN”) algorithm. Waydo Decl.
26 ¶¶ 18–24; Ex. 2 (Stultz Rebuttal) ¶¶ 29–31; Ex. 2 (Stultz Rpt.) ¶¶ 129, 136–48; *see also* Ex. 35 (Cragg
27 Dep. II) 87:18–89:7 (AliveCor’s economist recognizing Apple’s extensive efforts to develop HRNN).

28 HRNN, like HRPO, was designed to produce an average heartrate reading at regular intervals.

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1 Waydo Decl. ¶ 23; Ex. 12 (Shapiro Dep.) 238:11–239:9. But unlike HRPO, HRNN’s accuracy is
2 independent of the user having identified the form of exercise in advance, or of Apple engineers having
3 coded for that form of exercise in advance. Waydo Decl. ¶ 23. Instead, the advanced machine learning
4 techniques allow HRNN to learn from a diverse set of workout data to more accurately detect heartrate
5 across a broad set of activities regardless of whether the user has specified the correct kind of workout
6 or whether Apple engineers have studied that form of exercise before. Waydo Decl. ¶¶ 20–23. HRNN
7 consistently produced more accurate heartrate estimates than HRPO, with fewer rates of large errors
8 (e.g., readings that were more than 20 beats per minute off). Waydo Decl. ¶¶ 24–26; *see also* Exs. 13–
9 15 (APL-ALVCOR_00611807 at -821, -825–27, APL-ALVCOR_00860277, APL-
10 ALVCOR_00610371 at -377–381) [REDACTED]). Apple’s testing also
11 demonstrated that HRNN reported a heartrate more frequently than HRPO, resulting in fewer gaps in
12 the readings. *Id.* A battery of experiments thus showed that HRNN provided more accurate data than
13 HRPO for “different activities such as indoor walking, outdoor walking, indoor running, outdoor
14 running, indoor cycling, outdoor cycling, rowing, elliptical, swimming, and high-intensity interval
15 training.” Ex. 6 (Stultz Rpt.) ¶¶ 144–48. This undisputed “corpus of testing” demonstrated that HRNN
16 “was ‘substantially superior for workout heart rate tracking’—“improv[ing] the coverage and accuracy
17 of Workout Mode heart rate detection.” *Id.* ¶ 148; *see also* Ex. 2 (Stultz Rebuttal) ¶¶ 30–31.

18 In watchOS 5, Apple therefore reconfigured Workout Mode to make use of HRNN. Waydo
19 Decl. ¶¶ 24–27. But it did not swap out HRPO for HRNN altogether: Because Apple’s testing indicated
20 that HRNN sometimes lagged behind HRPO in surfacing a first reading, Apple’s initial redesign of
21 Workout Mode reported a reading from HRPO if (and only if) HRPO produced its first heartrate
22 reading more quickly than HRNN. Waydo Decl. ¶ 27; Ex. 6 (Stultz Rpt.) ¶¶ 140–41. Workout Mode
23 then began reporting values from the more-accurate HRNN as soon as HRNN reported its first heartrate
24 reading or the first sixty seconds of a workout session elapsed (whichever occurred first); from then
25 on, HRPO would run only in the background and its outputs would be neither displayed to the customer
26 in the Workout App nor stored for any future access by Apple, the customer, or third-party app
27 developers. Waydo Decl. ¶ 27; Ex. 6 (Stultz Rpt.) ¶ 140. Apple has since further improved HRNN so
28 it more quickly produces its first heartrate reading and removed HRPO entirely from watchOS several

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1 years ago. Waydo Decl. ¶ 28; Ex. 6 (Stultz Rpt.) ¶ 141; Ex. 16 (Waydo Dep.) 37:9–38:12, 139:24–
2 140:3 (“HRPO ... was finally fully removed either in the fall 2020 or 2021 software release”).

2. The Workout Mode API

3
4 The same Workout Mode heartrate readings displayed by Apple to Workout App users are
5 available to third-party app developers (with customer consent) via the Workout Mode API. Waydo
6 Decl. ¶¶ 29–30; Ex. 6 (Stultz Rpt.) ¶ 104. Apple provides third-party developers in the Apple
7 Developer Program with access to the Workout Mode API pursuant to the terms of its licensing
8 agreements. Waydo Decl. ¶¶ 29–30; Ex. 1 (Stiroh Rpt.) ¶¶ 23, 26–27; Ex. 9 (Stiroh Rebuttal) ¶¶ 23,
9 33; Ex. 6 (Stultz Rpt.) ¶ 104; Ex. 34 (Cragg Dep. I) 195:14–23; *see also* Mot. 19 (acknowledging that
10 Apple in its role as a “platform provider made [heartrate values generated by HRPO] available for years
11 to attract developers to its platform”). Without use of such an API, third-party developers would not
12 be able to access these heartrate readings at all. Waydo Decl. ¶ 30; Ex. 6 (Stultz Rpt.) ¶ 120.

13 Apple’s published documentation indicates that the Workout Mode API (also referred to as
14 “HKWorkoutSession”) is intended to “track the user’s workout on Apple Watch.” Ex. 17 (APL-
15 ALVCOR_01019397). With exemplary references to cycling workouts and running apps, Apple
16 explains that, “[w]hen used properly, workout sessions let [a third party] app contribute to both the
17 Move and Exercise rings,” which reflect the number of minutes that an individual moved and exercised
18 throughout the day. *Id.*; *see also* Waydo Decl. ¶ 32; Ex. 18 (APL-ALVCOR_01019113) (2018 version
19 of the developer.apple.com page for “HKWorkout” explains “[t]he workout records summary about a
20 single physical activity (for example, the duration, total distance, and total energy burned)”). As
21 specified in the DPLA, “[a]pplications may only use Documented APIs [such as the Workout Mode
22 API] in the manner prescribed by Apple.” Ex. 19 (DPLA) § 3.3.1.

23 The Workout Mode API has been used by [REDACTED] developers over the years to access and
24 use workout data generated in Workout Mode for their apps. Waydo Decl. ¶ 33; Ex. 9 (Stiroh Rebuttal)
25 ¶ 39; *see also* Ex. 2 (Stultz Rebuttal) ¶¶ 36–37. For example, [REDACTED]
26 [REDACTED] and displays average heartrate and distance run
27 when an individual starts a running session. Ex. 2 (Stultz Rebuttal) ¶ 36. [REDACTED]
28 [REDACTED] and displays average heartrate

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1 and other fitness tracking metrics. *Id.* ¶ 37. All of these developers access the same heartrate readings
2 from the Workout Mode that Apple uses for its own Workout App. *Id.* ¶¶ 34–37; Waydo Decl. ¶¶ 29–
3 31.

4 Pursuant to Apple’s DPLA, Apple may “change . . . access to the Apple services” and otherwise
5 “modify the Apple software . . . at any time without notice,” including Apple’s APIs and data provided
6 through those APIs by Apple to developers. Ex. 19 (DPLA) §§ 2.8 & 2.10. Apple effectuated such a
7 change in watchOS 5 when it redesigned its Workout Mode to utilize HRNN to determine heartrate
8 rather than HRPO. This change modified the underlying Apple software used to provide Apple’s own
9 Workout App with heartrate readings—and, consequently, the heartrate readings available to third-
10 party developers through the Workout Mode API. Waydo Decl. ¶¶ 24, 29–33; Ex. 2 (Stultz Rebuttal)
11 ¶¶ 29–32; Ex. 1 (Stultz Rpt.) ¶¶ 129, 136–48. The underlying algorithms, HRPO and HRNN, are not
12 and have never been licensed or otherwise made available to developers. Waydo Decl. ¶ 34.

B. AliveCor’s SmartRhythm Feature

14 AliveCor has developed multiple apps for the iPhone, Apple Watch, and Android devices. Ex.
15 7 (Jafari Rpt.) ¶¶ 36–37. This includes its “flagship” Kardia App, which is “designed for use with each
16 of AliveCor’s mobile ECG sensors, which, today, include the KardiaMobile, the KardiaMobile 6L, and
17 the Kardia Card [and, earlier, the KardiaBand].” *Id.* ¶ 37. While the Kardia App is free to download
18 from Apple’s App Store, AliveCor also offered a paid subscription service called (from 2017–2019)
19 “Kardia Premium,” which unlocked certain features that could be used with various AliveCor products.
20 Ex. 1 (Stiroh Rpt.) ¶ 15; Ex. 20 (Locke Dep.) 30:11–34:12.

21 In November 2017, AliveCor released the SmartRhythm software feature within its Kardia App,
22 which subscribers of Kardia Premium—who paid \$9.99 per month or \$99 per year—could unlock. Ex.
23 20 (Locke Dep.) 30:11–33:15; Ex. 7 (Jafari Rpt.) ¶ 38. SmartRhythm used Workout Mode heartrate
24 readings as inputs in an algorithm that looked for irregular heart rhythms. Ex. 7 (Jafari Rpt.) ¶ 38.
25 AliveCor does not—and never has—paid any commission or other monies to Apple arising from its
26 sale of subscriptions. Ex. 9 (Stiroh Rebuttal) ¶ 48.

27 Soon after its submission in November 2017, AliveCor’s Kardia App was rejected by Apple’s
28 App Review team because its SmartRhythm feature used the Workout Mode API in an unintended

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1 way. Ex. 21 (APL-ALVCOR_00000179) at -184–89; Ex. 22 (Gundotra Dep.) 236:14–19. AliveCor’s
2 SmartRhythm software required the Watch to run Workout Mode at all times, including when the user
3 was not doing a workout, so that SmartRhythm could use Workout Mode’s heartrate readings to
4 conduct irregular rhythm monitoring, rather than to track heartrate during a discrete workout session.
5 Ex. 1 (Stiroh Rpt.) ¶ 98; Ex. 9 (Stiroh Rebuttal) ¶ 38; Ex. 24 (Caldbeck Dep.) 203:23–205:7; Ex. 25
6 (Kardia User Manual) at 12. Monitoring for irregular rhythms is not Workout Mode’s intended
7 purpose—which is to provide accurate heartrate and calorie tracking during exercise. Ex. 13 (APL-
8 ALVCOR_00611807) at -808, -825; Ex. 15 (APL-ALVCOR_00610371) at -374, -377–379; Ex. 36
9 (“HK Workout,” Apple Developer Website); Waydo Decl. ¶¶ 9–12; *see also* Ex. 6 (Stultz Rpt.) ¶¶ 119–
10 20; Ex. 2 (Stultz Rebuttal) ¶¶ 24–25. After months of back-and-forth between AliveCor and Apple,
11 and after AliveCor changed its app to better resemble a [REDACTED] system, Apple agreed in
12 March 2018 to allow Kardia with the SmartRhythm feature to remain on the App Store and retain its
13 access to the Workout Mode API. Ex. 63 (APL-ALVCOR-00078391) at -391; *see also* Ex. 1 (Stiroh
14 Rpt.) ¶ 8; Ex. 20 (Locke Dep.) 35:6–14; Ex. 24 (Caldbeck Dep.) 203:23–206:14; Ex. 26 (APL-
15 ALVCOR_00436336); Ex. 43 (Tan Dep.) 208:13–209:7; Ex. 62 (APL-ALVCOR-00078272) at -275–
16 76.

17 AliveCor withdrew the SmartRhythm feature from its Kardia App a little over a year later, in
18 mid-2019. According to AliveCor, it observed changes in SmartRhythm’s ability to detect irregular
19 heart rhythms—specifically, atrial fibrillation (“AFib”)—after Apple released watchOS 5 in September
20 2018. Ex. 7 (Jafari Rpt.) ¶¶ 41–42, 121. Despite believing that the heartrate data available through the
21 Workout Mode API had changed, *id.*, AliveCor did not ask Apple for support, ask anyone at Apple
22 how Workout Mode determines heartrate, or otherwise inform anyone at Apple that the SmartRhythm
23 feature was experiencing issues before deciding to withdraw it from the app. Waydo Decl. ¶ 39. Nor
24 did AliveCor publicly announce that it believed SmartRhythm was experiencing degraded performance
25 before discontinuing the feature. Ex. 20 (Locke Dep.) 142:22–146:12. Upon seeing coverage of
26 SmartRhythm’s removal, Apple reached out to AliveCor to ask whether it “could address” the “changes
27 ... in the Apple Watch operating system” that AliveCor blamed. Ex. 27 (APL-ALVCOR-00079528).
28 AliveCor never reached out to Apple.

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1 AliveCor continued to submit new versions of its apps to the App Store, and it remains a part
2 of the Developer Program and signatory to the DPLA today. Waydo Decl. ¶ 35; *see also, e.g.*, Exs.
3 28–33 (AliveNDCal_01511763; AliveNDCal_01511764; AliveNDCal_04638165;
4 AliveNDCal_04638166; AliveNDCal_04649133; AliveNDCal_04649134).

III. LEGAL STANDARD

6 Summary judgment is appropriate where “there is no genuine dispute as to any material fact
7 and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). Because AliveCor
8 bears the burden of proof at trial, its motion “must affirmatively demonstrate that no reasonable trier
9 of fact could find other than for the moving party,” *Rookaird v. BNSF Ry. Co.*, 908 F.3d 451, 459 (9th
10 Cir. 2018)—undisputed evidence, in other words, “which would entitle it to a directed verdict,”
11 *Houghton v. South*, 965 F.2d 1532, 1536 (9th Cir. 1992). Because Apple does not bear the burden of
12 proof, by contrast, its cross-motion “may simply point to the absence of evidence to support the
13 nonmoving party’s case.” *In re Brazier Forest Prod., Inc.*, 921 F.2d 221, 223 (9th Cir. 1990). The
14 Court then must enter summary judgment on any claim for which AliveCor “fails to make a showing
15 sufficient to establish a genuine dispute of fact with respect to the existence of [the challenged]
16 element[s].” *City of Vernon v. S. California Edison Co.*, 955 F.2d 1361, 1365 (9th Cir. 1992); *see also*
17 *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986) (“[T]here is no issue for trial unless there is
18 sufficient evidence favoring the nonmoving party for a jury to return a verdict for that party.”).
19 Evidence is viewed “in the light most favorable to,” and “all reasonable inference[s]” are drawn in
20 favor of, the nonmoving party. *Rookaird*, 908 F.3d at 459. Careful scrutiny is required because “an
21 appropriate award of summary judgment may save the parties and the courts from unnecessarily
22 spending the extraordinary resources required for a full-blown antitrust trial.” *Bhan v. NME Hosps.,*
23 *Inc.*, 929 F.2d 1404, 1409 (9th Cir. 1991) (affirming summary judgment and collecting cases).

IV. ARGUMENT

25 AliveCor brings claims for monopolization and attempted monopolization under Section 2 of
26 the Sherman Act, 15 U.S.C. § 2, as well as violation of California’s Unfair Competition Law, Cal. Bus.
27 & Prof. Code § 17200. Its complaint featured broad allegations that Apple not only undertook
28 “exclusionary design changes” that included an “‘updated’ ... heartrate algorithm” that “did not

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1 improve the user experience at all,” FAC ¶¶ 7, 88, 112, but also engaged in “pretextual” enforcement
2 of the App Store review guidelines, *id.* ¶¶ 4, 76, “cop[ied] AliveCor’s ideas” for providing ECG and
3 heart-rhythm analysis, *id.* ¶¶ 3, 77, and engaged in “little acts of sabotage” to make SmartRhythm
4 “buggy,” *id.* ¶ 78. Taking these allegations as true, the Court allowed AliveCor to test its theory in
5 discovery. *See* Dkt. 42 at 14–15. AliveCor has failed that test: Undisputed evidence demonstrates that
6 Apple set out to improve and in fact improved Workout Mode, benefitting both consumers and
7 developers. AliveCor has therefore abandoned its initial theories, arguing in its motion for partial
8 summary judgment that the *removal* of HRPO, considered alone, did not provide users with new
9 benefits. But the law does not preclude Apple from improving its products—and the products of
10 thousands of third-party developers—because of the alleged negative impact that *part* of its effort had
11 on AliveCor. The Court should deny AliveCor’s motion and enter judgment for Apple on all claims.

A. The Court Should Enter Summary Judgment on AliveCor’s Section 2 Claims

13 A Section 2 claim for monopolization requires proof of “(a) the possession of monopoly power
14 in the relevant market; (b) the willful acquisition or maintenance of that power; and (c) causal antitrust
15 injury.” *Allied Orthopedic*, 592 F.3d at 998 (internal quotation marks omitted). Attempted
16 monopolization similarly requires a showing of anticompetitive conduct, along with “specific intent”
17 to monopolize and a dangerous probability of achieving monopoly power in a defined market. *Cascade*
18 *Health Solutions v. PeaceHealth*, 515 F.3d 883, 893 (9th Cir. 2008). Undisputed evidence shows that
19 AliveCor cannot meet its burden of proof on any of these Section 2 elements: Apple did not acquire
20 monopoly power through exclusionary conduct, Apple is not a monopolist in the market in which the
21 alleged conduct occurred, and Apple’s conduct did not harm competition.

1. Apple Did Not Engage in Exclusionary Conduct

23 AliveCor’s Section 2 claims fail at the outset because there is no proof of monopolization (or
24 attempted monopolization) “through exclusionary conduct.” *MetroNet*, 383 F.3d at 1130. To prove
25 such conduct, a plaintiff must show “anticompetitive abuse or leverage of monopoly power, or a
26 predatory or exclusionary means of attempting to monopolize the relevant market.” *Qualcomm*, 969
27 F.3d at 990. AliveCor claims that the changes Apple made to its Workout Mode to “remov[e] third
28 party access to HRPO” were exclusionary, Mot. 10–11, but this argument requires the Court to don

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1 blinders. Apple did not just “withdraw” HRPO but reconfigured Workout Mode to integrate a
 2 replacement algorithm, HRNN, that *improved* the heartrate values available to both Apple and
 3 developers—a lawful product improvement. *Allied Orthopedic*, 592 F.3d at 1000. Even focused on
 4 the withdrawal alone, however, Apple’s alleged refusal to deal with AliveCor was not anticompetitive
 5 but rather justified by its interests in improving its services and protecting its intellectual property.
 6 AliveCor’s claims therefore fail under any paradigm, and Apple is entitled to summary judgment. *See*
 7 *MetroNet*, 383 F.3d at 1131 n.11 (recognizing that whether “specific conduct is anticompetitive is a
 8 question of law” properly addressed at summary judgment).²

9 **a. Apple’s Product Improvement Is Lawful**

10 In antitrust cases, courts have “specific rules for common forms of alleged misconduct,” *Novell,*
 11 *Inc. v. Microsoft Corp.*, 731 F.3d 1064, 1072 (10th Cir. 2013) (Gorsuch, J.), including cases, like this
 12 one, about a design change. The parties agree AliveCor’s claims are “governed by” *Allied Orthopedic*,
 13 the Ninth Circuit’s seminal decision on product improvement. Dkt. 24 at 14; *see also* Dkt. 42 at 14
 14 (recognizing *Allied Orthopedic* as “relevant to all of AliveCor’s anticompetitive conduct claims”).
 15 Under *Allied Orthopedic*, product improvement “is ‘necessarily tolerated by the antitrust laws.’” 592
 16 F.3d at 1000; *accord Oahu Gas*, 838 F.2d at 369; *Foremost*, 703 F.2d at 545; *Cal. Comp.*, 613 F.2d at
 17 744. This ensures a company can “bring its products to market whenever and however it chooses,”
 18 *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 286 (2d Cir. 1979), and the antitrust laws are
 19 not used to “unjustifiably deter the development and introduction of those new technologies so essential
 20 to the continued progress of our economy,” *Foremost*, 703 F.2d at 542–43.

21 AliveCor purports to seek partial judgment that Apple is not entitled to “immunity” under a
 22 “‘product improvement’ defense.” Mot. 12, 15, 18. But there is no “product improvement defense”;
 23 *Allied Orthopedic* sets out a standard for evaluating whether a design change can be exclusionary under
 24 Section 2 in the first instance. Thus, AliveCor does not seek “judgment” on any claim, defense, or
 25 even element. *See Operation Tech., Inc. v. Cyme Int’l T & D Inc.*, 2016 WL 6246806, at *7 (C.D. Cal.
 26 Mar. 31, 2016) (recognizing the absence of authority authorizing such a request while denying the
 27

28 ² As explained below, AliveCor’s theories also ask the Court to ignore the fact that the conduct did not occur in its alleged market. *See infra* 27, 36–39.

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1 motion on other grounds). But this impropriety is beside the point because AliveCor cannot establish
2 exclusionary conduct: To the contrary, undisputed evidence demonstrates that Apple intended to
3 improve its product, did improve its product, and consumers benefitted as a result.

4 **i. Apple’s Genuine Improvement to Workout Mode Was Not**
5 **Exclusionary Conduct**

6 As a matter of law, “a design change that improves a product by providing a new benefit to
7 consumers does not violate Section 2.” *Allied Orthopedic*, 592 F.3d at 998–99. Or, as AliveCor puts
8 it, design changes are afforded “[a]ntitrust immunity,” Mot. 15—meaning the conduct is not
9 exclusionary—so long as the change represents an improvement in *some* respect and is not
10 accompanied by “associated anticompetitive conduct.” *Allied Orthopedic*, 592 F.3d at 998–99. This
11 is not “a technical inquiry into the justifiability of product innovations” between “the advantages of
12 two alternatives.” *ILC Peripherals Leasing Corp. v. IBM Corp.*, 458 F. Supp. 423, 440–41 (N.D. Cal.
13 1978) (granting summary judgment against Section 2 challenge to a product design change). Rather,
14 the question is whether undisputed facts show that the design change “provided some new benefit to
15 consumers and thus constituted an improvement.” *Allied Orthopedic*, 592 F.3d at 1000. For all of its
16 bluster, AliveCor does not and cannot dispute that Apple’s changes to Workout Mode did just that.

17 All of the key facts are undisputed. It is undisputed that Apple’s Workout Mode seeks to
18 provide accurate heartrate and calorie tracking during exercise for both Apple Watch users, who access
19 such data through Apple’s Workout App, and developers, who access the same data (with user consent)
20 through the Workout Mode API. *See supra* 5–9; *see also* Waydo Decl. ¶¶ 9–12, 29–31; Ex. 6 (Stultz
21 Rpt.) ¶¶ 120–43, 198; Ex. 2 (Stultz Rebuttal) ¶¶ 24–37; Ex. 9 (Stiroh Rebuttal) ¶¶ 36–42. It also is
22 undisputed that Apple labored to improve this data feed not only to enhance its popular Workout App
23 but also to provide more accurate Workout Mode data to developers of health and fitness apps. *See*
24 *supra* 5–8; *see also* Ex. 1 (Stiroh Rpt.) ¶¶ 85–86; Ex. 9 (Stiroh Rebuttal) ¶¶ 39–42, 52 & n.129; Ex. 6
25 (Stultz Rpt.) ¶ 120–21, 182–84, 198; Ex. 2 (Stultz Rebuttal) ¶¶ 29–31, 36–37; Ex. 35 (Cragg Dep. II)
26 87:18–89:7; Ex. 7 (Jafari Rebuttal) ¶ 9. Nor is there any dispute that Apple rolled out HRNN as part
27 of the watchOS 5 Workout Mode update only after this lengthy process demonstrating verifiable
28 improvements. Ex. 35 (Cragg Dep. II) 87:18–89:7; Waydo Decl. ¶¶ 18–26. As Dr. Stultz summarizes,
Apple introduced HRNN only after it “was proven to produce more accurate heart rate readings, more

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frequently, with fewer errors” than HRPO. Ex. 2 (Stultz Rebuttal) ¶ 30; *see also* Areeda & Hovenkamp, Antitrust Law: An Analysis of Antitrust Principles and Their Application ¶ 776(d)5 (2023) (explaining that the “significant belief that the invention was an improvement—even if not confirmed by subsequent market experience—should serve to undermine” any claim that “the *only purpose* of the innovation was to eliminate” competition).

Apple’s reconfiguration of Workout Mode thus provided significant, undisputed benefits. First, Apple’s updates to Workout Mode allowed health and fitness app developers to “improve the functionality of their apps.” Ex. 9 (Stiroh Rebuttal) ¶ 43. Second, consumers benefitted from access to more accurate measurements of heartrate and burned calories—both through third-party apps and Apple’s own Workout App. Ex. 1 (Stiroh Rpt.) ¶¶ 52, 85; Ex. 6 (Stultz Rpt.) ¶¶ 119–21; Ex. 2 (Stultz Rebuttal) ¶¶ 24–25, 32–37; *see also* Ex. 39 (Foley Rebuttal) ¶¶ 65–67. AliveCor concedes as much, acknowledging Apple’s design change was “an improvement for purposes of tracking heart *rate* (not heart rhythm) during *exercise*.” Mot. 7; *see also* Ex. 61 (Jafari Rebuttal) ¶ 13 (similar concession by AliveCor’s technical expert that HRNN had “pros” in particular scenarios). More accurate information was particularly valuable, for example, to individuals who used their Watch to determine exercise intensity and those who sought to keep their heartrate in a target zone when exercising for health reasons (e.g., after a heart attack). Ex. 2 (Stultz Rebuttal) ¶ 40. Even AliveCor’s economist was forced to admit [REDACTED] it was [REDACTED] Ex. 35 (Cragg Dep. II) 15:3–8, 59:16–60:1, 62:6–12.³

Unable to muster any evidence disputing “that HRNN represented an improvement for heartrate monitoring during workouts,” Mot. 17, AliveCor instead suggests that the algorithm change was not an “improvement[] for medical monitoring and analysis purposes,” *id.* at 2. True or not, AliveCor’s

³ Apple recognized that developers wanted reliable heartrate data for non-workout use cases and went on to develop and then release the Tachogram API, “which produces far more precise and granular heart rate data” than HRPO. Ex. 16 (Waydo Dep.) 98:15–17. The Tachogram API thus “provides a superior platform for the development of algorithms” even for the narrow purpose of “detect[ing] atrial fibrillation.” Ex. 2 (Stultz Rebuttal) ¶ 165. So even if Plaintiffs are correct that HRNN was “no more accurate” than HRPO for detecting AFib in 2018, “that in no way contradicts that [Apple’s innovations] facilitate[d] the introduction of new types of [heartrate] functions ... in the long run.” *Allied Orthopedic*, 592 F.3d at 1001. This is why antitrust law is not used to inhibit product development: Allowing a disappointed developer to freeze Apple’s efforts would stifle innovation in technology markets and thereby “deny large consumer benefits.” *Qualcomm*, 969 F.3d at 990–91.

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1 claim fails as a matter of law because a product improvement requires “some new benefit to
 2 consumers”—not improvement in *every* respect. *Allied Orthopedic*, 592 F.3d at 1000 (emphasis
 3 added); *see also Cal. Comp.*, 613 F.2d at 744; *Image Tech. Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d
 4 1195, 1220 & n.12 (9th Cir. 1997). Detecting AFib is only one, very specific possible use of the data
 5 provided by the HRPO algorithm, Ex. 6 (Stultz Rpt.) ¶¶ 132–35, and not even the intended use of
 6 Apple’s Workout Mode heartrate detection. Waydo Decl. ¶¶ 9–12; Ex. 2 (Stultz Rebuttal) ¶¶ 24–28,
 7 191; *see also supra* 9. A new electric car engine that makes the car faster, more reliable, and more
 8 efficient is a product improvement even if its range is slightly shorter than the petrol engine it replaces.
 9 Again, introducing HRNN was an improvement for millions of Apple Watch consumers who used the
 10 Workout App as well as the ██████████ third-party developers (and their users) who used the Workout
 11 Mode API for its intended purpose—reporting out heartrates and calories burned *during exercise*. Ex.
 12 9 (Stiroh Rebuttal) ¶¶ 38–43; Ex. 2 (Stultz Rebuttal) ¶¶ 29–31, 36–37. This is product improvement
 13 under the antitrust laws. *Cal. Comp.*, 613 F.2d at 744.⁴

14 AliveCor’s theory parallels the one rebuffed in *Allied Orthopedic*. There, the plaintiffs
 15 similarly argued that a product improvement was “meaningful” only if it was useful in certain clinical
 16 scenarios and discounted the design changes because they could have been made compatible with
 17 accessories that had interfaced with the older product. *Allied Orthopedic Appliances, Inc. v. Tyco*
 18 *Health Care Grp. L.P.*, 2008 WL 7346921, at *14 (C.D. Cal. July 9, 2008). The district court expressly
 19 rejected these arguments. *Id.* at *14–16. Accepting “Plaintiffs’ criticisms of Tyco’s design changes,”
 20 the court observed, “would clearly impose a standard unduly restrictive of product innovation.” *Id.* at
 21 *15. To the contrary, “Tyco ha[d] every right to design and promote features that appeal to some
 22 customers even if the design may not comport with some clinicians’ protocols for viewing patient data
 23 or their views on the effectiveness of specialty sensors.” *Id.* at *16. The Ninth Circuit affirmed,
 24 recognizing “[t]here is no room for balancing the benefits or worth of a product improvement against
 25 its anticompetitive effects,” nor “criteria that courts can use to calculate the ‘right’ amount of
 26

27 ⁴ AliveCor says Apple’s use of HRPO with its High Heart Rate Notification feature is an “admission[.]”
 28 that HRNN was “most definitely not an improvement for medical purposes.” Mot. 18. This is a red
 herring. The High Heart Rate Notification feature, which did not provide continuous HRPO readings,
 is wholly distinct from Workout Mode and IRN. *See* Ex. 2 (Stultz Rebuttal) ¶¶ 104–09.

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1 innovation.” *Allied Orthopedic*, 592 F.3d at 1000. So too here: Blackletter law protects Apple’s right
2 to update its software to benefit its own products as well as those of the vast majority of other
3 developers—whether or not that design change proved less advantageous to AliveCor. *See* Areeda &
4 Hovenkamp, *Fundamentals of Antitrust Law* § 7.01[D] (4th ed. 2023) (“[T]he Ninth Circuit ha[s]
5 repeatedly held that actual product improvements never violate § 2, even if they harm rivals by limiting
6 demand for their complementary products,” and rejected “a rule requiring a dominant firm to keep old
7 technology on the market after it introduced new technology”).

8 Apple’s Workout Mode update was therefore a “procompetitive innovation” that “enhance[d]
9 the functionality available to Apple Watch users.” Ex. 9 (Stiroh Rebuttal) ¶ 43; *see also* *Cal. Comp.*,
10 613 F.2d at 744 (“[P]erformance improvement ... represents a superior product.”). That cannot be
11 exclusionary conduct under Section 2. *See Allied Orthopedic*, 592 F.3d at 999–1003.

ii. It Is Improper to Consider Only Part of the Product Change

12
13 AliveCor tries to avoid the categorical protection afforded to product improvements by
14 narrowing the Court’s focus to only the alleged removal of “third party access to the heart rate values
15 generated by [the] HRPO algorithm.” Mot. ii; *see also* Mot. to Exclude Dr. Stiroh at 6 (arguing the
16 “conduct at issue” is “Apple’s decision to remove third-party access to HRPO-generated heart rates”).
17 AliveCor argues that act imparted no improvements to consumers—ignoring what Apple added in its
18 place—and that it therefore is entitled to partial summary judgment that Apple’s conduct is not a
19 genuine product improvement. Mot. at 15–19. But this framing of the conduct disregards commercial
20 reality and contravenes the manner in which courts assess product changes.

21 Apple does not sell or license heartrate algorithms but rather provides developers with access
22 to the Workout Mode API (among thousands of other software tools and services) as part of a broader
23 intellectual property license. Ex. 19 (DPLA) § 2.8; Ex. 9 (Stiroh Rebuttal) ¶¶ 23, 25, 33; Ex. 34 (Cragg
24 Dep. I) 60:1-61:4. Even AliveCor’s own expert could not say that Apple’s heartrate algorithms are
25 [REDACTED] Ex. 35 (Cragg Dep. II) 54:21–55:17. Rather, he admitted that the so-called
26 [REDACTED] was [REDACTED] the broader software update in which HRNN was
27 introduced as part of the Workout Mode. Ex. 34 (Cragg Dep. I) 100:12–15.

28 As explained above, the Workout Mode was designed (among other things) to report the user’s

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1 average heartrate at regular intervals, and developers gained access to such data through the Workout
2 Mode API. Waydo Decl. ¶¶ 11–12, 30; Ex. 2 (Stultz Rebuttal) ¶¶ 24–25, 32–37; Ex. 6 (Stultz Rpt.) ¶¶
3 119–20, 198; *see also supra* 6–10. Before watchOS 5, the HRPO algorithm provided those heartrate
4 values. Ex. 13 (APL-ALVCOR_00611807) at -832; Ex. 16 (Waydo Dep.) 80:18–81:4. Apple
5 developed HRNN to do the same thing while addressing various shortcomings in HRPO’s heartrate
6 detection approach. Waydo Decl. ¶¶ 17–24; Ex. 38 (APL-ALVCOR_00605882) at -883; *see also* Ex. 6
7 (Stultz Rpt.) ¶ 129. By design, Workout Mode can only report one heartrate value at a time—meaning
8 that Apple had to discontinue access to the values generated by HRPO to make those same (yet more
9 accurate) values available from HRNN. *See* Waydo Decl. ¶¶ 40–50; Ex. 46 (Stultz Dep. II) 223:15–
10 23; *see also supra* 8 (explaining how the redesigned Workout Mode would only report from HRPO if
11 it generated a value first before switching to values generated by HRNN). As a result, the so-called
12 “withdrawal” of access to HRPO is inseparable from the introduction of HRNN. Apple’s design
13 change refashioned Workout Mode by replacing HRPO with HRNN to deliver an improved version of
14 the same output—heartrate values at a regular (approximately five-second) cadence. Waydo Decl.
15 ¶¶ 23–24; Ex. 38 (APL-ALVCOR_00605882) at -883.

16 Precedent confirms that the analytical locus belongs on the redesigned Workout Mode—the
17 software Apple in fact redesigned and the product that it and developers in fact used. In *Allied*
18 *Orthopedic*, for example, the defendant redesigned a pulse oximetry sensor system by changing the
19 calibration coefficients used with the sensors. 592 F.3d at 994–95. That change rendered the new
20 system incompatible with generic sensors, and the plaintiffs sued—claiming, like AliveCor, that the
21 redesign broke their product and made it commercially inviable. *Id.* In rejecting the claim, the court
22 analyzed whether the new sensor design—not the design of individual components like the calibration
23 coefficients—was a product improvement. *Id.* at 1000–01. So too in other cases. *See Foremost*, 703
24 F.2d at 542–43 (introduction of a “photographic system,” including a camera, film, and photofinishing
25 products, was procompetitive despite complaints that old photofinishing products were incompatible);
26 *Cal. Comp.*, 613 F.2d at 744 (IBM’s integrated storage controller was a product improvement based
27 on the overall change to the product, not the withdrawal of an old interface alone); *ILC Peripherals*,
28 458 F. Supp. at 438 (similar).

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1 It would be equally incoherent in this case to analyze the “removal” of access to HRPO heartrate
2 values in isolation where those heartrate values were only “removed” insofar as they were replaced by
3 the more accurate outputs generated by HRNN. A tire change does not make a car worse because the
4 car will not drive if you look at the removal of the old tires alone. Nor is a remodeled kitchen worse
5 because you cannot cook food using the removed appliances. Were AliveCor’s proposed framing here
6 correct, a product update could rarely, if ever, be a product improvement—regardless of the benefits
7 conferred by the new design—because discontinuing an old product by definition does not “provid[e]
8 *a new benefit* to consumers” when one ignores the new product that is introduced. Mot. 15 (quoting
9 *Allied Orthopedic*, 592 F.3d at 998–99). AliveCor cites no case that supports its view.

10 The fractured opinion AliveCor does cite, *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340 (Fed.
11 Cir. 1998), is inapposite. See Mot. 17. That court hung liability on the subjective motivation for a
12 product change, *id.* at 1382—a standard the Ninth Circuit has repeatedly rejected. See *Allied*
13 *Orthopedic*, 592 F.3d at 1001; *Oahu Gas*, 838 F.2d at 368–69. Plus, the claimed “modifications had
14 no effect on ... performance”—that is, they were not improvements at all. *C.R. Bard*, 157 F.3d at 1382;
15 see also *Areeda & Hovenkamp*, *supra*, ¶ 776a n.9 (recognizing the innovations in *C.R. Bard* “were
16 clearly not superior to the older technology”). Nothing in *C.R. Bard* supports an analysis focused on
17 the supposed withdrawal of an old component without considering the redesigned product.

18 AliveCor also argues that because “watchOS ran HRPO and HRNN together” for some time
19 “Apple *could have* permitted third parties to select which algorithm’s heartrates they wanted to use.”
20 Mot. 17 (emphasis omitted and added). This argument is misplaced both on the facts and the law.
21 Because early versions of HRNN occasionally did not report a heartrate value as quickly during the
22 first minute of exercise, Ex. 12 (Shapiro Dep.) 170:7–171:22, Apple at first implemented a hybrid
23 approach in which HRPO would report [REDACTED] heartrate during the first minute of exercise
24 if it were able to do so before HRNN. *Id.* But from then on, HRPO operated only in the background
25 and its heartrate values were not recorded. *Id.* at 171:5–22; Waydo Decl. ¶ 27; see also *supra* 8. There
26 was not, as AliveCor implies, a “switch” whereby a developer could have chosen which algorithm it
27 wanted to use. And there can be no doubt that Apple believed this was the best configuration: Had
28 Apple wanted to cripple AliveCor by withdrawing access to HRPO, it could have removed HRPO

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1 altogether rather than engineer its hybrid solution. AliveCor’s suggestion that *both* HRPO and HRNN
 2 heartrate data could have been made available to developers via the Workout Mode API would have
 3 required a new invention that had never been part of Workout Mode. Ex. 2 (Stultz Rebuttal) ¶¶ 43–
 4 44; Waydo Decl. ¶¶ 43–47; *see also infra* 33–36 (explaining the difficulties in AliveCor’s proposed
 5 alternative).

6 Moreover, courts have rejected the “novel theory” that even a “monopolist could not alter the
 7 design of a product ‘if any alternative was open to them which would have less impact on
 8 competitors.’” *Allied Orthopedic*, 2008 WL 7346921, at *16; *accord In re IBM Peripheral EDP*
 9 *Devices Antitrust Litig.*, 481 F. Supp. 965, 1021 (N.D. Cal. 1979), *aff’d*, 698 F.2d 1377 (9th Cir. 1983).
 10 Instead, the Ninth Circuit has held that in product improvement cases “there is no least restrictive
 11 alternative requirement in the context of a Section 2 claim.” *Image Tech. Serv., Inc. v. Eastman Kodak*
 12 *Co.*, 903 F.2d 612, 620 (9th Cir. 1990). And courts have refused to engage in the exercise AliveCor
 13 invites here. *See, e.g., Allied Orthopedic*, 2008 WL 7346921, at *16 (refusing to “assess how difficult
 14 it would be for Tyco to incorporate both a digital memory reader and resistor reader ... [to] provide a
 15 design that is less restrictive of generic competition”); *ILC Peripherals*, 458 F.Supp. at 439 (“Where
 16 there is a difference of opinion as to the advantages of two alternatives which can both be defended
 17 from an engineering standpoint, the court will not allow itself to be enmeshed in a technical inquiry
 18 into the justifiability of product innovations.”).⁵

19 At bottom, AliveCor’s claim rests on the premise that Apple should not be able to redesign its
 20 products if doing so would stymie even a single developer in any way—regardless of the myriad
 21 benefits to Apple’s own products, other developers, and consumers. That theory runs afoul of the
 22 blackletter rule that a firm has “no duty to help its competitors survive or expand when introducing an
 23 improved product design,” *Allied Orthopedic*, 592 F.3d at 1002, nor even a “duty to disclose its plans
 24 to rivals,” *Olympia Equip. Leasing Co. v. W. Union Tel. Co.*, 797 F.2d 370, 376 (7th Cir. 1986); *accord*
 25 *Foremost*, 703 F.2d at 545; *Cal. Comp.*, 613 F.2d at 744. After all, competition is not a “lovefest,”
 26 *Aerotec Int’l, Inc. v. Honeywell Int’l, Inc.*, 836 F.3d 1171, 1184 (9th Cir. 2016), and it “would be
 27

28 ⁵ As explained below, this proposed alternative is not in fact a valid less restrictive alternative—even
 if the Court were to conduct such an analysis. *See infra* 34–36.

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1 perverse” to hold liable a firm that “extend[s] a helping hand, though not required to do so, and later
2 withdraws it,” *Olympia Equip.*, 797 F.2d at 376.

3 **iii. Apple Did Not Engage in “Associated Anticompetitive Conduct”**

4 Because Apple’s design change to the Workout Mode indisputably improved its product,
5 AliveCor must demonstrate “associated anticompetitive conduct” accompanying that design change—
6 that is, “some conduct of the monopolist associated with [its] introduction of a new and improved
7 product design” that “constitutes an anticompetitive abuse or leverage of monopoly power, or a
8 predatory or exclusionary means of attempting to monopolize the relevant market,” independent of the
9 product improvement itself. *Allied Orthopedic*, 592 F.3d at 999–1000. Here, AliveCor has not and
10 cannot establish “associated anticompetitive conduct” to support AliveCor’s claim.

11 At the outset, AliveCor cannot cling to the Court’s earlier ruling on the pleadings that AliveCor
12 could potentially identify associated conduct. *See* Mot. 19. At that stage, the Court had to take as true
13 all allegations in the Complaint—including not only that Apple’s “updated heart rate algorithm ... did
14 not improve user experience,” Dkt. 42 at 15, but also that Apple “rais[ed] rivals’ costs” through its
15 enforcement of the App Review Guidelines, “manufacture[d] technical problems with SmartRhythm,”
16 and engaged in a bevy of other conduct. Dkt. 1 ¶¶ 76, 116. There is now undisputed evidence that the
17 “updated heart rate algorithm,” HRNN, improved the user experience. *See supra* 18–21. And AliveCor
18 has abandoned the notion that anything other than the so-called withdrawal of access to HRPO—
19 including the “several” other forms of conduct alleged in the Complaint, Dkt. 42 at 4; *see also* FAC
20 ¶¶ 72–79—produced an anticompetitive effect cognizable under Section 2. *See* Ex. 34 (Cragg Dep. I)
21 43:20–44:6 & Ex. 35 (Cragg Dep. II) 31:21–35:2 (testifying repeatedly that the “exclusionary conduct”
22 in the case was “the algorithm change” and that all other forms of alleged conduct “aren’t part of the
23 exclusionary conduct at issue in the case”); Mot. 2, 12 & Mot. to Exclude Dr. Stiroh at 1 (arguing
24 similarly). Because “[s]ummary judgment is the put up or shut up moment in a lawsuit,” *Siegel v. Shell*
25 *Oil Co.*, 612 F.3d 932, 937 (7th Cir. 2010), AliveCor cannot survive summary judgment by reference
26 to disproven allegations and other supposed misconduct that it has abandoned.⁶

27 _____
28 ⁶ As Dr. Stiroh explains, and AliveCor does not contest, Apple’s enforcement of its App Review
Guidelines is in fact procompetitive. Ex. 9 (Stiroh Rebuttal) ¶¶ 198–206; *see also Epic*, 67 F.4th at

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1 Without these discredited accusations, the *only* conduct AliveCor’s own economist claims
 2 “prevent[ed] third parties from identifying irregular heart rhythms and from offering competing heart
 3 rhythm analysis apps” was the purported withdrawal of access to HRPO. Mot. 19; *see* Ex. 35 (Cragg
 4 Dep. II) 31:21–35:2; Ex. 40 (Cragg Rebuttal) ¶¶ 23–35. There is nothing “associated” about that
 5 conduct. Even in AliveCor’s own telling, that is the design change itself. *See* Mot. 14–15 (arguing
 6 “Apple’s decision to cut off access to heart rates Apple previously made available via the HRPO
 7 algorithm” is the relevant “design change”). Thus, the “product improvement at issue in this case, not
 8 some associated conduct by [Apple], caused the [alleged] incompatibility” and attendant foreclosure.
 9 *Allied Orthopedic*, 592 F.3d at 1002. A single design change cannot be both a product improvement
 10 and the associated anticompetitive conduct. *See Foremost*, 703 F.2d at 545 (“the creation of
 11 technological incompatibilities” was not “associated conduct” as it was part of the design itself).

12 AliveCor also suggests that [REDACTED]
 13 [REDACTED] constitutes associated conduct. Mot.
 14 19–20. Neither [REDACTED] is even exclusionary conduct at all, let alone the “abuse[]
 15 or leverage[]” of monopoly power AliveCor pled. Dkt. 42 at 14. Regardless, the accusation that Apple
 16 knew its design change could impair AliveCor’s (or any other developer’s) apps does not transform the
 17 redesign of Workout Mode into a separate “anticompetitive abuse or leverage of monopoly power.”
 18 *Allied Orthopedic*, 592 F.3d at 999.

19 First, AliveCor’s contention is unfounded. [REDACTED]
 20 [REDACTED]
 21 [REDACTED]
 22 Ex. 41 (APL-ALVCOR_00442146) at -148. [REDACTED]
 23 [REDACTED]
 24 [REDACTED] *Id.* Far from seeking to “eliminat[e] competition,” Mot. 10, [REDACTED]

25 _____
 26 987. The same is true for the only other alleged conduct AliveCor mentions in its motion—that Apple
 27 “copied AliveCor.” Mot. 2; *see also, e.g.*, FAC ¶¶ 3, 77, 97. That assertion is unfounded, but in any
 28 event such alleged conduct is not anticompetitive because it would benefit consumers by offering new,
 free functionalities. Ex. 9 (Stiroh Rebuttal) ¶ 184; *see also* Ex. 35 (Cragg Dep. II) 139:24–140:8
 [REDACTED]; *Blix Inc. v. Apple*
Inc., 2021 WL 2895654, at *4 n.1 (D. Del. July 9, 2021) (rejecting similar theory of liability), *aff’d*,
 2022 WL 17421225, at *1 (Fed. Cir. Dec. 6, 2022).

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1 [REDACTED] Ex. 41 (APL-
2 ALVCOR_00442146) at -147; *see also* Ex. 42 (AliveNDCal_00011693) at -696 & Ex. 45 (Valys Dep.)
3 123:1–3, 285:8–289:24 [REDACTED]

4 There is no evidence that Apple knew that reconfiguring Workout Mode would significantly or
5 permanently impair AliveCor’s SmartRhythm feature. Undisputed evidence demonstrates that Apple
6 developed and introduced HRNN as a replacement for the HRPO algorithm in Workout Mode to
7 improve the accuracy of the heartrate values generated during workouts (*see supra* 7–8, 15–19)—not
8 as a pretextual ploy to exclude AliveCor. Ex. 6 (Stultz Rpt.) ¶¶ 136–140, 144–148; Waydo Decl.
9 ¶¶ 20–25. After all, Apple never actually cut off AliveCor’s access to high-frequency heartrate values,
10 as both HRPO and HRNN provided the same thing—“a heart rate value and its associated timestamp
11 reported approximately every five seconds.” Ex. 2 (Stultz Rebuttal) ¶ 29. Indeed, Apple emailed
12 AliveCor to inquire “if this is something we could address” after AliveCor discontinued SmartRhythm,
13 Ex. 27 (APL-ALVCOR_00079528), but AliveCor never reached out to Apple to discuss this issue.
14 Waydo Decl. ¶ 39. Even today, with the benefit of hindsight informed by extensive expert analyses,
15 there is no reliable evidence demonstrating that Apple’s changes to Workout Mode even had a
16 detrimental impact on SmartRhythm (or explaining how it did so). Ex. 2 (Stultz Rebuttal) ¶¶ 63–142
17 (explaining that AliveCor’s experts “do not demonstrate that there was a degradation in SmartRhythm
18 performance because of changes made in watchOS 5”); *see also* Jafari Mot. at 1–2.

19 Second, nothing about Apple’s knowledge of the supposed value of heartrate data or the
20 potential impact of its design change on competitors “supplies the violation” under Section 2, *Berkey*
21 *Photo*, 603 F.2d at 286 n.30, because Apple’s subjective intent does not change the “overall effect” of
22 the conduct, *Schneiderman*, 787 F.3d at 654. AliveCor identifies no way in which Apple’s knowledge
23 of developers’ use of heartrate data impacted the design change it undertook or the procompetitive
24 effects of that change. That is why “[s]tatements of an innovator’s intent to harm a competitor through
25 genuine product improvement are insufficient by themselves to create a jury question under Section
26 2.” *Allied Orthopedic*, 592 F.3d at 1001; *see also Oahu Gas*, 838 F.2d at 370 (no liability where
27 “conduct with a predatory rationale had a procompetitive effect”); *In re IBM*, 481 F. Supp. at 1005
28 (same even where defendant’s “predominant intent” was to preclude competition); *Fundamentals of*

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1 Antitrust Law, *supra*, § 6.04 (explaining that antitrust analysis turns on the “nature and consequences
2 of a particular practice,” “not the purpose or intent”).

3 The summary judgment record here is strikingly similar to the summary judgment record in
4 *Allied Orthopedic*. There, as here, the plaintiff tried to resuscitate its product improvement claim by
5 pointing to “documents suggesting that [the defendant] acted with predatory intent” in distributing its
6 redesigned product. *Allied Orthopedic*, 2008 WL 7346921, at *19. But the court rejected this attempt
7 to pin liability on “[o]ther components of Tyco’s conduct [that] are not challenged as independent
8 violations of the Sherman Act” because “mixed motives in introducing the [redesigned product] ...
9 cannot cure the utter lack of proof demonstrating the synergistic effects of [the defendant’s] behavior.”
10 *Id.* at *18–20. The Ninth Circuit affirmed, agreeing that no claim lies where the product improvement,
11 not any alleged associated conduct, produced the alleged injury. 592 F.3d at 1002. So too here.

12 Even though it asks the Court to hold *Allied Orthopedic* inapposite, Mot. 15, AliveCor does
13 little to engage with the case itself—relying instead on *In re Suboxone Antitrust Litigation*, 622 F. Supp.
14 3d 22 (E.D. Pa. 2022). There, a drug manufacturer coupled the introduction of a new drug formulation
15 with a disparaging marketing campaign, increased prices, withdrawal of the existing product from the
16 market, delaying required regulatory approvals, and filing a false government petition—all of which
17 the court found was associated conduct. *Id.* at 64. That is entirely distinguishable from a redesign of
18 a single product like Apple’s Workout Mode. And there is no evidence of similarly independent
19 anticompetitive conduct here: Apple worked *with* AliveCor to make its product available on the App
20 Store by granting AliveCor an exception to the App Review Guidelines (Ex. 40 (Cragg Rebuttal) ¶ 77),
21 tried to *help* troubleshoot AliveCor’s software issues after the watchOS 5 update (Ex. 27 (APL-
22 ALVCOR_00079528)), and introduced a free IRN feature that *decreased* marketwide prices and
23 *increased* output dramatically in the alleged relevant market (Ex. 9 (Stiroh Rebuttal) ¶¶ 236–43). There
24 is simply nothing associated or anticompetitive about Apple’s challenged conduct.⁷

25 _____
26 ⁷ AliveCor also cites *In re Apple iPod iTunes Antitrust Litigation*, 796 F. Supp. 2d 1137 (N.D. Cal.
27 2011). But there, the court *rejected* the claim that conduct that did not independently “give rise to
28 Section 2 liability” could be associated anticompetitive conduct related to the introduction of iTunes
4.7. *Id.* at 1145–46. And with regard to iTunes 7.0, the court found only that there was disputed
evidence about whether it was a genuine product improvement (with no analysis of any supposed
associated conduct). *Id.* at 1146; *see also* Verdict Form, 2014 WL 7406353 (N.D. Cal. Dec. 16, 2014)

FILED UNDER SEAL**b. Apple’s Removal of HRPO Was Not an Anticompetitive Refusal to Deal**

Even if AliveCor were correct in limiting the analysis of Apple’s conduct to the withdrawal of developers’ access to HRPO data, and even if that conduct were “susceptible to antitrust scrutiny,” Mot. 1, it was not anticompetitive. As a general matter, the Sherman Act “does not restrict the long recognized right of trader or manufacturer engaged in an entirely private business, freely to exercise his own independent discretion as to parties with whom he will deal.” *United States v. Colgate Co.*, 250 U.S. 300, 307 (1919); *see also Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 409 (2004); *linkLine*, 555 U.S. at 448. And courts have long recognized “perfectly procompetitive ends” of refusals to deal, including a monopolist’s right “to pursue an innovative replacement product of its own.” *Novell*, 731 F.3d at 1075. Refusal to deal claims therefore exist “at or near the outer boundary of § 2 liability,” *Trinko*, 540 U.S. at 409, where “conduct [is] irrational but for its anticompetitive effect,” *Novell*, 731 F.3d at 1075; *see also Qualcomm*, 969 F.3d at 993–94 (exceptions to the general rule that there is no antitrust duty to deal “should be applied only in rare circumstances”). That is far from the case here.

To be clear, a “withdrawal of assistance” is, for purposes of the antitrust laws, the same type of conduct as a unilateral refusal to deal. *Novell*, 731 F.3d at 1079. In *Novell*, for example, the court found that the refusal-to-deal framework applied to a “complain[t] that Microsoft refused to share its intellectual property with rivals after first promising to do so.” *Id.* at 1066. The Ninth Circuit reached the same conclusion twice: once where plaintiffs challenged a “refusal to provide” specific intellectual property “licenses to rival[s],” *Qualcomm*, 969 F.3d at 994, and again where a manufacturer challenged its supplier’s “withholding of parts and technical data,” *Aerotec*, 836 F.3d at 1184. The Federal Circuit likewise analyzed “withholding access to [a defendant’s] proprietary information . . . and technical services” as a “refusal to deal.” *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 1358 (Fed. Cir. 1999). And most recently, the D.C. Circuit held that claiming “a dominant firm must lend its facilities to its potential competitors” is a “theory of antitrust law” analyzed under refusal-to-deal precedent. *New York v. Meta Platforms, Inc.*, 66 F.4th 288, 305 (D.C. Cir. 2023). These cases confirm that Apple’s conduct—even if framed as a withdrawal of developers’ access to HRPO data—must be analyzed as a

(later finding iTunes 7.0 was a genuine improvement). Thus, *iPod iTunes* provides no support for AliveCor’s argument that there is associated anticompetitive conduct here.

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1 refusal to deal. Such a claim fails as a matter of law on three separate grounds.

2 *First*, AliveCor’s refusal to deal claim fails first because only a monopolist can have a duty to
3 deal. *linkLine*, 555 U.S. at 448 n.2. Here, because AliveCor is not challenging Apple’s conduct in the
4 HRA Apps market, that duty would arise, if at all, in the upstream market—the platform market in
5 which Apple provides and developers “receive tools that facilitate the development of iOS ap[p]s.”
6 *Epic*, 67 F.4th at 968–70. Indeed, this is a case akin to both *linkLine* and *Trinko* in which the plaintiff
7 claims “conduct in the upstream market violated § 2 of the Sherman Act by impeding the ability of [the
8 plaintiff] to compete in the downstream market.” *linkLine*, 555 U.S. at 449–50 (describing “the
9 insufficient assistance” claims at issue in both cases). The “nub” of such a case is an alleged abuse of
10 “power in the wholesale market” by an “upstream monopolist”—which requires, *a fortiori*, the proof
11 of monopoly power in that upstream market. *Id.* at 449–50 & n.2; *see also Aerotec*, 836 F.3d at 1175
12 (assessing the defendant’s power “over the APU parts market” where the refusal to supply such parts
13 allegedly “smother[ed] competition in the repair services market” where the plaintiff operated).
14 AliveCor has not only failed to define such a market (*see infra* 36–39) but also conceded that Apple is
15 not a monopolist in it—whatever its contours. Ex. 34 (Cragg Dep. I) 43:7–19, 194:12–195:16; Ex. 35
16 (Cragg Dep. II) 89:8–90:25. As in *linkLine* and *Trinko*, AliveCor’s claim is “not cognizable under the
17 Sherman Act in the absence of an antitrust duty to deal.” *linkLine*, 555 U.S. at 449–50.

18 *Second*, AliveCor cannot prove Apple *refused* to deal. To the contrary, Apple has continued to
19 deal with AliveCor on the same terms it always has: AliveCor remains a licensee in Apple’s Developer
20 Program with all of the benefits that entails. Ex. 9 (Stiroh Rebuttal) ¶¶ 23, 48. That includes the same
21 access to Apple’s APIs (and data) enjoyed by other developers. *Id.* ¶ 51. AliveCor knew Apple could
22 and frequently did “change . . . access to the Apple services” and otherwise “modify the Apple software
23 . . . at any time without notice.” Ex. 19 (DPLA) §§ 2.8 & 2.10; *see also* Ex. 34 (Cragg Dep. I) 115:2–
24 121:15. And AliveCor did not notify Apple of any issue or concern it had about a change to heartrate
25 data after the watchOS 5 update—precluding Apple from actually *refusing* a request for access to
26 HRPO data. Ex. 44 (Barnett Dep.) 104:6–108:24; Ex. 45 (Valys Dep.) 214:16–25, 216:11–13; *see also*
27 Ex. 2 (Stultz Rebuttal) ¶¶ 48, 144. That AliveCor merely wishes Apple had provided *additional*
28 services does not amount to a *refusal* to deal; any inability to access data processed through HRPO—

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1 that Apple neither accessed for its own Workout App nor provided to *any* developer—is an inactionable
2 refusal to “deal under the terms and conditions *preferred by* [AliveCor].” *Aerotec*, 836 F.3d at 1184
3 (emphasis added); *accord linkLine*, 555 U.S. at 450 (“[I]f a firm has no antitrust duty to deal with its
4 competitors at wholesale, it certainly has no duty to deal under terms and conditions that the rivals find
5 commercially advantageous.”).

6 *Third*, AliveCor’s claim fails under the applicable test for evaluating refusals to deal in any
7 event. As the Ninth Circuit has explained, a duty to deal arises in the “one, limited exception” in which
8 the defendant (1) “unilaterally terminate[s] a voluntary and profitable course of dealing”; (2) for which
9 “the only conceivable rationale or purpose is to sacrifice short-term benefits in order to obtain higher
10 profits in the long run from the exclusion of competition”; and (3) “the refusal to deal involves products
11 that the defendant already sells in the existing market to other similarly situated customers.”
12 *Qualcomm*, 969 F.3d at 993–94; *see also Aerotec*, 836 F.3d at 1184; *Metronet*, 383 F.3d at 1132. None
13 of these conditions can be met here.

14 To start, Apple did not terminate a profitable relationship between the parties. *See Qualcomm*,
15 969 F.3d at 993. AliveCor paid no commissions to Apple resulting from the sales of its Kardia
16 Premium subscription with SmartRhythm. The only relationship between the parties from which Apple
17 has derived any revenue is AliveCor’s membership in the Apple Developer Program, for which
18 AliveCor paid Apple \$99 per year. Ex. 9 (Stiroh Rebuttal) ¶ 48. That relationship is unchanged. Apple
19 has never terminated AliveCor’s membership, and AliveCor continues to distribute apps and sell
20 subscriptions through the App Store today. Ex. 9 (Stiroh Rebuttal) ¶ 48. In short, Apple has continued
21 to license its intellectual property to developers, including AliveCor, without interruption. *Id.* ¶¶ 25,
22 43; *see also Qualcomm*, 969 F.3d at 994 (no termination of a profitable course of dealing where the
23 defendant “had a practice of providing exhaustive licenses” since it “first gained monopoly power”).

24 Nor did Apple sacrifice short-term benefits to recoup higher profits in the long run by allegedly
25 withdrawing developers’ access to HRPO data. *See Qualcomm*, 969 F.3d at 994. The only purported
26 profit sacrifice AliveCor has identified is a loss of commissions paid by AliveCor to Apple for its
27 subscription sales. Ex. 34 (Cragg Dep. I) 100:25–101:5. But that is indisputably wrong since AliveCor
28 never paid *any* commissions to Apple. Ex. 9 (Stiroh Rebuttal) ¶ 48. AliveCor also cannot show that

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1 Apple’s “only conceivable” rationale was to recoup “higher profits in the long run from the exclusion
 2 of competition.” *Qualcomm*, 969 F.3d at 994. According to AliveCor, the algorithm change allowed
 3 Apple’s IRN feature to supplant SmartRhythm in the relevant market, cementing “[i]n one fell swoop”
 4 Apple’s monopoly in watchOS HRA Apps. Mot. 1. But Apple has not monetized IRN, which remains
 5 free today, and there is no evidence that Apple has profited a dime from AliveCor’s discontinuation of
 6 SmartRhythm. *See Qualcomm*, 969 F.3d at 994; *Aerotec*, 836 F.3d at 1184. Without such evidence of
 7 a profit sacrifice, courts presume a refusal to deal is competitive and profit-maximizing. *Metronet*, 383
 8 F.3d at 1133; *Novell*, 731 F.3d at 1076.

9 AliveCor suggests Apple sought to “eliminat[e] competition” to “pave a path for Apple to
 10 explore new monetization models” for Apple’s IRN technology. Mot. 9–10. This is also false. Apple
 11 has never pursued any such “monetization model” in the half-decade since Apple released watchOS 5.
 12 *See* Ex. 8 (Williams Dep.) 153:2–11; Ex. 47 (Cha Dep.) 213:10–19; Ex. 9 (Stiroh Rebuttal) ¶ 50. Nor
 13 is there any evidence that it intends to do so now. [REDACTED]

14 [REDACTED]
 15 [REDACTED]
 16 [REDACTED] *See* Ex. 48 (APL-ALVCOR_00066223). [REDACTED]
 17 [REDACTED]
 18 [REDACTED] *Id.* at -225. [REDACTED]
 19 [REDACTED]
 20 [REDACTED]

21 Ex. 47 (Cha Dep.) 213:10–19. Or as Apple’s COO put it: “[W]e’ve not done that.” Ex. 8 (Williams
 22 Dep.) 153:2–11; *see also* Waydo Decl. ¶ 7. The supposed plan for Apple to reap profits from its heart
 23 rhythm analysis technology is wholly illusory. Apple’s decisions were in fact consistent with its basic
 24 incentives as a platform operator “to offer high-quality tools to developers to encourage them to create
 25 more high-quality apps for its platform, and in turn, increase the attractiveness of Apple devices that
 26 support these apps to consumers.” Ex. 9 (Stiroh Rebuttal) ¶ 36; *see also Ohio v. Am. Express Co.*, 138
 27 S. Ct. 2274, 2281–83 (2018) (explaining how platforms invest in the services provided to their
 28 customers to increase participation by all groups of customers).

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1 Finally, there is no evidence that the alleged refusal to deal involves a product that Apple
2 provided to customers similarly situated to AliveCor. Apple does not offer different APIs or different
3 data to other developers, and the Workout Mode API to which AliveCor has access is the same API
4 that all other developers can access. Ex. 2 (Stultz Rebuttal) ¶¶ 32–38; Ex. 36 (“HK Workout,” *Apple*
5 *Developer Website*); Ex. 37 (“Running Workout sessions,” *Apple Developer Website*). The algorithm
6 change in Workout Mode applied equally to all developers—as well as Apple itself—as part of the
7 watchOS 5 update. What is more, Apple now also provides developers the Tachogram API, which
8 includes access to the same beat-to-beat heartrate data Apple uses for its first-party IRN feature. Ex.
9 16 (Waydo Dep.) 85:15–86:1, 131:7–9, 142:10–12; *see also* Ex. 6 (Stultz Rpt.) ¶ 189. In short, Apple
10 “applies its [relevant] policy equally with respect to all” developers, and there is zero evidence that
11 Apple “single[d] out [AliveCor] for anticompetitive treatment in its” provision of data or software
12 services. *Qualcomm*, 969 F.3d at 995; *accord Metronet*, 383 F.3d at 1133 (no liability where the
13 defendant sells “to [the plaintiff] on the same terms that it sells to [other] consumers”); *linkLine*, 555
14 U.S. at 444 (a firm has “no obligation to provide [its] rivals with a ‘sufficient’ level of service”).

15 By declaring that Apple is required to provide access to HRPO data to developers, *see* Mot. 14,
16 AliveCor is not seeking an order for Apple “to deal with [AliveCor] on the same terms that it already
17 deals with others in the existing retail market.” *Metronet*, 383 F.3d at 1133. Rather, AliveCor would
18 have the Court “set[] the terms of dealing,” between Apple and its developer customers, “assum[ing]
19 the day-to-day controls characteristic of a regulatory agency” determining “the proper price, quantity,
20 and other terms of dealing.” *Id.* That would not only be an unprecedented departure from over a
21 century of case law refusing to impose such duties, but it would also transform the Court into a “central
22 planner[],” *Trinko*, 540 U.S. at 408—a role to which courts have repeatedly recognized they “should
23 never aspire.” *NCAA v. Alston*, 141 S. Ct. 2141, 2164 (2021); *accord Trinko*, 540 U.S. at 407–08;
24 *Aerotec*, 836 F.3d at 1183; *MetroNet*, 383 F.3d at 1133.

c. Apple’s Conduct Was Justified

25
26 AliveCor’s claims also falter on another, independent ground: Apple’s changes to Workout
27 Mode were justified. Under Section 2, there can be no “antitrust liability if there was a legitimate
28 business justification” for the defendant’s conduct. *Oahu Gas*, 838 F.2d at 369; *accord High Tech*.

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1 *Careers v. San Jose Mercury News*, 996 F.2d 987, 990 (9th Cir. 1993) (“If there is a valid business
2 justification for [the defendant’s] conduct, there is no antitrust liability.”). And while “there is no least
3 restrictive alternative requirement” here, *Image Tech.*, 903 F.2d at 620, AliveCor cannot establish one
4 anyways, see *O’Bannon v. NCAA*, 802 F.3d 1049, 1076–79 (9th Cir. 2015).

5 **i. Apple’s Redesign of Workout Mode Was Supported by Legitimate
6 Business Justifications**

7 A business justification is “a nonpretextual claim that [the defendant’s] conduct is indeed a
8 form of competition on the merits.” *Qualcomm Inc.*, 969 F.3d at 991; accord *Epic*, 67 F.4th at 986.
9 These justifications include not only efforts to “enhance[] the quality or attractiveness of a product”
10 but also steps taken “to profit from [one’s] intellectual property rights.” *Image Tech.*, 125 F.3d at
11 1219–20 & n.20; see also *Epic*, 67 F.4th at 986 (affirming that “IP-compensation is a cognizable
12 procompetitive rationale”); *Cal. Comp.*, 613 F.2d at 744 (redesigning product to “improve[]
13 performance” was procompetitive). That is because such conduct “encourag[es] innovation, industry
14 and competition,” *Atari Games Corp. v. Nintendo of Am.*, 897 F.2d 1572, 1576 (Fed. Cir. 1990)—
15 “relat[ing] directly or indirectly to the enhancement of consumer welfare,” *Data Gen. v. Grumman Sys.*
16 *Support*, 36 F.3d 1147, 1183 (1st Cir. 1994). AliveCor bears the “burden of proving that [Apple] acted
17 without a legitimate business justification.” *City of Vernon*, 955 F.2d at 1366. It cannot do so here—
18 necessitating summary judgment. See, e.g., *Universal Analytics, Inc. v. MacNeal-Schwendler Corp.*,
19 914 F.2d 1256, 1258-59 & n.9 (9th Cir. 1990) (affirming summary judgment where plaintiff fails to
20 carry its “burden of proving ... [a] lack of legitimate business justifications”); *Calculators Hawaii, Inc.*
21 *v. Brandt, Inc.*, 724 F.2d 1332, 1339 (9th Cir. 1983) (same).

22 *First*, as discussed at length above, it is undisputed that Apple endeavored to improve Workout
23 Mode in at least two ways—improving the accuracy of heartrate tracking during workouts as well as
24 the accuracy of workout calorie tracking. Ex. 6 (Stultz Rpt.) ¶¶ 136–40, 144–48; see also *supra* 7–8,
25 15–21. The benefits of more accurate workout heartrate and calorie tracking information are
26 undisputed. As Dr. Stiroh explains, the Apple Watch faced strong competition from smartwatches and
27 fitness trackers, and many consumers were focused on fitness and health features. Ex. 1 (Stiroh Rpt.)
28 ¶¶ 78–80; Ex. 9 (Stiroh Rebuttal) ¶ 145. Apple’s improvements “tapp[ed] into consumer demand” and
thus “are plainly procompetitive.” *Epic*, 67 F.4th at 987 (crediting justifications to improve “important

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1 aspects of a device purchase” for many iPhone and iPad users). With the advent of HRNN,
2 “[c]onsumers benefited directly because Apple made its improved heartrate features available ... both
3 through its own products and through the HealthKit data available to third-party app developers.” Ex.
4 1 (Stiroh Rpt.) ¶ 86. Moreover, “[c]onsumers and developers also indirectly benefited” as boosted
5 Apple Watch sales gave developers “access to a larger customer base” and in turn “the improvement
6 in the quality of heartrate dat[a] resulted in a greater availability of apps compatible with Apple Watch
7 and in improved functionality for existing apps.” *Id.* ¶ 87.

8 AliveCor tries to discount these improvements because Apple’s initial redesign of Workout
9 Mode sometimes relied on HRPO in the first sixty seconds of a workout session where HRNN had not
10 yet generated its first heartrate reading, which, AliveCor suggests, “show[s] Apple could have
11 permitted third parties to select which algorithm’s heart rates they wanted to use.” Mot. 17. Not so.
12 *See infra* 33–36. This fact instead underscores that Apple’s efforts to improve Workout Mode were
13 not pretextual. Had Apple in fact wanted to cripple AliveCor by cutting off access to HRPO—whether
14 or not it degraded Apple’s product—it could have withdrawn all access to HRPO (or simply rejected
15 AliveCor’s app). Apple instead maintained developers’ access to HRPO data where it was available
16 more quickly than rates from HRNN, confirming that Apple wanted to deliver the best data, as soon as
17 possible, to developers and consumers.⁸

18 The facts here are a far cry from the examples AliveCor cites in which courts have rejected
19 justifications as unconnected to the challenged conduct. *See* Mot. 16. In *North Texas Specialty*
20 *Physicians v. FTC*, for example, the court rejected physicians’ attempts to justify horizontal price-fixing
21 with “nebulous ‘teamwork efficiencies’” where there was “no theory as to how” those efficiencies
22 “result[ed] from or [were] in any way connected to” the challenged conduct. 528 F.3d 346, 368–69
23 (5th Cir. 2008). That is nothing like this case, in which the algorithm change itself allowed Apple to
24

25 ⁸ AliveCor also tries to deride the undisputed improvements to Workout Mode as irrelevant because it
26 does not challenge “Apple’s introduction and inclusion of HRNN.” Mot. 16. But as explained above,
27 Apple did not make an isolated decision to “remove[] the ability to also receive heart rates from
28 HRPO,” *id.* at 17; it made a decision to improve the data available through the Workout Mode, which
it accomplished by replacing a feed to HRPO data with a feed to HRNN data. *See supra* 7–8, 18–22.
Contemporaneous records demonstrate that these changes worked in concert toward Apple’s
overarching goal of improving Workout Mode by delivering more accurate data to developers and, in
turn, consumers. *See, e.g.*, Ex. 13 (APL_ALVCOR_00611807).

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1 deliver more accurate heartrate data. An unbroken line of controlling precedent holds instead that a
2 company is justified in redesigning its product to try to improve it in *some* way. *See Cal. Comp.*, 613
3 F.2d at 744; *Image Tech. Servs.*, 125 F.3d at 1220 & n.12; *Allied Orthopedic*, 592 F.3d at 999–1002.

4 *Second*, Apple’s introduction of a new algorithm facilitated its ability to profit from its
5 intellectual property. Prior to the release of watchOS 5, the supposed HRA App market was small,
6 consisting only of AliveCor’s one app—with just over 13,000 Kardia Premium subscribers. Ex. 9
7 (Stiroh Rebuttal) ¶¶ 218, 227. Competitive forces therefore incentivized Apple to focus its efforts on
8 improving Workout Mode for the vast swaths of exercise and fitness apps (many of which, unlike
9 AliveCor, generate revenue for Apple via their transactions). *Id.* ¶¶ 39, 49, 52, 227. Apple’s interest
10 in selling more Watches only amplified that incentive. *See id.* ¶¶ 41–45. This is the virtuous cycle
11 created by competition and the intellectual property laws, in which licensing compensation encourages
12 Apple to continue to invest and innovate. *See* Ex. 1 (Stiroh Rpt.) ¶¶ 13.b, 62–64.

13 That is what happened here. Apple poured more than [REDACTED] into research and
14 development for the Watch since its release. Ex. 1 (Stiroh Rpt.) ¶ 83 & Fig. 7. That investment has
15 *increased* year-over-year, *id.*—behavior inconsistent with a monopolist but precisely what economics
16 predicts from an innovator incentivized to compete. *See id.* ¶¶ 78–79, 83. As a result of those
17 investments, Apple has continued to innovate not only for the Watch generally but also with respect to
18 its heartrate features specifically. For example, in October 2019 Apple released a Tachogram API that
19 gave developers access to beat-to-beat heartrate data. Ex. 9 (Stiroh Rebuttal) ¶ 182. Over [REDACTED]
20 developers have sought and obtained access to this data—the same used in Apple’s IRN feature—
21 allowing them to assess heart rhythm more accurately. Ex. 16 (Waydo Dep.) 34:20–35:11, 73:22–75:5,
22 84:22–86:1, 98:13–24; *see also* Ex. 9 (Stiroh Rebuttal) ¶ 182. Innovations like this—which all experts
23 agree deliver real benefits to consumers—demonstrate why Apple’s efforts to improve its technology
24 in ways that better compensate the company for its intellectual property not only make sense but also
25 are procompetitive and beneficial to consumers.

ii. AliveCor Cannot Establish a Less Restrictive Alternative

26
27 Although the existence of a procompetitive justification is dispositive, *Image Tech.*, 903 F.2d
28 at 620, AliveCor also cannot establish a “*substantially* less restrictive” alternative to the challenged

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1 conduct, *Epic*, 67 F.4th at 990. Only where “a restraint is *patently and inexplicably* stricter than is
2 necessary to accomplish all of its procompetitive objectives” can “an antitrust court ... invalidate it and
3 order it replaced with a less restrictive alternative.” *O’Bannon*, 802 F.3d at 1075. Thus, an alternative
4 suffices only if it would have been “‘virtually as effective’ in serving the [defendant’s] procompetitive
5 purposes ... without significantly increased cost.” *Epic*, 67 F.4th at 990. AliveCor cannot meet that
6 standard here.

7 AliveCor’s proposed alternative is no alternative at all. Rather, AliveCor’s experts posit that
8 Apple should have adhered to the “status quo” by “continu[ing] to provide HRPO-generated heart rates
9 to third-parties” as opposed to making the change to HRNN. Ex. 40 (Cragg Rebuttal) ¶ 76; *see also*
10 Ex. 61 (Jafari Rebuttal) ¶ 27. But AliveCor’s economist, Dr. Cragg, could not say how long Apple
11 would have to persist in maintaining the status quo and admitted he had no opinion about [REDACTED]
12 [REDACTED] had it done so. Ex. 35 (Cragg Dep. II) 95:20–99:22. Indeed,
13 had it been forced to maintain HRPO, Apple would not likely have invested in HRNN—since the
14 driving purpose of that algorithm was to utilize machine-learning in place of Apple engineers’ manual
15 coding. Waydo Decl. ¶ 20. Dr. Cragg in fact disavowed the notion that it would even be procompetitive
16 to restore the status quo today. Ex. 35 (Cragg Dep. II) 71:16–25.

17 AliveCor also suggests Apple “could have given third-party app developers the option to choose
18 between accessing either HRPO- or HRNN-calculated values through the Workout Mode API.” Ex.
19 61 (Jafari Rebuttal) ¶ 27. To be clear, Workout Mode, and the Workout Mode API, were not designed
20 to provide two sets of side-by-side data. Ex. 2 (Stultz Rebuttal) ¶ 43. Nor has Workout Mode ever
21 “chosen” between two heartrates—one from each of HRPO and HRNN. Waydo Decl. ¶¶ 43–47.
22 Rather, Workout Mode for a time reported HRPO readings until HRNN began returning heartrate
23 readings of its own at which point it switched to the superior readings from HRNN. Ex. 12 (Shapiro
24 Dep.) 170:7–171:22. While AliveCor notes that Apple maintains many algorithms on its operating
25 system, it is undisputed that running HRPO and HRNN in parallel for prolonged periods and allowing
26 developers to select between them would create significant memory-drain and processing problems for
27 Apple’s software. Ex. 6 (Stultz Rpt.) ¶ 140; Ex. 46 (Stultz Dep. I) 116:3–117:11. And AliveCor cannot
28 prove its proposed alternative—which would require Apple “to rewrite portions of its source code,

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1 create new data variables for the additional set of data values, and, potentially develop a new API to
 2 access the additional data values and/or account for display and other selection issues that could arise
 3 from the provision of simultaneous data sets,” Ex. 2 (Stultz Rebuttal) ¶ 44—is feasible without
 4 substantial costs. *See Epic*, 67 F.4th at 992 (rejecting claim where plaintiff failed to prove alternative
 5 would be virtually as effective or could be accomplished without substantial additional costs).⁹

6 Moreover, AliveCor’s proposed alternative—even if it could be achieved—is not “virtually as
 7 effective” as Apple’s decision to introduce a new algorithm and reconfigure its Workout Mode to
 8 provide the best available data for the greatest number of uses. *Epic*, 67 F.4th at 990. As Dr. Stultz
 9 explains, “HRPO and HRNN are designed and operate to perform the same stated purpose in the Apple
 10 Watch during Workout Mode: to determine a heart rate every five seconds during a workout session.”
 11 Ex. 2 (Stultz Rebuttal) ¶ 40; *see also* Ex. 12 (Shapiro Dep.) 37:7–23 (“HRNN ... serves the same
 12 objectives of HRPO but does a better job.”). AliveCor thus suggests that Apple make “inferior values
 13 available to users and app developers,” which “would be misleading at best, potentially harmful, and
 14 not as effective.” Ex. 2 (Stultz Rebuttal) ¶ 40; *see also* Ex. 39 (Foley Rebuttal) ¶¶ 79–81 (describing
 15 developer and consumer confusion that would arise with AliveCor’s proposed alternative). AliveCor’s
 16 alternative also would have had deleterious effects on memory usage, battery life, and other key aspects
 17 of the user experience. Ex. 2 (Stultz Rebuttal) ¶¶ 40–45; *see also* Ex. 6 (Stultz Rpt.) ¶ 140; Ex. 46
 18 (Stultz Dep. I) 116:3–117:11; Ex. 9 (Stiroh Rebuttal) ¶¶ 53–54; Ex. 39 (Foley Rebuttal) ¶¶ 80–82.

19 Indefinitely stifling innovation is *not* a procompetitive alternative, and robbing consumers and
 20 developers of the many benefits ushered in by the upgraded Workout Mode is not “virtually as
 21 effective.” *Epic*, 67 F.4th at 990; *see also* Ex. 2 (Stultz Rebuttal) ¶ 41 (explaining that “software should
 22 continue to be updated with improvements, especially machine learning algorithms” like the algorithms
 23 at issue here). AliveCor’s argument implies that Apple could *never* replace an algorithm on which a
 24 developer relied with an improved one (if it did not also continue to provide access to the old

25 _____
 26 ⁹ Dr. Jafari states in his rebuttal report that Apple would incur “insignificant” costs in developing his
 27 alternative solution. Ex. 61 (Jafari Rebuttal) ¶ 25. Dr. Jafari never quantifies that figure. *Id.* Whatever
 28 it is, he cites *no* record evidence for his assertion, nor does he conduct *any* analysis to support it. *Id.*
 Unsubstantiated supposition cannot satisfy AliveCor’s burden of proof. *See Hebert v. Allied Rubber*
& Gasket Co., 632 F. Supp. 3d 1175, 1181 (S.D. Cal. 2022) (“Unsupported or conclusory statements
 of experts are insufficient to raise a genuine issue of material fact precluding summary judgment.”)

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1 algorithm)—a result that would paralyze innovation contrary to the very purpose of antitrust law, which
 2 is to “permit[] and indeed encourage[]” companies like Apple “to compete aggressively on the merits”
 3 including through “the process of invention and innovation.” *Allied Orthopedic*, 592 F.3d at 998.¹⁰

4 **2. AliveCor Has Failed to Define an Upstream Market and Cannot Prove Apple’s
 5 Monopoly Power in It**

6 AliveCor’s monopoly claims also fail on separate “threshold” grounds because it has defined a
 7 market in which it allegedly competes with Apple but not the relevant market in which Apple’s conduct
 8 occurred—nor can AliveCor prove Apple’s power within *that* market. *Qualcomm*, 969 F.3d at 992.
 9 This step is critical, for “[w]ithout market power,” a company’s “actions do not threaten consumer
 10 welfare.” *Rebel Oil Co., Inc. v. Atlantic Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir. 1995); *accord*
 11 *Davis-Watkins Co. v. Serv. Merch.*, 686 F.2d 1190, 1202 (6th Cir. 1982) (“Without market power, a
 12 firm cannot have an adverse effect on competition.”). While AliveCor defines an “HRA Apps” market,
 13 Mot. 3, that cannot be the only relevant market in this case. AliveCor’s own expert concedes that
 14 Apple’s challenged conduct—what AliveCor characterizes as [REDACTED]—
 15 occurred in a *different* market altogether: the one in which Apple provides services and tools, like the
 16 Workout Mode API, to developers such as AliveCor. Ex. 34 (Cragg Dep. I) 38:22–39:8, 193:1–195:23;
 17 *see also* Mot. 19 (acknowledging that Apple in its role as a “platform provider made [heartrate values
 18 generated by HRPO] available for years to attract app developers to its platform”). So even if Apple’s
 19 alleged conduct foreclosed competition in the alleged HRA App market (it did not, *infra* 39–42),
 20 AliveCor also must define and prove up the relevant market in which the alleged conduct occurred.
 21 AliveCor has not even attempted to do so—fatal to its Section 2 claims. *See, e.g., Plush Lounge Las*
 22 *Vegas v. Hotspur Resorts*, 371 F. App’x 719, 720–21 (9th Cir. 2010) (market definition); *Snake River*
 23 *Valley Elec. Ass’n v. PacifiCorp*, 357 F.3d 1042, 1052 (9th Cir. 2004) (monopoly power).

24 The relevant market must include that in which the conduct occurred. *See Dreamstime.com*,

25 ¹⁰ Because this is a Section 2 case challenging a product improvement or refusal to deal, “[t]here is no
 26 room” for “balancing” procompetitive and anticompetitive effects. *Allied Orthopedic*, 592 F.3d at
 27 1000. Even if there were, the absence of a less restrictive alternative means Apple’s conduct can be
 28 “briefly confirm[ed]” as reasonable on balance. *Epic*, 67 F.4th at 994. AliveCor’s expert economist
 has not even undertaken any weighing, nor has AliveCor quantified the allegedly competing effects in
 a manner that would allow for balancing in any practical way. AliveCor therefore lacks any proof that
 the balance of competitive harm favors it. *See Cnty. of Tuolumne v. Sonora Cmty. Hosp.*, 236 F.3d
 1148, 1160 (9th Cir. 2001) (granting summary judgment after balancing).

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1 *LLC v. Google LLC*, 54 F.4th 1130, 1138 (9th Cir. 2022) (affirming dismissal of Section 2 claim where
 2 alleged anticompetitive conduct did not occur in alleged relevant market); *In re Zinc Antitrust Litig.*,
 3 2016 WL 3167192, at *13 (S.D.N.Y. June 6, 2016) (Section 2 plaintiffs “must allege a plausible
 4 relevant market, which serves ... to show that the defendant’s anticompetitive conduct occurred in
 5 some particular market.”). In cases involving multiple markets, such as where a defendant allegedly
 6 acts in an upstream market to foreclose a downstream market, “a necessary element” is the definition
 7 of the upstream market and demonstration of the defendant’s power within it. *Alaska Airlines, Inc. v.*
 8 *United Airlines, Inc.*, 948 F.2d 536, 545 n.12 (9th Cir. 1991).

9 This rule holds across all kinds of antitrust cases, from essential facilities (*Alaska Airlines*, 948
 10 F.2d at 545 n.12) and tying claims (*Truck-Rail Handling, Inc. v. Burlington N. & Santa Fe Ry. Co.*,
 11 244 F. App’x 130, 131–32 (9th Cir. 2007)) to “leveraging” theories (*Virginia Vermiculite, Ltd. v. W.R.*
 12 *Grace & Co.-Conn.*, 108 F. Supp. 2d 549, 580 (W.D. Va. 2000)) and other “foreclosure offense[s]”
 13 (Fundamentals of Antitrust Law, *supra*, §§ 18.02[D][1] & 18.06). In short, “in the two-market
 14 situation, a plaintiff cannot establish a violation of Section 2 without proving that the defendant used
 15 its monopoly power in one market to obtain, or attempt to attain, a monopoly in the downstream, or
 16 leveraged, market.” *Alaska Airlines*, 948 F.2d at 547; *see also Cascade Health*, 515 F.3d at 912 (“Tying
 17 arrangements are forbidden on the theory that, if the seller has market power over the tying product,
 18 the seller can leverage this market power through tying arrangements to exclude other sellers of the
 19 tied product.”); *Frontier Med., Inc. v. Presbyterian Healthcare Servs., Inc.*, 2001 WL 37125276, at *4
 20 (D.N.M. Feb. 1, 2001) (for “a vertical restraint,” “the court must define the relevant upstream and
 21 downstream markets ... and examine the defendants’ ‘market power’ therein”).

22 There can be no doubt that this is, at minimum, a two-market case.¹¹ AliveCor labels Apple’s
 23 conduct as various forms of “tying” and “leveraging,” FAC ¶¶ 112–41—all of which by definition
 24 involve, and therefore require the definition of, multiple markets. *See Truck-Rail Handling*, 244 F.

25 _____
 26 ¹¹ In addition to the alleged HRA Apps aftermarket, AliveCor also defines a number of foremarkets—
 27 one of which the Court already rejected. Dkt. 42 at 9–10. For purposes of this motion, Apple is not
 28 arguing that AliveCor failed to properly define a foremarket. An upstream market refers to a market
 for a product at a previous stage of a production or distribution chain and is distinct from the
 foremarket-aftermarket framework. *See Alaska Airlines*, 948 F.2d at 545. In other words, AliveCor’s
 error is not in failing to define a foremarket but in failing to define the distinct market in which Apple’s
 alleged exercise of monopoly power (the exclusionary conduct) occurred.

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1 App’x at 131–32; *Virginia Vermiculite*, 108 F. Supp. 2d at 580. And as AliveCor’s motion explains,
2 it has now focused its case on Apple supposedly “removing access to HRPO’s heart rates.” Mot. 2.
3 The thrust of this claim is that Apple had a duty to continue providing AliveCor access to HRPO in an
4 upstream market—in which, according to AliveCor, Apple’s refusal to deal foreclosed competition in
5 a downstream market where HRA Apps are sold to consumers. *Id.* at 10–11; *see also Doe v. Abbott*
6 *Labs.*, 571 F.3d 930, 931 (9th Cir 2009) (holding that “allegations of monopoly leveraging ... in two
7 markets [does not] state a claim under § 2 of the Sherman Act, absent an antitrust refusal to deal”);
8 *linkLine*, 555 U.S. at 450–52 (explaining that where a plaintiff alleges an “upstream monopolist[]
9 abused [its] power in the wholesale market to prevent” competition “in the retail market,” the “duty to
10 deal” arises, if at all, “at the wholesale level”); *supra* 27 (explaining that AliveCor’s claim requires
11 proof of monopoly power in the market in which the duty to deal would arise).

12 Nor is there any dispute that the conduct did not occur in the alleged downstream HRA App
13 market. AliveCor is not challenging Apple’s introduction of IRN, nor seeking an order that Apple give
14 AliveCor access to IRN—Apple’s alleged offering in the HRA App market. *See* Ex. 40 (Cragg
15 Rebuttal) ¶ 35. As AliveCor repeats, it is now focused on access to HRPO data—which is indisputably
16 *not* a product in the alleged HRA App market but rather an [REDACTED] into AliveCor’s app that is provided
17 pursuant to the parties’ vertical licensing agreement. Ex. 35 (Cragg Dep. II) 55:18–56:21; Ex. 34
18 (Cragg Dep. I) 116:21–117:3; *see also* Mot. 3 (conceding the heartrate values Apple provides to
19 developers are “[a] necessary input” that “is provided ... via an application programming interface”).
20 Thus, as AliveCor’s expert recognizes, the market for “services and developing software and
21 publishing software” is *different* than the HRA App market because it involves “different [products]
22 than what consumers are getting in the HRA App market,” Ex. 34 (Cragg Dep. I) 195:14–23; *see also*
23 *id.* at 38:22–39:8 (conceding that not “all of the conduct” occurred in “the HRA App market”).

24 AliveCor therefore must prove up the separate relevant market in which Apple’s conduct
25 occurred as well as Apple’s power in that market. *Qualcomm*, 969 F.3d at 992. AliveCor has not even
26 tried to do so, *see* FAC ¶¶ 30–49, and its own experts have forsworn any attempt to do so, Ex. 34
27 (Cragg Dep. I) 195:5–16; Ex. 45 (Cragg Dep. II) 89:8–90:25. Nor does AliveCor contend that Apple
28 exercises monopoly power in a market that includes developing software and services (or any upstream

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1 market in which access to HRPO data is provided). Ex. 34 (Cragg Dep. I) 43:7–11. These failures
2 preclude liability under the Sherman Act. See *Qualcomm*, 969 F.3d at 992 (court erred by failing to
3 limit analysis to the allegedly restrained market); *Intergraph*, 195 F.3d at 1351–54 (rejecting antitrust
4 claims where plaintiff attempted to show monopoly power in wrong market); *Coast Cities Truck Sales,*
5 *Inc. v. Navistar Int’l Transp. Co.*, 912 F. Supp. 747, 766 (D.N.J. 1995) (claims dismissed “in the
6 absence of a relevant product market within which the alleged ... conduct could have occurred”).

3. AliveCor Cannot Demonstrate Antitrust Injury

7
8 Assuming AliveCor could show that Apple is a monopolist in a well-defined, relevant market
9 and that Apple’s alleged conduct gives rise to a cognizable antitrust claim—all of which AliveCor
10 cannot do for the numerous reasons explained above—Apple is still entitled to summary judgment
11 because AliveCor cannot demonstrate that the conduct caused any harm to competition. To make out
12 a claim for monopolization (or attempted monopolization) under Section 2 of the Sherman Act, a
13 plaintiff must show “causal antitrust injury.” *Somers*, 729 F.3d at 963; *Allied Orthopedic*, 592 F.3d at
14 998. Antitrust injury is “injury of the type the antitrust laws were intended to prevent and that flows
15 from that which makes defendants’ acts unlawful.” *Somers*, 729 F.3d at 963. Because the antitrust
16 laws protect “competition not competitors,” *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S.
17 477, 488 (1977), a plaintiff must demonstrate not only injury to itself, but also injury to “competition
18 in the market as a whole”—such as a market-wide reduction in output or an increase in prices stemming
19 from the alleged anticompetitive conduct. *Gorlick Distrib. Ctrs., LLC v. Car Sound Exhaust Sys., Inc.*,
20 723 F.3d 1019, 1024-25 (9th Cir. 2013); see also *Qualcomm*, 969 F.3d at 996 (“[I]n order to make out
21 a § 2 violation, the anticompetitive harm identified must be to *competition itself*, not merely to
22 competitors.”); *Metro Indus., Inc. v. Sammi Corp.*, 82 F.3d 839, 848 (9th Cir. 1996) (“Though Metro
23 alleges that Vollrath was forced out of the steamer market as a result of Sammi’s actions, Metro has
24 produced no evidence of reduced output or increased prices.”).

25 AliveCor cannot demonstrate that Apple’s alleged conduct caused any harm to competition “in
26 the market where competition is [allegedly] being restrained.” *Qualcomm*, 969 F.3d at 992; see also
27 *Am. Ad Mgmt., Inc. v. Gen. Tel. Co. of Cal.*, 190 F.3d 1051, 1057 (9th Cir. 1999). As discussed above,
28 the market in which Apple’s conduct occurred is one in which Apple is a platform operator, and

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1 AliveCor its customer. *See supra* 4, 27. AliveCor does not claim any injury in *that* market. Rather,
2 AliveCor posits foreclosure and diminished quality in the downstream market for HRA Apps. *See*
3 Ex. 5 (Cragg Rpt.) ¶¶ 288, 312. “Parties whose injuries, though flowing from that which makes the
4 defendant’s conduct unlawful, are experienced in another market do not suffer antitrust injury.”
5 *Qualcomm*, 969 F.3d at 992; *see also Intergraph*, 195 F.3d at 1353 (“The prohibited conduct must be
6 directed toward competitors and must be intended to injure competition.”).

7 Nor can AliveCor demonstrate that Apple’s conduct caused injury in its alleged relevant market
8 of watchOS HRA Apps. AliveCor cannot “use *indirect* evidence,” *Qualcomm*, 969 F.3d at 991; it must
9 instead show “proof of actual detrimental effects [on competition],” *Amex*, 138 S. Ct. at 2284.
10 AliveCor’s own experts concede that Apple has neither charged supracompetitive prices nor extracted
11 supracompetitive profits in the so-called HRA App market. *See* Ex. 34 (Cragg Dep. I) 149:6–20.
12 Apple’s so-called “HRA App” (IRN) is—and always has been—available for *free*. *See Brooke Grp.*
13 *Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 224 (1993) (“consumer welfare is
14 enhanced” by “lower aggregate prices in the market”); *Rebel Oil*, 51 F.3d at 1447 (“Lower prices, even
15 if below cost, are the essence of competition and are a ‘boon to consumers.’”). Output, measured as
16 the number of HRA Apps (as defined by AliveCor) on the market, has expanded exponentially since
17 Apple’s release of watchOS 5. *See* Ex. 9 (Stiroh Rebuttal) ¶¶ 212–18. The Supreme Court has refused
18 to infer competitive injury where there was no evidence that a firm charged more than its competitors
19 and output “grew dramatically” by 30%. *Amex*, 138 S. Ct. at 2288–89. Here, AliveCor’s experts
20 concede that there is no evidence [REDACTED]
21 [REDACTED] Ex. 34 (Cragg Dep. I) 149:22–25, and [REDACTED]
22 more than 8.8 million individuals—“have[] access to an HRA functionality” as a result of Apple’s
23 entry, Ex. 9 (Stiroh Rebuttal) ¶ 218.

24 While AliveCor may claim that the “full” foreclosure of competing HRA Apps constitutes harm
25 to competition, its expert identifies only one “app” that was supposedly foreclosed: AliveCor’s own
26 SmartRhythm feature. Ex. 5 (Cragg Rpt.) ¶¶ 286–293. To start, AliveCor’s only evidence that the
27 watchOS 5 update impaired SmartRhythm’s functionality is unreliable and inadmissible—leaving a
28 causal chasm between the challenged conduct and AliveCor’s claimed injury. *See Jafari Mot.* at 1–2

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1 But even taking AliveCor’s evidence at face-value, there is no proof that Apple’s conduct caused
 2 SmartRhythm’s exit, as opposed to it having been AliveCor’s own “business decision.” Ex. 5 (Cragg
 3 Rpt.) ¶ 291. Rather, “one of the chief architects” of SmartRhythm (Ex. 7 (Jafari Rpt.) ¶ 40) admitted
 4 that the company may have been able to re-release a functional version of SmartRhythm. Ex. 45 (Valys
 5 Dep.) 123:1–3, 285:8–289:24. And neither AliveCor nor its experts have conducted any analysis of
 6 the efforts and costs involved in doing so—despite claiming that the ability to operate SmartRhythm
 7 on watchOS was worth *over \$1.2 billion*. See Ex. 50 (Austin Rpt.) ¶ 75.¹²

8 Further, Apple is not the sole source of heartrate data for app developers; AliveCor could have
 9 gotten similar data by selling a wrist-wearable device itself or by partnering with any other company
 10 that sells wrist-wearables. Ex. 9 (Stiroh Rebuttal) ¶ 168; *see also* Dkt. 42 at 9 (recognizing as plausible
 11 only a “broadly defined” hardware market in which there are many “ECG-capable wearable devices”).
 12 AliveCor developed a “pretty operational prototype” of a product that allowed AliveCor to collect its
 13 own PPG data but decided not to pursue this strategy for business reasons. Ex. 9 (Stiroh Rebuttal)
 14 ¶ 168. Similarly, AliveCor could have taken its SmartRhythm feature to other platforms, such as
 15 Samsung and Garmin, but opted not to do so. *Id.* ¶ 172. Having made the conscious choice to not even
 16 attempt to compete through such channels, AliveCor cannot blame Apple for its alleged foreclosure.

17 Even if Apple’s conduct did cause AliveCor to withdraw its SmartRhythm feature, the mere
 18 fact that conduct “has the effect of reducing consumers’ choices” “does not sufficiently allege an injury
 19 to competition” because such an effect is “fully consistent with a free, competitive market.” *Brantley*
 20 *v. NBC Universal, Inc.*, 675 F.3d 1192, 1202 (9th Cir. 2012) (citations omitted); *accord Qualcomm*,
 21 969 F.3d at 990; *Somers*, 729 F.3d at 966. That is because “intrud[ing] upon consumers’ freedom of
 22 choice ... has been implicitly rejected by the Supreme Court as a sufficient independent basis for
 23 antitrust liability,” *Hirsh v. Martindale-Hubbell, Inc.*, 674 F.2d 1343, 1349 n.19 (9th Cir. 1982), unless
 24 and “until it harms consumer welfare,” *Rebel Oil*, 51 F.3d at 1433. With lower prices, growing output,

25 _____
 26 ¹² AliveCor contends that a company called Cardiogram was foreclosed because it had developed an
 27 app for AFib detection “but was never able to release [it] due to Apple’s anticompetitive conduct.”
 28 Mot. 3. But discovery has not borne this out. [REDACTED]

[REDACTED] Ex. 9 (Stiroh
 Rebuttal) ¶ 51, n.127. There is no evidence that Apple’s challenged conduct injured Cardiogram or
 degraded its app in any way.

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1 and high customer satisfaction, there is no such harm to competition here.

2 AliveCor claims that its feature is higher quality than Apple’s, because some consumers would
 3 prefer the more “continuous” monitoring offered by SmartRhythm—but AliveCor has no *evidence*
 4 supporting this theory. Ex. 9 (Stiroh Rebuttal) ¶¶ 225–29, 232–33; *see also* Ex. 35 (Cragg Dep. II)
 5 61:8–15 (disclaiming any opinion that “consumers value accurate heart rate measurements when they
 6 are using apps that make use of the workout mode API”). In fact, consumers prefer Apple’s free IRN
 7 feature to AliveCor’s pricey \$99 a year subscription to Kardia Premium, Ex. 9 (Stiroh Rebuttal) ¶¶ 233,
 8 237–239. Mere speculation that some consumers would have preferred SmartRhythm to Apple’s IRN
 9 cannot support a finding of antitrust injury. *See Somers*, 729 F.3d at 965 (no antitrust injury based on
 10 speculation that the absence of supracompetitive prices was due to lower-product quality).

11 Finally, any foreclosure of SmartRhythm was, at most, an unintended consequence of the
 12 undisputed improvement in Apple’s Workout Mode, not reflective of “the anticompetitive aspect” of
 13 the challenged conduct. *Rebel Oil*, 51 F. 3d at 1433. Such injury—flowing from “aspects of [Apple’s]
 14 conduct that are beneficial . . . to competition”—is not antitrust injury. *Id.*; *see also Phila. Taxi Ass’n,*
 15 *Inc. v. Uber Techs., Inc.*, 886 F.3d 332, 336 (3d Cir. 2018) (no antitrust injury where taxicabs suffered
 16 because Uber entered the market with a low cost and popular ride-sharing platform).

17 **B. The Court Should Enter Summary Judgment on AliveCor’s UCL Claim**

18 The Court also should enter summary judgment on AliveCor’s derivative UCL claim, which is
 19 predicated on the exact same allegations and theories as its federal claims. *See* FAC ¶¶ 157, 159–60.
 20 The UCL authorizes only equitable remedies and AliveCor is seeking the paradigmatic legal remedy,
 21 over \$1 billion in damages, and has adduced no evidence that such relief would be inadequate. Nor
 22 can AliveCor succeed on the merits of its UCL claim. The “categorical antitrust rules” applicable
 23 here—protecting product improvements and refusals to deal from liability under the Sherman Act—
 24 preclude using California law to enjoin that same conduct as unfair. *Epic*, 67 F.4th at 1001. Regardless,
 25 undisputed evidence demonstrates that Apple’s alleged conduct was procompetitive—not unfair.

26 **1. AliveCor’s UCL Claim Fails Because AliveCor Is Not Entitled to Equitable Relief**

27 Unfair competition claims under are “generally limited to injunctive relief and restitution.”
 28 *Korea Supply Co. v. Lockheed Martin Corp.*, 29 Cal. 4th 1134, 1144 (2003) (cleaned up); *see also* Cal.

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1 Bus. & Prof. Code § 17203. They are therefore subject to the “equitable principles derived from federal
2 common law.” *Sonner*, 971 F.3d at 837; *see also Huynh v. Quora, Inc.*, 508 F. Supp. 3d 633, 662 (N.D.
3 Cal. 2020) (extending *Sonner* to all equitable relief). AliveCor cannot meet two of these prerequisites.

4 *First*, AliveCor cannot prove a “real and immediate threat that [it] will be wronged again.” *City*
5 *of Los Angeles v. Lyons*, 461 U.S. 95, 111 (1983). The alleged anticompetitive conduct—Apple’s
6 changes to Workout Mode as part of watchOS 5—was a design change that took place years ago. The
7 Watch operating system has been updated repeatedly over the past five years, and AliveCor has
8 presented no evidence that SmartRhythm is incompatible with any version of watchOS since watchOS
9 5. What is more, Apple has made additional changes to Workout Mode since watchOS 5. Waydo
10 Decl. ¶¶ 38–46. As a result, one cannot just undo the changes Apple made in 2018. *See, e.g.*, Ex. 35
11 (Cragg Dep. II) 72:1–18. There is therefore no evidence of “ongoing or likely to recur” anticompetitive
12 conduct to enjoin, much less a proposed way to do so. *Qualcomm*, 969 F.3d at 991.

13 *Second*, AliveCor cannot prove that it “lacks an adequate remedy at law.” *Sonner*, 971 F.3d at
14 844. To the contrary, AliveCor has the paradigmatic “legal remedy—damages.” *Id.* at 838. Its
15 damages expert, Dr. Austin, claims “to quantify damages incurred by AliveCor in connection with
16 alleged anticompetitive conduct by Apple.” *See* Ex. 50 (Austin Rpt.) ¶ 7. So while there is nothing to
17 enjoin, AliveCor seeks what purports to be a complete remedy: AliveCor’s UCL claim is premised on
18 the same conduct as its Sherman Act claims, FAC ¶¶ 157, 159–60, and neither AliveCor nor Dr. Austin
19 have ever suggested that the extraordinary sum AliveCor seeks—over \$1.2 billion—would be
20 inadequate. *See, e.g., Huynh*, 508 F. Supp. 3d at 662 (granting summary judgment on UCL claim
21 because plaintiff had an adequate remedy at law); *Rhynes v. Stryker Corp.*, 2011 WL 2149095, at *3-
22 4 (N.D. Cal. May 31, 2011) (granting motion to dismiss for same reason).

23 For these reasons, AliveCor’s proposed injunction runs afoul of the bedrock rule in antitrust
24 cases forbidding the imposition of “a duty that [the court] cannot . . . adequately and reasonably
25 supervise.” *Alston*, 141 S. Ct. at 2163. As the Supreme Court has explained, courts give “wide berth
26 to business judgments” because they are “unlikely to be an effective day-to-day enforcer of a detailed
27 decree, able to keep pace with changing market dynamics alongside a busy docket.” *Id.* That is
28 particularly true in technology markets, where innovation and competition are “rapidly changing.”

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1 *Qualcomm*, 969 F.3d at 990–91. Because neither AliveCor nor its experts have identified how Apple
2 could reengineer watchOS, AliveCor’s request for equitable relief would foist upon this Court the
3 obligation to oversee the reanimation of Apple’s long-discontinued HRPO algorithm, the
4 reconfiguration of Apple’s software, and the ongoing maintenance of this algorithm in a manner that
5 is and remains operable with AliveCor’s technology. There is no basis for the Court to assume that
6 role, and thus AliveCor’s request for equitable relief—and its UCL claim—fail as a matter of law. *See*,
7 *e.g.*, *Trinko*, 540 U.S. at 408 (noting that courts should avoid the role of “central planners”).

2. AliveCor’s Derivative UCL Claim Fails on the Merits

8
9 AliveCor’s unfair competition claim also fails on its own merits. Of the “three varieties of
10 unfair competition” under the UCL, *Levitt v. Yelp! Inc.*, 765 F.3d 1123, 1130 (9th Cir. 2014), AliveCor
11 does not assert a fraud theory, FAC ¶¶ 159–60, and the demise of its federal antitrust claims spells the
12 end of its unlawfulness theory too. *See, e.g., Aleksick v. 7-Eleven, Inc.*, 205 Cal. App. 4th 1176, 1185–
13 86 (Cal. Ct. App. 2012); *Distance Learning Co. v. Maynard*, 2020 WL 2995529, at *9 (N.D. Cal. June
14 4, 2020). That leaves only AliveCor’s unfairness claim, which twice falters. First, the “categorical
15 antitrust rule[s]” precluding liability for product improvements and refusals to deal foreclose any
16 attempt to claim that Apple’s conduct can nonetheless be enjoined as unfair. *Epic*, 67 F.4th at 1001.
17 Second, Apple’s conduct is not on balance unfair or otherwise substantially anticompetitive.

a. AliveCor’s UCL Claim Fails Under the *Chavez* Doctrine

18
19 Unfairness claims do not invite “purely subjective notions of fairness” but rather must attack
20 an “actual or threatened impact on competition.” *Cel-Tech Commc’ns, Inc. v. L.A. Cellular Tel. Co.*,
21 20 Cal. 4th 163, 184, 186–87 (1999). As a result, the California Court of Appeals held in *Chavez v.*
22 *Whirlpool Corp.* that “[i]f the same conduct is alleged to be both an antitrust violation and an ‘unfair’
23 business act or practice for the same reason—because it unreasonably restrains competition and harms
24 consumers—the determination that the conduct is not an unreasonable restraint of trade necessarily
25 implies that the conduct is not ‘unfair’ toward consumers.” 93 Cal. App. 4th 363, 375 (2001). The
26 Ninth Circuit has since adhered to that rule, explaining that it precludes a UCL claim wherever “a
27 categorical antitrust rule” forecloses liability under federal antitrust law. *Epic*, 67 F.4th at 1001; *see*
28 *also City of San Jose v. Off. of the Comm’r of Baseball*, 776 F.3d 686, 691–92 (9th Cir. 2015). “To

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1 permit a separate inquiry into essentially the same question under the unfair competition law,” courts
 2 reason, “would only invite conflict and uncertainty and could lead to the enjoining of procompetitive
 3 conduct.” *Chavez*, 93 Cal. App. 4th at 375.

4 AliveCor’s claim runs headlong into this bar. As explained above, Apple’s change to watchOS
 5 was a product improvement “necessarily tolerated by the antitrust laws.” *Allied Orthopedic*, 592 F.3d
 6 at 1000; *see also supra* 14–18. And even if it were not, Apple’s conduct was a lawful refusal to deal
 7 within “the long recognized right of [a] trader or manufacturer engaged in an entirely private business,
 8 freely to exercise his own independent discretion as to parties with whom he will deal.” *Colgate*, 250
 9 U.S. at 307; *see also supra* 26–30. By AliveCor’s own repeated admission, the product improvement
 10 doctrine confers an “immunity” to antitrust liability, *Mot.* 15, 20, and *Chavez* itself held that a refusal
 11 to deal that is lawful under federal antitrust law cannot be unfair under California law, 93 Cal. App.
 12 4th at 375. Either way, Apple’s conduct is protected by a “categorical” rule. *Epic*, 67 F.4th at 1001.

13 **b. Apple’s Conduct Is Neither Unfair on Balance, Nor Tethered to a**
 14 **Violation of the Antitrust Laws**

15 AliveCor’s claim also falters under both the balancing and tethering tests used to assess whether
 16 conduct is “unfair” under the UCL. *Lozano v. AT&T Wireless Servs., Inc.*, 504 F.3d 718, 735 (9th Cir.
 17 2007); *Cel-Tech*, 20 Cal.4th at 187. As explained above, the “utility of [Apple’s] practice” outweighs
 18 any alleged “harm to the consumer,” *Lozano*, 504 F.3d at 735–36, as prices have dropped, output is up,
 19 and Workout Mode has only become more accurate for its intended purpose over time. *See supra* 6–
 20 8, 15–18, 39–42. The result is the same under the “tethering test.” There is no “incipient violation of
 21 an antitrust law,” *Cel-Tech*, 20 Cal.4th at 187, since Apple released watchOS 5 in 2018 and allegedly
 22 foreclosed the market by 2019, Ex. 5 (Cragg Rpt.) ¶¶ 190, 261 & Fig. 7. Plus, labeling Apple’s conduct
 23 as unfair would turn upside down “the policy or spirit” of the antitrust laws, which recognize an entity
 24 has no duty to deal and can bring products to market freely. *Cel-Tech*, 20 Cal.4th at 187; *see also RLH*
 25 *Indus., Inc. v. SBC Commc’ns, Inc.*, 133 Cal. App. 4th 1277, 1286 (2005).

26 **V. CONCLUSION**

27 The Court should enter summary judgment in favor of Apple on AliveCor’s claims and deny
 28 AliveCor’s motion for partial summary judgment.

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1 DATED: July 27, 2023

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3 Caeli A. Higney

4 *Attorney for Defendant Apple Inc.*

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