

United States District Court
Northern District of California

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

ALIVECOR, INC.,
Plaintiff,
v.
APPLE INC.,
Defendant.

Case No. 21-cv-03958-JSW

**ORDER GRANTING, IN PART, AND
DENYING, IN PART, MOTION TO
DISMISS**

Re: Dkt. No. 21

Now before the Court for consideration is the motion to dismiss filed by Defendant Apple Inc., (“Apple”). The Court has considered the parties’ papers, relevant legal authority, and the record in the case, and it finds this matter suitable for disposition without oral argument.¹ *See* N.D. Civ. L.R. 7-1(b). For the following reasons, the Court GRANTS, IN PART, AND DENIES, IN PART, Apple’s motion.

BACKGROUND

Plaintiff AliveCor, Inc. (“AliveCor”) filed a complaint against Apple, alleging that Apple unlawfully monopolized the U.S. market for watchOS heart rate analysis apps. AliveCor alleges that it is an innovator in the smartwatch industry that helped change the perception of the Apple Watch from an accessory to a personal health monitoring tool. (Compl. ¶¶ 2, 17-18.) AliveCor’s products include: (1) the KardiaBand, a wristband for the Apple Watch, capable of recording an electrocardiogram (“ECG”); (2) the Kardia app, which analyzes readings from the KardiaBand on the Apple Watch; and (2) SmartRhythm, a heart rate analysis app with the ability to monitor a user’s heart rate and alert the user of an irregularity suggesting they should record an ECG. (*Id.* ¶

¹ The Court has also received and considered the subsequent authorities submitted by the parties. (*See* Dkt. Nos. 32, 34-36.)

1 2.) SmartRhythm used data from the Apple Watch’s heart rate algorithm to detect the
2 irregularities. (*Id.* ¶ 20.) AliveCor alleges that SmartRhythm is the true focus of the lawsuit.

3 AliveCor alleges that Apple was aware of and supportive of AliveCor’s innovations to the
4 Apple Watch. (*Id.* ¶¶ 20-23.) But as the Apple Watch grew in popularity and shortly after the
5 KardiaBand gained FDA approval, AliveCor alleges that Apple announced its own heart initiative
6 for the Apple Watch, which AliveCor viewed as an attempt to undercut the KardiaBand. (*Id.* ¶
7 24.) From this point on, AliveCor alleges that Apple viewed AliveCor as a competitor and took
8 steps to undercut AliveCor including introducing an updated Apple Watch and watch operating
9 system (“watchOS”), with the ability to record an ECG and Apple’s own heart rate analysis app.
10 (*Id.* ¶ 25, 27.)

11 **A. Product Market Allegations.**

12 AliveCor focuses its allegations on Apple’s purported exclusionary conduct regarding
13 heart rate analysis apps. (*Id.* ¶ 28.) However, AliveCor alleges that Apple abused monopoly
14 power in multiple markets, including the U.S. market for watchOS heart rate analysis apps (*e.g.*
15 AliveCor’s SmartRhythm and Apple’s version of that app) and ECG-capable smartwatches. (*Id.*)

16 **1. ECG-capable smartwatches.**

17 According to AliveCor, a smartwatch is a mobile computing device with a touchscreen
18 display that is typically worn on the wrist. (*Id.* ¶ 30.) A smartwatch acts as a digital watch but
19 provides additional functionality that makes it an extension of and complement to a user’s
20 smartphone. (*Id.*) AliveCor alleges that it is the broad functionality and touchscreen capabilities
21 of smartwatch that drive demand for smartwatches because the features provide users with
22 smartphone-like capabilities in a wearable device. (*Id.*) AliveCor alleges that traditional
23 wristwatches and fitness trackers are not reasonably interchangeable with smartwatches because
24 wristwatches do not provide any “smart” characteristics and fitness trackers do not offer the array
25 of functions a smartwatch provides beyond health monitoring. (*Id.* ¶ 31.)

26 AliveCor alleges that within the broader smartwatch market there is a submarket for
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1 smartwatches capable of taking ECGs (“ECG-capable smartwatches”).² (*Id.* ¶ 29, 33.) The
 2 ability to record an ECG on a smartwatch adds a layer of heart health-related functionality that,
 3 “when combined with a smartwatch’s other functionality, provides a unique combination of uses
 4 not available on any other type of wearable or mobile computing device.” (*Id.* ¶ 34.)

5 **2. Heart rate analysis apps.**

6 AliveCor also alleges that the market or aftermarket of “watchOS heart rate analysis apps”
 7 constitutes the relevant product market.³ (*Id.* ¶ 45, 48.) AliveCor alleges that a heart rate analysis
 8 app “analyzes the user’s heart rate in real time, typically using a PPG sensor in close proximity to
 9 the user’s wrist” and determines whether the user’s heart rate is normal or irregular. (*Id.* ¶ 40.)
 10 The app runs constantly while the device is worn and alerts a user when a situation arises requiring
 11 an ECG recording and medical analysis. (*Id.*) This distinguishes a heart rate analysis app from an
 12 ECG app, which records and interprets an ECG using specialized hardware, and a heart rate
 13 tracking app, which tracks certain aspects of a user’s heart rate to assess general fitness but does
 14 not provide medical analysis or diagnostics. (*Id.* ¶¶ 40-41.) For Apple Watch users, the only heart
 15 rate analysis apps are those written for watchOS, so the only reasonably interchangeable heart rate
 16 analysis app alternatives an Apple Watch user can select are watchOS apps. (*Id.* ¶ 39, 45.)

17 **B. Market Share Allegations.**

18 AliveCor alleges that Apple possesses monopoly in the U.S. market for ECG-capable
 19 smartwatches and watchOS heart rate analysis apps. (*Id.* ¶ 48.) AliveCor alleges, on information
 20 and belief, that Apple commands over sixty-eight percent of the U.S. smartwatch market. (*Id.* ¶
 21 49.) According to AliveCor, Apple’s share of the narrower ECG-capable smartwatch market is
 22 even greater—over seventy percent—because Apple’s competitors only offer ECG functionality
 23 on a subset of their smartwatches. (*Id.* ¶ 50.)

24 AliveCor alleges that Apple has a nearly one hundred percent market share of watchOS
 25 heart rate analysis apps given its complete control over watchOS and distribution for watchOS

26 _____
 27 ² AliveCor adopts in the alternative broader definitions of the relevant ECG-capable smartwatch
 market that it defines as “all smartwatches” or “all ECG-capable wearable devices.” (*Id.* ¶ 35.)

28 ³ In the alternative, AliveCor alleges that the relevant market can be more broadly defined as “all
 heart rate analysis apps for wearable devices.” (*Id.* ¶ 46.)

1 apps. (*Id.*) AliveCor further alleges that competition in the smartwatch market does not constrain
 2 Apple’s power in the watchOS heart rate analysis app market because of high switching costs and
 3 consumer lock-in. (*Id.* ¶ 55.) AliveCor also alleges that Apple has monopoly power over locked-
 4 in Apple Watch users. (*Id.* ¶¶ 57-69.)

5 **C. Allegations of Anticompetitive Conduct.**

6 AliveCor alleges that Apple harmed competition by excluding competitors for watchOS
 7 heart rate analysis app in several ways including by pre-announcing Apple’s own heart initiative
 8 (*id.* ¶ 72), informing AliveCor that SmartRhythm violated App Store guidelines (*id.* ¶¶ 73-75), and
 9 making changes to watchOS that created technical problems for SmartRhythm. (*Id.* ¶ 76.)

10 AliveCor alleges that Apple’s changes to the heart rate algorithm prevented third-party developers
 11 from being able to detect heart rate fluctuations and irregularities. (*Id.* ¶¶ 77-84.) As a result of
 12 these changes, SmartRhythm could not provide accurate heart rate analysis, and AliveCor
 13 removed it from the market. (*Id.* ¶ 85.) AliveCor alleges that Apple made these changes to
 14 exclude competition not to provide benefits to users. (*Id.* ¶ 86.)

15 The complaint alleges claims monopolization and attempted monopolization in violation of
 16 Section 2 of the Sherman Act, 15 U.S.C. section 2 and violations of California’s Unfair
 17 Competition Law (“UCL”), California Business and Professions Code section 17200 *et seq.*

18 **ANALYSIS**

19 **A. Requests for Judicial Notice.**

20 Generally, when evaluating a motion to dismiss, district courts may not consider material
 21 outside the pleadings. *Lee v. City of Los Angeles*, 250 F.3d 668, 688 (9th Cir. 2001). There are
 22 two exceptions to this rule: the doctrine of incorporation by reference and judicial notice under
 23 Federal Rule of Evidence 201. Each mechanism permits district courts to consider materials
 24 outside a complaint, but each does so for different reasons. *Khoja v. Orezigen Therapeutics, Inc.*,
 25 899 F.3d 988, 1002-03 (9th Cir. 2018).

26 Under Rule 201, a court may take judicial notice of an adjudicative fact if it is “not subject
 27 to reasonable dispute.” Fed. R. Evid. 201(b). A fact is “not subject to reasonable dispute” if it is
 28 “generally known,” or “can be accurately and readily determined from sources whose accuracy

1 cannot reasonably be questioned.” *Id.* Though a court may take judicial notice of matters of
2 public record and properly consider those matters when evaluating a motion to dismiss, a court
3 may not take judicial notice of disputed facts contained in such public records. *Lee*, 250 F. 3d at
4 689 (quotations and citations omitted).

5 Incorporation by reference, on the other hand, is a judicially-created doctrine that treats
6 certain documents as though they are part of the complaint itself. *Khoja*, 899 F.3d at 1002. This
7 doctrine is a tool to prevent plaintiffs from highlighting only the portions of certain documents that
8 support their claims, while omitting portions of those documents that weaken their claims. *Id.*
9 (citations omitted). A court may incorporate a document by reference if the complaint refers
10 extensively to the document or the document forms the basis for the plaintiff’s claim. *Id.*
11 (citations omitted). For a reference to be sufficiently “extensive,” a document should be referred
12 to “more than once.” *Id.* at 1003. But “a single reference” could, in theory, satisfy the standard if
13 the reference is “relatively lengthy.” *Id.* If a document “merely creates a defense” to the
14 complaint’s allegations, the document does not necessarily “form the basis of” the complaint. *Id.*
15 at 1002-03 (“Although the incorporation-by-reference doctrine is designed to prevent artful
16 pleading by plaintiffs, the doctrine is not a tool for defendants to short-circuit the resolution of a
17 well-pleaded claim.”). When a court incorporates a document by reference, it may assume all
18 contents of the document are true for the purposes of a motion to dismiss under 12(b)(6). *Id.* at
19 1003 (citing *Marder v. Lopez*, 450 F.3d 445, 448 (9th Cir. 2006) (quotations omitted)). Thus,
20 courts must be cautious when drawing inferences from incorporated documents. *Id.*

21 Apple requests judicial notice of twelve exhibits in connection with its motion to dismiss.
22 Apple argues that the Court may consider these documents under the doctrine of incorporation by
23 reference because they are documents that the complaint “necessarily relies” upon. Exhibits A
24 through L are articles cited by AliveCor in the complaint. Exhibits A, D, and E are each referred
25 to twice in the complaint, and Exhibits B, C, and F through L are referred to once. Accordingly,
26 the complaint does not refer to any of the exhibits “extensively enough to warrant incorporation on
27 that ground alone.” *Khoja*, 899 F.3d at 1006. However, an exhibit may nevertheless be
28 incorporated by reference if AliveCor used the exhibit to form the basis of its claims. *Id.*

1 Here, Exhibits A-C are referenced once or twice in the complaint and these references are
2 found in a section of the complaint discussing AliveCor's background. Similarly, Exhibit L is
3 referenced once in the complaint, and it does not form the basis of Plaintiff's claims. These
4 references are not at the "core" of the complaint, and the Court DENIES Apple's request to
5 incorporate these documents by reference into the complaint. *See Garcia v. J2 Glob., Inc.*, No.
6 20-cv-06096-FLA (MAAx), 2021 WL 1558331, at *6 (C.D. Cal. Mar. 5, 2021) (denying
7 incorporation by reference because "any support [the exhibits] give to Plaintiff's claim is too
8 tangential to form the basis of Plaintiff's claim") (internal citation and quotation marks omitted).

9 On the other hand, Exhibits D-G, although referenced only once or twice, serve to form the
10 basis of Plaintiff's claim because Plaintiff cites them as support for its allegations related to the
11 relevant product market for heart rate analysis apps. Similarly, Exhibits H-K, though minimally
12 referenced, serve to form the basis of Plaintiff's claim because Plaintiff cites them to help show
13 Apple's market share in the smartwatch market. The Court GRANTS Apple's request to
14 incorporate these documents by reference into the complaint.

15 However, the Court agrees with AliveCor that with regard to the documents incorporated
16 by reference, the Court will not interpret the incorporated documents to contradict well-pled
17 factual allegations in the complaint. *Khoja*, 899 F.3d at 1003; *Sgro v. Danone Waters of N. Am.*
18 *Inc.*, 532 F.3d 940, 943 n.1 (9th Cir. 2008) (refusing to interpret incorporated disability plan
19 documents to contradict plaintiff's pleaded facts).⁴

20 **B. Legal Standard Applicable to a Motion to Dismiss.**

21 A complaint must contain a "short and plain statement of the claim showing that the
22 pleader is entitled to relief." Fed. R. Civ. P. 8(a)(2). "[D]etailed factual allegations are not
23 required" to survive a motion to dismiss if the complaint contains sufficient factual allegations to
24 "state a claim to relief that is plausible on its face." *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009)

25 _____
26 ⁴ In its request for judicial notice, Apple asks the Court to consider these documents under
27 the doctrine of incorporation by reference. In reply, Apple appears to conflate judicial notice
28 under Federal Rule of Evidence 201 and incorporation by reference. (*See* Dkt. No. 27, RJN
Reply, 1:27-2:2.) Because Apple's request for judicial notice did not address whether judicial
notice was proper under Rule 201, the Court will not consider whether the exhibits would be
proper subjects of judicial notice under Rule 201.

1 (citing *Bell Atl. v. Twombly*, 550 U.S. 544, 570 (2007)). “Labels and conclusions[] and a
2 formulaic recitation of the elements of a cause of action will not do.” *Twombly*, 50 U.S. at 555.

3 When evaluating a Rule 12(b)(6) motion to dismiss, a district court accepts as true all
4 material facts alleged in the complaint and draws all reasonable inferences in favor of the plaintiff.
5 *Faulkner v. ADT Servs., Inc.*, 706 F.3d 1017, 1019 (9th Cir. 2013). A district court should grant
6 leave to amend unless the court determines the pleading could not “possibly be cured by the
7 allegation of other facts.” *Lopez v. Smith*, 203 F.3d 1122, 1130 (9th Cir. 2000).

8 **C. Sherman Act Claims.**

9 Protecting competition, not individual competitors, is at the heart of antitrust regulation.
10 *See Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962). Accordingly, antitrust laws target
11 only behavior that tends to reduce (or actually reduces) competition. *Atl. Richfield Co. v. USA*
12 *Petroleum Co.*, 495 U.S. 328, 344 (1990); *Cargill, Inc. v. Monfort of Colo., Inc.*, 479 U.S. 104,
13 109-10 (1986) (“[I]t is inimical to the antitrust laws to award damages for losses stemming from
14 continued competition.” (citation and quotation omitted)).

15 To successfully plead monopolization under the Sherman Act, a plaintiff must allege: (i) a
16 market participant has monopoly power in the relevant market and (ii) is willfully acquiring or
17 maintaining monopoly power. *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 480-
18 81 (1992). “[G]rowth or development as a consequence of a superior product, business acumen,
19 or historic accident” is not prohibited behavior. *Id.* at 1481. A private plaintiff must also plead
20 the defendant’s anticompetitive behavior has injured it. *Rebel Oil Co. v. Atl. Richfield Co.*, 51
21 F.3d 1421, 1433 (9th Cir. 1995).

22 To successfully plead attempted monopolization under the Sherman Act, a private plaintiff
23 must allege: (i) predatory or anticompetitive conduct (ii) pursued with the specific intent to control
24 prices or destroy competition; (iii) a dangerous probability the defendant will achieve a monopoly
25 or monopoly power; and (iv) injury stemming from the complained-of anticompetitive behavior.
26 *Image Tech. Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1202 (9th Cir. 1997) (citations
27 omitted). Apple argues that AliveCor’s monopolization and attempted monopolization claims fail
28 for the same reasons.

1 **1. Relevant Product Market.**

2 Apple first argues that AliveCor fails to allege a plausible product market. To state a valid
3 claim for monopolization or attempted monopolization, a plaintiff must allege that a “relevant
4 market” exists and that the defendant has power within that market. *Newcal Indus., Inc. v. Ikon*
5 *Office Sol.*, 513 F.3d 1038, 1044 (9th Cir. 2008).⁵ The sufficiency of allegations concerning the
6 “relevant market” is a factual, rather than legal, question; therefore, a Sherman Act claim survives
7 a Rule 12(b)(6) motion to dismiss unless the alleged market suffers from a fatal legal defect. *Id.* at
8 1045; *see High Tech. Careers v. San Jose Mercury News*, 996 F.2d 987, 990 (9th Cir. 1993)
9 (market definition depends on “a factual inquiry into the ‘commercial realities’ faced by
10 consumers”) (citation omitted).

11 To avoid a fatal legal defect, the relevant market must be a “product market,” rather than a
12 market whose boundaries are delineated by consumers. *Id.* (citations omitted). The market at
13 issue must encompass the product at issue as well as all economic substitutes for the product. *Id.*
14 The relevant market must include the group of service providers “who have [the] actual or
15 potential ability to deprive each other of significant levels of business.” *Thurman Indus., Inc. v.*
16 *Pay ‘N Pak Stores, Inc.*, 875 F.2d 1369, 1374 (9th Cir. 1989). !

17 A degree of fungibility demarcates the outer boundaries of a product market: the court
18 must look to whether the market, as the plaintiff defined it, includes all reasonably interchangeable
19 products and whether there is cross-elasticity of demand between the product and its substitutes.
20 *Olin Corp. v. FTC*, 986 F.2d 1295, 1298-99 (9th Cir. 1993) (citation omitted). Practically, cross-
21 elasticity means that if the price of one good increases, demand for the purportedly equivalent
22 good will increase, as consumers substitute the equivalent good for their initial, now relatively
23 expensive, choice: “[i]f consumers view the products as substitutes, the products are part of the
24 same market.” *Rebel Oil Co.*, 51 F.3d at 1435.

25 AliveCor alleges that Apple’s conduct abuses monopoly power in two markets: (1) ECG-

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27 ⁵ This element of an antitrust claim need not be pled with specificity. *See Cost Mgmt. Servs., Inc.*
28 *v. Washington Nat. Gas Co.*, 99 F.3d 937, 950 (9th Cir. 1996) (complaint “need only allege
sufficient facts from which the court can discern the elements of an injury resulting from an act
forbidden by the antitrust laws”) (citation and quotation omitted).

1 capable smartwatches, and (2) watchOS heart rate analysis apps.⁶

2 **a. ECG-capable smartwatches.**

3 Apple argues that AliveCor’s hardware-based market definitions fail because they exclude
4 AliveCor’s own products. Specifically, Apple contends that AliveCor’s KardiaBand is not a
5 smartwatch, an ECG-capable smartwatch, or an ECG-capable wearable device, but instead is an
6 ECG-capable product designed to work with a smartwatch. That is, it complements but does not
7 compete in a market for wearable or smartwatch devices. AliveCor contends Apple’s argument
8 raises a factual issue that is improper to determine at this stage.

9 The Court agrees with Apple. The products at issue do not fall within the proposed ECG-
10 capable smartwatch market or the broader smartwatch market. As alleged, a smartwatch is a
11 “mobile computing device with a touchscreen display that is typically worn on the wrist” and “acts
12 as a digital watch, but also provides substantial additional functionality,” and the KardiaBand is a
13 “wristband for the Apple Watch.” (Compl. ¶ 2, 30.) Thus, the allegations in the complaint make
14 clear that the KardiaBand is used in connection with the Apple Watch and does not independently
15 satisfy the alleged smartwatch criteria. Contrary to AliveCor’s argument, this is not a factual issue
16 because it is apparent from the face of the complaint that the KardiaBand is not a smartwatch. The
17 alleged products do not fall within the proposed market of ECG-capable smartwatches or the
18 broader smartwatch market. Accordingly, neither of those are plausible relevant markets. *See*
19 *Hicks*, 897 F.3d at 1120 (relevant market must “encompass the product at issue.”).

20 In its opposition, AliveCor does not meaningfully dispute that the KardiaBand is not a
21 smartwatch or an ECG-capable smartwatch. Rather, it contends that “it is a wearable device,
22 albeit one that integrates with Apple Watches via the Kardia app to make them ECG-capable.”
23 (Opp’n at 10 n.3.) As such, of AliveCor’s three proposed hardware-based market, the only one
24 that could plausibly constitute a relevant market here is the broadly defined market for all ECG-
25 capable wearable devices, which AliveCor alleges in the alternative.

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28 ⁶ Antitrust law requires allegation of both a product market and a geographic market. AliveCor
alleges the United States is the relevant geographic market for its hardware and software product
markets. (Compl. ¶¶ 37, 47.) Apple does not challenge that allegation.

1 However, AliveCor’s contention that the KardiaBand falls within the proposed ECG-
2 capable wearable device market is also implausible. As Apple argues, if the KardiaBand is an
3 ECG-capable wearable device, then every product or band capable of being integrated with an
4 Apple Watch would fall into this market so long as the product can integrate with an Apple Watch
5 that has ECG capability. However, AliveCor focuses this litigation on heart rate analysis apps and
6 the devices on which those apps run. Thus, this definition does not make sense when viewed in
7 the broader context of the complaint. It is implausible that the proposed ECG-capable wearable
8 device market would include devices on which apps cannot be run, like the KardiaBand. AliveCor
9 fails to plausibly establish that the KardiaBand falls within the even the broadly defined proposed
10 ECG-capable wearable device market. *Newcal*, 513 F.3d at 1045 (market must encompass the
11 product at issue).

12 Even assuming the KardiaBand is an ECG-capable wearable device, AliveCor has failed to
13 allege that this is a plausible market. A plausible market requires facts explaining why seemingly
14 similar products excluded from the market are not substitutes for those in the market. *Reilly v.*
15 *Apple Inc.*, No. 21-cv-04601- EMC, 2022 WL 74162, at *6 (N.D. Cal. Jan. 7, 2022). The ECG-
16 capable wearable device market lacks justification on this basis. AliveCor has not alleged why
17 seemingly similar products, such as ECG-capable portable or mobile devices, are not reasonable
18 substitutes for ECG-capable wearable devices. AliveCor asserts that it alleges such products are
19 not reasonable substitutes for ECG-capable wearable devices because the demand for wearable
20 devices stems from their wearability. However, this is not alleged in the complaint. The
21 allegations AliveCor points to reference smartwatches, not ECG-capable wearable devices.
22 AliveCor cannot rely on its allegations related to smartwatches to bolster its deficient ECG-
23 capable wearable device market. The complaint contains few allegations about this proposed
24 alternative market, and it does not contain allegations related to the demand for wearables nor does
25 it allege why portable or mobile ECG-capable devices are not reasonable substitutes.

26 For these reasons, AliveCor has not plausibly alleged any of its proposed hardware-based
27 markets. The Court GRANTS Apple’s motion to dismiss on this basis.

28

b. WatchOS heart rate analysis apps.

Apple also challenges AliveCor’s alleged “watchOS heart rate analysis app” market. Apple argues this is a single-brand market, comprised of watchOS heart rate analysis apps, which fails because AliveCor does not establish watchOS apps as a separate market. AliveCor responds that it has plausibly alleged that watchOS heart rate analysis apps constitute a distinct sub-aftermarket of an aftermarket for watchOS apps.

Single-brand markets are “extremely rare.” *Reilly*, 2022 WL 74162, at *5 (quoting *Apple, Inc. v. Psystar Corp.*, 586 F. Supp. 2d 1190, 1198 (N.D. Cal. 2008)). However, “it is legally permissible to premise antitrust allegations on a submarket” or an aftermarket. *Newcal*, 513 F.3d at 1045, 1049 (finding single-brand market plausible in the context of aftermarkets). A submarket “is economically distinct from the general product market.” *Id.* at 1045. An aftermarket is “wholly derivative from and dependent on the primary market.” *Id.* at 1049. An aftermarket may constitute the relevant market where market imperfections, such as information and switching costs, “prevent consumers from realizing that their choice in the initial market will impact their freedom to shop in the aftermarket.” *Id.* at 1050. The actual existence of an aftermarket is a factual question. *Id.* at 1051.

Under *Newcal*, to plausibly assert a single-brand aftermarket at the pleading stage, a plaintiff must adequately allege that (1) the aftermarket is wholly derivative from the primary market; (2) illegal restraints of trade relate only to the aftermarket; (3) the defendant did not achieve market power in the aftermarket through contractual provisions that it obtains in the initial market; and (4) competition in the initial market does not suffice to discipline anticompetitive practices in the aftermarket. *Id.* at 1048-1050.

Here, AliveCor has plausibly alleged an aftermarket for watchOS apps. AliveCor’s allegations establish a plausible aftermarket for watchOS apps that is derivative from and dependent on the primary device market. AliveCor has also plausibly alleged that Apple achieved its market power in the aftermarket only after the initial device purchase, which satisfies the second *Newcal* consideration. The third *Newcal* factor considers the source of the defendant’s market power. AliveCor alleges that users face high switching costs after the initial device

1 purchase that are unknown at the time of the purchase. Such allegations are sufficient to establish
2 that the challenged aftermarket restraint is not knowingly accepted by users before the device
3 purchase. Finally, AliveCor alleges that high switching costs prevent users and developers from
4 switching to a different operating system after the initial device commitment. These allegations
5 suffice to plausibly establish that competition in the initial market does not necessarily discipline
6 anticompetitive practices in the aftermarket.

7 At this stage, AliveCor's allegations are sufficient to pursue a claim based on the alleged
8 aftermarket.⁷ The Court DENIES Apple's motion to dismiss on this basis.

9 **2. Market share.**

10 Apple also moves to dismiss AliveCor's claims on the basis that the complaint fails to
11 plead that Apple holds a sufficient market share, and therefore, market power, in the proposed
12 relevant markets. Based on the Court's conclusion regarding the plausibility of AliveCor's
13 alleged relevant markets, the question is whether AliveCor has sufficiently pled that it has a
14 dominant market share of the aftermarket of watchOS heart rate analysis apps.

15 Monopoly power may be established circumstantially where "the defendant owns a
16 dominant share" of a market and "significant barriers to entry" exist. *Image Tech.*, 125 F.3d at,
17 1202. Generally, a market share of sixty-five percent is sufficient for a monopolization claim,
18 while a "lower quantum" is required for an attempt claim. *Rebel Oil Co. v. Atl. Richfield Co.*, 51
19 F.3d 1421, 1438 (9th Cir. 1995).

20 The Ninth Circuit has held that a plaintiff need not plead market share with specificity.
21 *See Newcal*, 513 F.3d at 1045 ("There is no requirement that these elements of the antitrust claim
22 be pled with specificity."). Courts have found rough estimates of market share sufficient at the
23 pleading stage. *See United Energy Trading, LLC v. Pacific Gas & Electric Co.*, 200 F. Supp. 3d
24 1012, 1020 (N.D. Cal. 2016) (denying motion to dismiss and finding single allegation related to

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26 ⁷ The Court finds *Pistacchio v. Apple Inc.* distinguishable. In *Pistacchio*, the court concluded that
27 the plaintiff had not adequately pled that the relevant market should be limited to the iOS
28 platform. 4:20-cv-07034-YGR, 2021 WL 949422, at *2 (N.D. Cal. Mar. 11, 2021). However, the
plaintiff in *Pistacchio* did not allege an aftermarket theory, and the complaint contained far fewer
allegations supporting the alleged relevant market.

1 market share sufficient); *Teradata Corporation v. SAP SE*, No. 18-cv-03670-WHO, 2018 WL
2 6528009, at *15 (N.D. Cal. Dec. 12, 2018) (finding allegation that defendant “possess a market
3 share that ranges, on information and belief, from 60% to 90%” sufficed to plead market power at
4 the motion to dismiss stage); *Datel Holdings Ltd. v. Microsoft Corp.*, 712 F. Supp. 2d 974, 997-98
5 (N.D. Cal. 2010) (finding allegation that defendant held approximately 66% of market as of a
6 specific date sufficient at motion to dismiss stage).

7 Here, AliveCor alleges that Apple commands one hundred percent of the market for heart
8 rate analysis apps on watchOS devices based on Apple’s “complete control over both watchOS
9 and distribution for watchOS apps.” (Compl. ¶ 52; *see also id.* ¶¶ 8, 53.) AliveCor also alleges
10 Apple’s monopoly power over Apple Watch users in the aftermarket based on high switching
11 costs and consumer lock-in. (*See id.* ¶¶ 58-69.) At this stage, these allegations are sufficient to
12 plead a dominant market share.

13 Apple’s cited cases are distinguishable. In *Fed. Trade Comm’n v. Facebook, Inc.*, the
14 complaint contained only a conclusory allegation of market share dominance. No. CV 20-3590
15 (JEB), 2021 WL 2643627, at *12 (D.D.C. June 28, 2021). The court found the allegation
16 insufficiently “robust” to establish Facebook’s market share particularly in light of the
17 “idiosyncratically drawn” personal social networking services product market. *Id.* Similarly, in
18 *Korea Kumho Petrochemical v. Flexsys Am. LP*, the court dismissed the plaintiff’s claim where
19 the plaintiff’s sole allegation related to market power was that the defendant achieved
20 “dominance” in the relevant market. No. C07-01057 MJJ, 2008 WL 686834, at *9 (N.D. Cal.
21 Mar. 11, 2008). By contrast here, AliveCor has alleged that Apple has dominance in the watchOS
22 heart rate analysis app market and has provided detailed allegations of switching costs and lock-in.

23 Apple also contends that AliveCor premises its market share allegations on the flawed
24 claim that Apple has dominance over wearable devices capable of providing heart rate analysis.
25 Specifically, Apple challenges AliveCor’s allegation that Apple has a market share in ECG-
26 capable smartwatches of “well over 70%” because “Apple’s closest competitors only offer ECG
27 functionality on a subset of their smartwatches.” (Compl. ¶ 50.) Apple argues that this
28 assumption fails to take into account that Apple also only offers ECG functionality on a subset of

1 its smartwatches. *See* RJN Ex. D. However, Apple’s arguments effectively challenge the
2 interpretation of evidence presented by AliveCor. The Court cannot say that Plaintiff’s
3 calculations are incorrect as a matter of law. At this stage of the proceedings, taking Plaintiff’s
4 allegations as true, AliveCor’s allegations of market share are plausible. For these reasons, the
5 Court DENIES Apple’s motion on this basis.

6 **3. Anticompetitive conduct.**

7 “The second element of a section 2 monopoly claim, the ‘conduct’ element, is the use of
8 monopoly power to foreclose competition, to gain a competitive advantage, or to destroy a
9 competitor.” *Image Tech.*, 125 F.3d at 1208 (internal citations and quotation marks omitted).
10 Conduct is anticompetitive if it “tends to impair the opportunities of rivals and either does not
11 further competition on the merits or does so in an unnecessarily restrictive way.” *Free FreeHand*
12 *Corp. v. Adobe Sys. Inc.*, 852 F. Supp. 2d 1171, 1180 (N.D. Cal. 2012).

13 “As a general rule, courts are properly very skeptical about claims that competition has
14 been harmed by a dominant firm’s product design changes.” *United States v. Microsoft Corp.*,
15 253 F.3d 34, 65 (D.C. Cir. 2001). A design change that improves a product by providing a new
16 benefit to consumers does not violate the antitrust laws “absent some associated anticompetitive
17 conduct.” *Allied Orthopedic Appliances Inc. v. Tyco Health Care Group LP*, 592 F.3d 991, 998-
18 99 (9th Cir. 2010). “If a monopolist’s design change is an improvement, it is necessarily tolerated
19 by the antitrust laws, unless the monopolist abuses or leverages its monopoly power in some other
20 way when introducing the product.” *Id.* at 1000 (internal citations omitted).

21 Apple relies on *Allied Orthopedic* to argue that product improvements absent associated
22 anticompetitive conduct do not violate Section 2. AliveCor argues that *Allied Orthopedic* applies
23 only to tying claims. Although *Allied Orthopedic* was a tying case, it broadly held that “a design
24 change that improves a product by providing a new benefit to consumers does not violate Section
25 2 absent some associated anticompetitive conduct.” *Id.* at 998-999. AliveCor has not pointed to
26 any language in *Allied Orthopedic* or cited case law to support its narrow interpretation of the
27 holding. Thus, the Court finds the holding in *Allied Orthopedic* relevant to all of AliveCor’s
28 anticompetitive conduct claims, which focus on the same alleged conduct.

1 With that threshold issue decided, the Court will proceed to address Apple’s arguments.
2 First, Apple argues that AliveCor has not alleged associative anticompetitive conduct because it
3 does not allege that Apple and AliveCor compete on the relevant functionality. The Court
4 disagrees. AliveCor has alleged that Apple’s heart rate analysis app indicates when a user should
5 consider taking an ECG and that Apple uses the data from its heart rate algorithm to provide
6 diagnostic aspects to competitors like AliveCor’s products. (*See* Compl. ¶¶ 81, 86.)

7 Second, Apple argues that Apple Watch sales do not supply the requisite associated
8 anticompetitive conduct. AliveCor alleges that Apple “implicitly condition[s] the sale of an Apple
9 Watch to the use of its heart rate analysis app...[and] the user not using a third-party developer’s
10 heart rate analysis app.” (*Id.* ¶¶ 107-08.) Despite this allegation, Apple argues that AliveCor has
11 not actually established that users use Apple’s heart rate analysis app in lieu of third-party heart
12 rate analysis apps, that Apple has rejected all third-party developer heart rate analysis apps, or that
13 there are no third-party heart rate analysis apps currently available to Apple Watch users.
14 However, Apple does not provide any legal authority indicating that such allegations are required
15 to satisfy the pleading burden for the conduct element. *See Newcal*, 513 F.3d at 1045 (“There is
16 no requirement that these elements of the antitrust claim be pled with specificity.”).

17 Indeed, Apple’s arguments ignore that the complaint alleges that Apple has abused or
18 leveraged its monopoly power “in some other way” as contemplated by the Court in *Allied*
19 *Orthopedic*. 592 F.3d at 1000. AliveCor alleges that Apple made changes to the heart rate
20 algorithm that made it effectively impossible for third parties to inform a user when to take an
21 ECG. AliveCor alleges that the updated heart rate algorithm, which was pushed out to all earlier
22 Apple Watch models, did not improve user experience; the purpose and effect of the update was to
23 prevent third parties from identifying irregular heart rate situations and from offering competing
24 heart rate analysis apps. These allegations present the type of “associated conduct” that makes
25 product design changes cognizable under antitrust law. Plaintiff’s allegations plausibly establish
26 that Apple’s conduct was anticompetitive. Thus, the Court DENIES Apple’s motion to dismiss on
27 this basis.
28

1 **D. UCL Claim.**

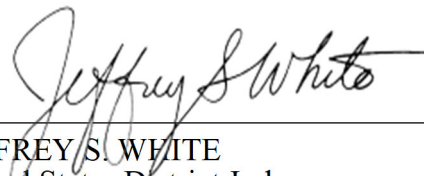
2 Apple contends that the AliveCor's UCL claim rises and falls with the Sherman Act
3 claims. Because the Court finds that AliveCor has plausibly alleged its antitrust claims, Apple's
4 motion to dismiss the UCL claim is DENIED.

5 **CONCLUSION**

6 For the foregoing reasons, the Court GRANTS, IN PART, AND DENIES, IN PART,
7 Apple's motion to dismiss. The parties shall appear for a case management conference on May
8 20, 2022, at 11:00 a.m. The parties shall submit a joint case management statement by May 13,
9 2022.

10 **IT IS SO ORDERED.**

11 Dated: March 21, 2022



JEFFREY S. WHITE
United States District Judge

United States District Court
Northern District of California

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