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PRESENTATION

Operator

Good afternoon, and welcome to AtriCure's First Quarter 2024 Earnings Conference Call. This call is being recorded for replay purposes. (Operator Instructions)

I would now like to turn the call over to Marissa Bych from the Gilmartin Group for a few introductory comments.

Marissa Elizabeth Bych *Gilmartin Group LLC - Principal*

Thank you. By now, you should have received a copy of the earnings press release. If you have not received a copy, please call (513) 644-4484 to have one e-mailed to you.

Before we begin today, let me remind you that the company's remarks include forward-looking statements. Forward-looking statements are subject to numerous risks and uncertainties, many of which are beyond AtriCure's control, including risks and uncertainties described from time to time in AtriCure's SEC filings. These statements include, but are not limited to, financial expectations and guidance, expectations regarding the potential market opportunity for AtriCure's franchises and growth initiatives, future product approvals, clearances, reimbursement and clinical trial outcomes. AtriCure's results may differ materially from those projected. AtriCure undertakes no obligation to publicly update any forward-looking statements.

Additionally, we refer to non-GAAP financial measures, specifically revenue reported on a constant currency basis, adjusted EBITDA and adjusted loss per share. A reconciliation of these non-GAAP financial measures with the most directly comparable GAAP measures is included in our press release, which is available on our website.

And with that, I would like to turn the call over to Mike Carrel, President and CEO.

Michael H. Carrel *AtriCure, Inc. - CEO, President & Director*

Thank you, Marissa. Good afternoon, everyone, and thank you for joining us today. I am pleased to report a strong start to 2024 as we expand our global impact on patients with atrial fibrillation and postoperative pain.

In the first quarter, we achieved total revenue of $109 million, reflecting 16% growth from the first quarter of 2023, driven by steady demand and activity across our franchises and geographies. In addition, we improved gross margins and expanded profitability with a nearly 50% increase in adjusted EBITDA in the first quarter of 2024 compared to the first quarter of 2023.

As we continue efforts to grow adoption across our portfolio, we are reiterating expectations to generate full year 2024 revenue of $459 million to $466 million, reflecting 15% to 17% year-over-year growth. We are also reaffirming our plans to deliver a full year adjusted EBITDA of $26 million to $29 million with annual improvements thereafter. We remain confident in our strategy to invest in innovation and growth while driving increasing profitability and cash flow generation.

As I think about the future of AtriCure, our strong growth outlook is the result of many years of innovation, clinical investments and market development initiatives. As you all know, AtriCure is the leader in the treatment of advanced atrial fibrillation, and we are #1 in each of our multibillion-dollar markets. As we uphold this position, we do not take competition lightly. We have long anticipated that our success, marked by consistent double-digit growth within vastly underpenetrated disease states would invite new entrants into the markets.

In fact, we have intentionally executed a strategy that involves market expansion and development activities for over a decade in anticipation of some competition, which we are beginning to see today. We believe competition validates the immense opportunity still ahead for our business. And of course, we expect new market entrants to be able to generate business by entering our markets. We know that physicians try new products. That said, we are confident in our long-term prospects because we know that competition creates greater therapy awareness and stimulates strong long-term market growth.

For example, look at TAVR and percutaneous appendage management markets over the past 15 years. New entrants have helped grow those markets and drive multibillion-dollar franchises. Our confidence is also founded in the exceptional quality and safety of our innovative products, which are further supported by compelling clinical outcomes. We will continue to differentiate AtriCure from the field by investing in innovation, which you will see this year through our recent cryoSPHERE+ launch and upcoming AtriClip Flex Mini launch, both of which we expect to be game-changing technologies.

And we will keep investing in market expanding clinical evidence in support of our technology, such as the only stroke trial ever done for concomitant cardiac surgery in our LeAAPS trial. Lastly, one of our greatest long-term differentiators is the deep knowledge and strength of our commercial and education teams. We have over 400 field personnel globally, building and strengthening relationships with cardiac and thoracic surgeons and EPs. We will continue to invest across these differentiators in our business: innovation, clinical science and field expertise to enable AtriCure to remain a market leader.

Looking forward, we expect to stay several steps ahead of our peers in the market and development -- and market development and expansion. To date, our investments have culminated in a robust cadence of innovation and the launch of multiple growth drivers of our business. More recently, in our open ablation franchise, we have had tremendous success with our EnCompass Clamp. The EnCompass Clamp leverages the proven technology of our synergy ablation system to provide simpler and faster ablations in open heart procedures. This increased procedure efficiency over legacy solutions continues to drive exceptional adoption of this device in opening up new opportunities for growth. We are pleased to see EnCompass highlighted at the recent AATS meeting in Toronto across many papers and presentations.

We are committed to making concomitant treatment, the standard of care for patients undergoing cardiac surgery and still see significant opportunity ahead in both pre-op Afib patients and eventually postop Afib reduction. Building on this, we anticipate EU MDR approval and the European launch of the EnCompass Clamp in the back half of 2024, further expanding the impact of this outstanding product.

Our founding mission is to advance the treatment of atrial fibrillation, leading to the development of stand-alone minimally invasive treatments for patients. Our Hybrid AF therapy is an important extension of our expertise in effective treatment and is the only approved stand-alone treatment for long-standing persistent Afib. The evidence is clear that the most effective way to treat those patients is with the combined epicardial and endocardial approach, making our Hybrid AF therapy complementary to all catheter-based technologies.

I am pleased to see the strength of our fourth quarter 2023 results carried into the first quarter of this year, resulting in increasing adoption across a growing base of accounts. As we expected, 2024 is shaping up to be a pivotal year for stand-alone treatment of Afib with the availability of multiple PFA catheter technologies in the U.S., highlighting this attractive and vastly underserved market. We are finding the physician interest in PFA technology encourages robust conversations on approaches to treating Afib and the varying needs of patients across the spectrum of this progressive disease. Our hybrid approach is complementary to PFA, and we believe the focus on more efficient endocardial ablation is a tailwind for everyone in the market long term.

In fact, we have several customers already using endocardial PFA catheters in the second stage of their hybrid procedures, further validating our thoughts that PFA is part of a rising tide in this market. As we move through 2024, we remain focused on targeted efforts to support accounts as they develop Hybrid AF therapy programs.

In addition, we are in the early stages of the launch of our Steerable EPi-Sense device in Europe, providing another catalyst for this franchise in our international markets.

Our emphasis on innovation also extends to our appendage management franchise. Over a dozen years ago, we set out to transform the standard of care for patients with atrial fibrillation by offering a safer and more reliable method to exclude the appendage. Today, our AtriClip products are the most widely used appendage management devices in the world with more than 0.5 million devices sold. Given the strength and long-standing contribution of our AtriClip platform, we understand the competitive dynamics in this market are top of mind for investors.

However, we are pleased to continue driving healthy adoption in this business, marked by over 15% growth in our U.S. open appendage management business in the first quarter and record sales of our AtriClip Flex-V device even in the presence of competitive device trialing. We are already seeing the availability of a competitive device yield in-depth discussions on treating the appendage, allowing us to highlight the advantages of our AtriClip technology. Over the long term, we expect this to promote therapy awareness in way that we could not do on our own. In the short term, we are ready to compete and remain focused on delivering differentiated solutions.

To that end, we are preparing for another significant innovation in this market with our AtriClip Flex Mini device, which is on track for FDA clearance and commercial launch later this year. The AtriClip Flex Mini builds on the solid foundation of our AtriClip technology, known for ease of use, unparalleled safety and outstanding closure results with a substantially smaller profile in this new device.

We also view our market opportunity for appendage management as multiples of where we began dozens of years ago -- a dozen years ago. The investment in our LeAAPS clinical trial has the potential to dramatically expand the use of the AtriClip devices as the standard of care for all patients undergone cardiac surgery, which represents over 1.5 million patients per year globally. The LeAAPS clinical trial is investigating the use of the AtriClip products in patients without preoperative Afib diagnosis, seeking to demonstrate a clinically meaningful reduction in ischemic and systemic arterial embolism. If successful, this massive clinical trial, along with existing robust clinical evidence would further separate our products from all other surgical left atrial appendage management devices.

Enrollment in the LeAAPS clinical trial has continued rapidly, with almost 2,300 enrollments today, driven by strong demand for patient inclusion across 77 sites in the U.S. and Canada. We anticipate the first patient enrollment in our European sites in the coming weeks, and we now expect to complete full enrollment of 6,500 patients by the middle of 2025.

Beyond our offerings in Afib, we have been successful in creating and expanding our pain management franchise, where our cryoSPHERE product line provides temporary relief from postoperative pain. Since launching in 2019, adoption of the cryoSPHERE probe has been remarkable with over 60,000 Cryo Nerve Block procedures performed to date. The momentum behind commercial adoption of the cryoSPHERE probe speaks to the meaningful reduction in pain patients experience following thoracic surgery. As this therapy continues to grow, we are making investments in clinical data to support a comprehensive value proposition for both patients and physicians.

At the same time, we are actively improving our current technology to advance therapy adoption. Recently, we announced the limited launch of our cryoSPHERE+ device, which features new insulation technology to reduce freeze times by 25%. The limited launch is progressing well, the feedback has been excellent, and we remain on track for a full-scale launch by the end of this quarter.

As cryoSPHERE+ made its debut, we are completing studies to show the benefits of our new cryoSPHERE MAX probe, which incorporates this new insulation technology and features a larger ball tip. We expect cryoSPHERE MAX probe to show even further reduction in ablation and procedure time and expect to launch the cryoSPHERE MAX probe late in 2024. We are confident that the improvements we are making will strengthen the case for adoption in an expanded set of use cases, including the sternotomy market.

As we innovate and execute against our current market opportunity, we are researching additional market expanding applications for

Cryo Nerve Block therapy and look forward to updating you on our progress.

In closing, I would like to reiterate my earlier comments. We have made investments across multiple growth vectors that will enable AtriCure to remain a market leader, and we expect to stay several steps ahead of peers in the market development and expansion. Over the past decade, our company has consistently delivered outstanding growth even in the context of pressure in different markets. Looking forward, we remain positioned to penetrate each of our markets meaningfully and sustainably, driving durable growth and leverage throughout our organization.

I believe the future at AtriCure is even more compelling now than ever before with new market entrants validating this position. Therefore, as we look forward into 2024, we remain focused on expanding the reach of our solutions for patients with advanced forms of Afib, managing the left atrial appendage in patients undergoing cardiac surgery and reducing postoperative pain. We are also eager to launch several new products across our markets and expand our clinical research initiatives, all while continuing our efforts to improve profitability in our business.

And with that, I'll turn the call over to Angie Wirick, our Chief Financial Officer. Angie?

Angela L. Wirick *AtriCure, Inc. - CFO*

Thank you, Mike. Our first quarter 2024 worldwide revenue of $108.9 million increased 16.4% on a reported basis and 16.3% on a constant currency basis when compared to the first quarter of 2023. We saw strong growth across franchises and geographies, demonstrating the diversified growth drivers of our business in each of our markets globally. Sequentially, worldwide sales grew $2.3 million or 2.2% over the fourth quarter of 2023.

First quarter 2024 U.S. revenue was $90.2 million, a 15.4% increase from the first quarter of 2023. Open ablation product sales were $29.3 million compared to $25.1 million, up 16.5% over the first quarter 2023 and propelled by ongoing adoption of our EnCompass Clamp across both new and existing accounts. U.S. sales of appendage management products were $35.9 million, up 11% over the first quarter of 2023. We saw robust growth in our AtriClip FLEX V device, driving our open appendage management products to an overall growth rate of approximately 15.4%.

As Mike noted in his comments, our strong first quarter growth in open appendage management products is against the backdrop that included accounts choosing to trial the Medtronic device. However, our appendage management franchise revenue saw pressure from a decline in our minimally invasive appendage management products, primarily from a reduction in LARIAT system sales where we have a very limited base of users, and following an outstanding fourth quarter of growth in our MIS AtriClip products.

Pain Management sales were $12.7 million, up 15.1% over the first quarter of 2023 and with limited revenue contribution from our new cryoSPHERE+ probe. Finally, minimally invasive ablation sales were $12.3 million, up 27.8% over the first quarter of 2023. Similar to the end of 2023, our results this quarter reflect an increasing demand for our Hybrid AF therapy with more accounts adopting this treatment for advanced Afib patients.

International revenue totaled $18.6 million, up 21.5% on a reported basis and up 21.1% on a constant currency basis as compared to the first quarter of 2023. European sales accounted for $11.3 million, up 20.7% and Asia Pacific and other international markets accounted for $7.3 million and international sales, up 22.9%. We are excited by the continued strength of our international business across franchises and geographies and see pathways for accelerated growth to extend throughout 2024. Gross margin for the first quarter 2024 was 74.7%, up 21 basis points from the first quarter of 2023. The increase was driven primarily by both product and geographic mix, along with operational efficiencies.

Now moving on to operating expenses for the quarter. For comparability of operating costs, my remarks will exclude the $4 million gain on legal settlement recorded as an offset to SG&A in the first quarter of 2023. Operating expenses increased $12.8 million or 16.1% from $79.4 million in the first quarter of 2023 to $92.2 million in the first quarter of 2024. Overall, the change was a result of our continued investments in research and development activities, which increased approximately 29% from the first quarter 2023, reflecting robust enrollment in our LeAAPS clinical trial and progress on several research and product development initiatives.

We saw leverage within SG&A as expenses increased by approximately 13% from the first quarter of 2023. And as we navigate the remainder of 2024, we will prioritize investments in research and development to ensure a future of -- with an enhanced pipeline of products and clinical evidence, balanced with our commitment to realize increasing economies of scale to expand profitability.

Now turning to the bottom line. We drove adjusted EBITDA of $2.8 million for the first quarter 2024 compared to adjusted EBITDA of $1.9 million for the first quarter of 2023 for an increase of approximately 46%. Our loss per share was $0.28 in the first quarter of 2024 compared to a loss per share of $0.14 in the first quarter 2023, while the adjusted loss per share each period was $0.25 and $0.23, respectively.

We ended the first quarter with $106 million in cash and investments, reflecting our normal pattern of a heavy burn -- heavy first quarter burn driven by share vesting, variable compensation payments and operational needs. We expect to generate positive cash flows for the remainder of 2024, resulting in a modest overall burn for the year, which is consistent with our guidance earlier this year. We remain in a very solid position with our balance sheet to fund the current and future operating needs of the business.

And now closing with our outlook for 2024. As Mike mentioned, we are reiterating our expectations for full year revenue of $459 million to $466 million, reflecting growth of 15% to 17% over the full year 2023. Underlying procedure trends and the operating environment remains stable in our key markets worldwide. Therefore, we expect to see sequential revenue growth from the first to second quarter that is in line with historical seasonality in our business. In other words, we expect to see mid-single-digit to upper single-digit growth on a sequential basis.

From a margin perspective, we continue to expect 2024 gross margin to be in line with 2023 gross margin with the potential for varying impacts from cost savings initiatives, product and geographic mix.

As I stated earlier in my comments and on previous calls, our primary focus with capital allocation is to incubate the next set of growth drivers for AtriCure. Therefore, we expect to maintain R&D as a percentage of revenue at roughly 19% to 20% in 2024. Our spending across SG&A will moderate in proportion to revenue as the year progresses, providing leverage and sustained improvement to profitability.

With this in mind, we are reiterating our expectations for full year 2024 adjusted EBITDA of $26 million to $29 million, translating to an adjusted loss per share of approximately $0.74 to $0.82. We expect the remaining improvement to full year 2024 adjusted EBITDA over full year 2023, will occur in the third and fourth quarters of 2024, largely based on timing and expansion of R&D costs from the comparable quarters in 2023.

Overall, the first quarter 2024 results demonstrate that the strength and depth of our product portfolio. We are extremely pleased with our performance and the advancements of many impactful initiatives across the globe along with increasing profitability in 2024.

Now I will turn the call back to Mike.

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Thank you, Angie. We have begun 2024 on a solid footing across our business with strong growth on both top and bottom line while delivering on many key product and clinical milestones, which will drive growth for years to come. I would like to thank the entire AtriCure team for your commitment to our patient-first mission. Continue to live our values every day as we work together to build an even brighter future for our business. We have the unique opportunity to both advance and further expand our markets as we work to heal the lives of those affected by Afib and pain after surgery.

And with that, I'll turn it over to the operator for questions.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Our first question comes from Robbie Marcus with JPMorgan.

Robert Justin Marcus ***JPMorgan Chase & Co, Research Division - Analyst***

Great. Congrats on a good quarter here. Maybe I could start on the guidance. You beat revenue versus The Street by $2 million. Looks like missed EBITDA just slightly by $1 million yet kept guidance on the top line reiterated for the year. So maybe just walk us through the thought process there and how you're thinking about the guidance in light of the first quarter.

Angela L. Wirick ***AtriCure, Inc. - CFO***

Thanks, Robbie. I'd say it's still pretty early in the year. And while we're really pleased with the results of the first quarter, I felt like it was prudent to keep the guide in place. Mike walked through several new product introductions in his comments as well as increasing penetration of the market throughout the year as really the big growth drivers as we operate through the remainder of 2024, and we're seeing really robust momentum in our international business as well, which gives us good confidence in the ability to deliver and perform through the remainder of the year. So it just felt like it was early in the year and prudent to keep the guide where we were at.

Robert Justin Marcus ***JPMorgan Chase & Co, Research Division - Analyst***

Got it. You talked a bit about AtriClip and the competitor out in the market. I was hoping you could go into that a little more. When I look at the results, it's the one line item where you didn't beat in the first quarter, there is obviously a lot of concern out in the market. So I was hoping you could walk through your expectations for that line item for the rest of the year and what you're seeing competitively out in the market.

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Yes, I think we're going to tag team on that one, Robbie. So I appreciate the question. I know that it's top of mind for a lot of investors. I'll start with just kind of what we're seeing out in the field. As I mentioned in my comments, we definitely see the competition in a lot of sites trialing the competition out there. We're not seeing any kind of massive shift in any kind of market share from that standpoint, but we definitely see them in the field. Our team has done a really nice job of understanding what's happening at every one of the accounts. But they've also got relationships at a variety of different accounts around the country.

That being said, as I mentioned in my comments, I feel really confident in both our product that exists today, which we think is, by far, the best in the market. It's a great product that has been proven from both a safety and efficacy standpoint. I believe most customers understand and believe that, but they're going to try it. I mean, they're human beings, physicians like to try new things, and we definitely see sites trying out the new product because they want to kind of see what else is on the market.

As I mentioned in my comments, it's really important to understand that I think this drives great conversation. They're going to get some market share on it. Obviously, we understand that, but it drives discussion about managing the appendage. It drives discussion about the guidelines that just came out from both STS and AHA and ACC recently an era over in Europe that say you must treat the appendage every time someone has Afib. And obviously, there's a great way to treat the appendage with the AtriClip. So it drives a really good conversation around treatment of the appendage and then leads into the conversation around.

Well, we've got this trial, and we're getting sites up and running. As you heard, we've got 77 sites up and running on our LeAAPS trial from that standpoint. So yes, we're seeing competition out there. We definitely see them in the field and we see people trialing their product. But overall, I think that we're in a really good position. You saw it in our numbers with over 15% growth on our open part of our business.

I'll let Angie talk a little bit more maybe about kind of how we're projecting and looking at the rest of the year as well.

Angela L. Wirick ***AtriCure, Inc. - CFO***

Yes. So our guidance for the full company is a growth rate of 15% to 17% for the full year. I think that being said, we understand that there may be some fluctuations in different areas. But as a business over a very long track record, we've been able to deliver high growth from the business overall. And our expectations where we started the year, that each component of the business, each of our franchises would

start to converge around that corporate growth rate. We still feel like that is intact at this point in time.

I think very different from our expectations last year in 2023, where we knew that there would be some areas, some particular franchises that have very outsized growth and then others that may be behind, we feel like still each area of the business converging around that kind of overall corporate growth rate. So the pressure that you see in the U.S. appendage management number in the first quarter, just to frame this up.

About 75% of our U.S. appendage management revenue is in our open chest setting. The remaining 25% is in a minimally invasive setting, and we're still seeing nice and strong attachment to our hybrid procedures. But where we've got the competitive device. Like Mike said, we grew 15.4% in the first quarter. It saw really outsized pressure from a reduction in our LARIAT system revenue as well as some transition on our MIS AtriClip revenue, which brought the overall U.S. appendage management revenue growth rate down for the quarter.

Robert Justin Marcus ***JPMorgan Chase & Co, Research Division - Analyst***

Appreciate it.

Operator

Thank you. Our next question comes from William Plovanic with Canaccord Genuity.

William John Plovanic ***Canaccord Genuity Corp., Research Division - MD of Life Science Research***

Yes, great. I was wondering just a little bit more on the LARIAT, I think that's been a business. Have you discontinued that product in the U.S.? Is that going away? Or is that a one quarter kind of deal? And then just competitively, have you seen any change in pricing or bundling strategy in terms of the Penditure device. And then just since we're around that, Mike, how do you think about long-term growth in the LAA market today? Is this going to be a 50% grower at 20% -- 15% grower, 20% grower? And I'm talking about the U.S.

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Yes. I'll start on the first one. So -- because I think there are three different questions in there. So the first was about LARIAT. As you know, back several years ago, when we did the readout on the trial, while the device actually worked incredibly well for closure, it actually had better closure than any percutaneous device on the market today and also had a great safety record in the trial. And if you recall, it was a 600-patient trial. It did not meet the endpoint of reducing Afib. It reduced Afib by 4.3%, and we needed to hit about 8% in order to win the trial and have superiority.

So as a result, the product has still been on the market under the 510(k) that it was originally on. People continue to use it, but we weren't adding any net new sites. And so what you're seeing now with LARIAT is we're trying to evaluate what our next steps. We know this product is an exceptional product. It works very well. It is a product that does not get left in the bloodstream like you do on the other percutaneous catheter market. But we've got to consider what are our next steps with that product and likely would have to run a stroke trial, and I'm not saying we are going to, that would have to be the logical thing for someone to consider with it at some point in time.

We're not shutting it down because it is being used. That being said, the pressure is as you've seen in this market, it's not a lot of revenue. But as you've seen in this market, you've got new products coming on that are in trials. So there was a product called conformal and then also the Laminar just came out. So many sites are now getting involved in new trials on the new devices that are coming out. And my -- our suspicion is that you're seeing a little bit of pressure on that because it's not a lot and the sites that we're using our products tended to be the more advanced sites that are out there that would tend to be part of some trials like that. So we think that's kind of where maybe some of that pressure is happening on the LARIAT product. We're not promoting it. We're not pushing it in the market, but we have not shut it down either.

As it relates to kind of the kind of market dynamics, we're seeing good, consistent pricing in the market and feel really good about that from that standpoint. We think it makes a lot of sense from that standpoint. And then finally, as we look at the long-term rates for appendage management, I'm not going to give a specific number, but there's a reason we're running the LeAAPS trial.

The LeAAPS trial is about close to tripling maybe quadrupling the size of the overall market for people that can get their appendage managed, that full 1 million patients around the globe that are undergoing cardiac surgery, we believe the LeAAPS trial will demonstrate if you put an AtriClip on those patients prophylactically or even when they're in Afib, but prophylactically in the trial that you are going to reduce their stroke rate in their incidence of strokes. And we think that will be a big global trend that will happen once that product reads out. That should longer term, drive significant growth out of the appendage management business for a very long period of time.

And so without giving a specific number, we do see that this market is less than 20% penetrated in the U.S. when you kind of calculate all those patients and less than really between 5% and 10% on a global basis. So a long way to go without giving a specific growth rate, Bill.

William John Plovanic ***Canaccord Genuity Corp., Research Division - MD of Life Science Research***

Great. And then a follow-up, if I could, on EPi-Sense. Has PFA been a distraction, the EPi-Sense number was great. So the question we've been getting asked from investors is, is PFA going to be a distraction as those EPs adopt PFA and it makes it harder for you to kind of get in there and get those new accounts because they're focused on getting trained on other technologies. And then on PFA, what product are you targeting first with PFA in your own portfolio?

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Sure. As it relates to the catheter-based PFAs and the excitement that's out there. As I mentioned in my comments, we think it's actually engaging conversations. It's allowing us to have conversation with EP that maybe we weren't having before. We've got several sites, as I mentioned, that are now actually using PFA in the convergent procedure. So it's not actually having an impact on us in terms of getting and setting up new sites or any kind of major distraction from that standpoint. It really actually drives good discussion and conversation around, well, how would PFA work in a hybrid type setting, and so there's a lot of discussion about that.

And so we believe that discussion and awareness is good. Remember, PFA is an efficiency gain more than anything else when you look at the data and the results from all those companies. CONVERGE is an efficiency gain in terms of you reduce the time that someone has to do an ablation when they go in. So you've got double efficiency gains. People recognize the importance of that, and that's actually been a lot and a big part of the conversation relative to that. I know there was a second part of the conversation.

William John Plovanic ***Canaccord Genuity Corp., Research Division - MD of Life Science Research***

It was PFA general for your own portfolio, what's the first product?

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Yes. I mean, we think PFA can fit really well into every one of our technologies, very well as an option for people to utilize. As we've mentioned on this call before, we've definitely got programs underway and are making really good progress on that front, and it would be across pretty much our entire portfolio of products.

Operator

Thank you. Our next question comes from Rick Wise with Stifel.

John Glenn McAulay ***Stifel, Nicolaus & Company, Incorporated, Research Division - Research Analyst***

Mike, Angie, this is John on for Rick today. First question, just curious about price in the quarter and also in the year ahead, you have several product launches. Just curious how it might have factored into growth here and how you're looking at it for the rest of the year?

Angela L. Wirick ***AtriCure, Inc. - CFO***

John, when you think about a couple of the product launches that we outlined on the call, I think we've said the cryoSPHERE+, the newest technology that we're in the process of a limited launch currently in our pain management business, we would expect that to launch at similar pricing to the device that's on the market today.

There's a time savings benefit. We do think that most accounts will migrate over to this, and there's actually a cost savings benefit to the company. It's a better gross margin profile, but keeping the price the same on that. So not going to be a big driver of growth throughout

the year.

I'd say AtriClip Flex Mini, which would be kind of next step in terms of the launch to be determined at a future date when we're closer to the launch on that, the way that we're thinking about this, though, from how that factored into the guide is just looking for the impact from a volume perspective and not an uplift on a pricing perspective.

With a couple of the products in our European markets where we've gotten premiums in the U.S., the strategy would be the same when we launched the EnCompass Clamp in Europe, it would be at a higher price than our existing devices. So that's been factored into kind of the outlook again, minimal quantities in 2024 more impactful in 2025, but that has been factored into the overall guide. So taking a step back when you look at the quality of growth for 2024, we believe most of this is driven by just sheer volume growth as we continue to penetrate each of our markets.

John Glenn McAulay ***Stifel, Nicolaus & Company, Incorporated, Research Division - Research Analyst***

Great. That's helpful. And just a follow-up. You talked about starting up the first LeAAPS site in Europe. I was just curious, you saw pretty strong growth again, OUS in the appendage management business. I'm just curious maybe how LeAAPS can help get the OUS business potentially growing faster, more sites interested. Just sort of any thoughts there on appendage management outside the U.S.

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Yes, I think when we think about long term the impact of LeAAPS, the reason we're doing a global trial and including both Europe and Asia in the trial, we're trying to get them up and running fast because it's enrolled so fast in the U.S. is because we do want to make the standard of care changes everywhere around the globe. That's what this trial is meant to be. It's one of the reasons the trial is so large.

And so we're really excited about getting Europe up and running now and hopefully within the next 3 to 6 months, getting some sites in Asia as well. So they can be truly an international trial on that front. And we believe that's going to change adoption rates around the globe. As I mentioned, it's only like 5% penetrated around the globe. And so if we can prove stroke reduction in this patient population, that's obviously a significant benefit for society and for those patients, which we believe can change payer practices in countries throughout the world. And that is one of the reasons that we're doing that trial. So I do think that, that's going to be a critical piece for us to change care is the LeAAPS trial overall.

In the short term, what we're seeing is the recognition with all the guideline changes that you've seen, first, the guidelines in the U.S. and then now [Era] just came out recently where they made a Class 1A guideline that you must manage the appendage, it's basically telling everybody that they need to increase that. I believe that guideline changes that we've seen over the last 12 months will probably have a more dramatic effect on our business OUS, just because they're so lowly penetrated at this point in time. It takes time though because they've got to work out reimbursement by country and things like that. But I do believe that there's the potential to have some impact based on those guideline changes.

Operator

One moment for our next question. Our next question comes from Marie Thibault with BTIG.

Marie Yoko Thibault ***BTIG, LLC, Research Division - MD and Medical Technology and Digital Health Analyst***

I want to revisit the LARIAT and AtriClip discussion, just to try to triangulate some of the numbers you offered us. It looks like LARIAT and minimally invasive AtriClip were flat growth year-over-year at about $9 million of the U.S. appendage management revenue this quarter. And then AtriClip in the open setting, which is where we're seeing the competition was about $27 million, which grew 15.5% you said. Do those numbers sound about right to you?

And then secondly, is that the right way to think about kind of a similar breakdown and growth trend for those two parts for the rest of the year, mid-teens in the open AtriClip and then flat in other appendage management. Just want to make sure that we understand some of those puts and takes.

Angela L. Wirick *AtriCure, Inc. - CFO*

Marie, you are directionally correct on the revenue components. The open AtriClip business just under $28 million and the MIS appendage management business, a little over $8 million for the quarter at the -- close to $36 million for the quarter. We did actually see our MIS appendage management business go down. That is largely driven by the LARIAT product. Our Q1 of last year was kind of an outsized quarter, and we have just very few customers. So activity within a pretty small base of customers can skew the results there. And following a pretty strong fourth quarter for our MIS AtriClip, we saw a bit of softness in that area of the business in the first quarter.

I'd say longer term, would expect LARIAT to not be a big driver behind fluctuations either to the positive or negative just based on the comparable quarters in 2023. And when we think about our MIS AtriClip business, we're still seeing really strong attachment in our hybrid procedures and would expect as you continue to see strong results within our MIS ablation business for that to be a bit of a carry. But in the longer term, I think you'll see probably more of what we've seen in the past from that particular franchise, meaning our appendage management franchise. The growth typically has been driven more by the open side of the business, but I think that there's a pathway given the adoption and trends that we're seeing in MIS ablation to see an uplift on our MIS AtriClip in the future.

Marie Yoko Thibault *BTIG, LLC, Research Division - MD and Medical Technology and Digital Health Analyst*

Okay. That's really helpful, Angie. And then I want to ask about open ablation. That segment was, again, really strong here in the U.S. I think, as of the latest about half or more of it was -- of the U.S. business was EnCompass Clamp. Can you give us an update on the pace of adoption of that new-ish system? It does seem like there's more runway ahead, and I recall there was some price uplift as well. But just wondering where you are in the adoption curve and what growth drivers are there for the volume side?

Angela L. Wirick *AtriCure, Inc. - CFO*

All right. So another great product here with the EnCompass Clamp that you are -- it's still a little bit under 50% of the revenue in the first quarter. And we think we're still in pretty early innings when it comes to adoption. Our EnCompass Clamp for the quarter, over 450 accounts were users of that device, up from the fourth quarter and up from each quarter in 2023.

When you think about the kind of number of accounts that we've got in the U.S. in terms of users on our open side, still plenty of accounts to bring this to. And I'd say even within existing accounts, plenty of doctors, surgeons that we could be using the product as well. So that we're really targeting in terms of our efforts on the EnCompass Clamp rollout. The open chest market, so our cardiac surgery market still remains vastly underpenetrated. So while we've seen great traction with this device, we sit here today and say there's still plenty of room to grow and are really targeting on new users and making sure that adoption happens for every patient that's on the table. Thank you.

Operator

Thank you. Our next question comes from Matthew O'Brien with Piper Sandler.

Unidentified Analyst

This is (inaudible). First, if we could ask a little bit more about the guidance and what that implies for the rest of the year? And then also maybe what we can expect sequentially throughout the rest of '24?

Angela L. Wirick *AtriCure, Inc. - CFO*

[Sam], we caught the back part of your question. Can you repeat the first part?

Unidentified Analyst

Sure. Yes. I guess I'm just asking about what guidance implies for the rest of the year.

Angela L. Wirick *AtriCure, Inc. - CFO*

Okay. Sorry. Thanks for repeating that. Like we said in my prepared comments, our expectation is just given I'd say the stability that we're seeing in end user markets, both in the U.S. and internationally that we would expect some of the historical patterns that you've seen in the business in the past to be present when you think about sequential growth. So that means kind of mid- to upper single-digit growth from the first to the second quarter of 2024.

And again, reaffirming the guidance for the full year of the 15% to 17%, driven by the full business. And as we think through that and think through those numbers, I think understand the interest in each of the components of the business and how that they'll drive. I think we've been -- you're aware that the company overall, the different growth drivers have been able to promote very robust growth of AtriCure and deliver and both meet and exceed our guidance as we operate throughout the year, and we have the same expectations as we think through out of the operations of the remainder of the year.

Unidentified Analyst

Great. And then just one more on the appendage management business also. I guess how long do you expect this trial in (inaudible) And I know (inaudible), you think this will help grow the market. When do you think you could see that kick in?

Michael H. Carrel *AtriCure, Inc. - CEO, President & Director*

I think that trialing is going to continue on. I mean, the -- we've got a competitor in the market as we mentioned. And as everybody is well aware of, they're going to be in the market. People are going to try it. Some are going to keep using it and they're going to have some market share relative to that. But as we talked about, we did -- we grew 15% in one of our largest franchises, 15.4% in the U.S. And we haven't even kicked in a new product that's going to be introduced later on the year. And obviously, LeAAPS coming out kind of in subsequent years after that and future product iterations that we have.

So we think that you're already starting to see a little bit of the benefit because they did get some share this quarter, and we still saw some solid robust growth relative to that. So whether or not we're going to see kind of uptick on that, we're not going to put that out there right now. I do think that the LeAAPS trial long term plus the continued innovation will drive this market out for a long period of time.

Operator

Our next question comes from Danielle Antalffy with UBS.

Danielle Joy Antalffy *UBS Investment Bank, Research Division - Analyst*

Mike, you're going to be so sick of talking about AtriClip after Penditure after this call. But I'm going to ask one more question here. And I'd love a little bit if you could give more color on where you see the most adoption. I mean, I know Medtronic has barely any presence on the open ablation side of things, but they do have some legacy users there. Is it adoption in open procedures where an AtriCure ablation is being done? Like is it broad-based this trialing? Or is it more specific to one area versus one product than another?

Michael H. Carrel *AtriCure, Inc. - CEO, President & Director*

And maybe to be clear, I mean they're trialing everywhere. I mean, it's all over the country. It's -- so you're definitely seeing them in markets -- in almost every market around the country. I would gather that most of it has to do with good relationships. Medtronic has some good relationships with accounts. That's probably where they've targeted first and gotten into in terms of where we've noticed. But of course it's definitely happening in procedures where AtriCure's got an ablation going on and then they're testing out and using the Medtronic product on that front, so we definitely see it there. But it's happening everywhere. I mean, they've done a full launch on it. They've talked about it. They've marketed to it. And so we see them all across the country.

Danielle Joy Antalffy *UBS Investment Bank, Research Division - Analyst*

Okay. Got it. So it doesn't sound like there's any difference in your use in procedures being done where AtriCure open ablation is also being done. It sounds like you're seeing some dots pick up Penditure in that procedure as well.

Michael H. Carrel *AtriCure, Inc. - CEO, President & Director*

That does happen for sure, yes.

Danielle Joy Antalffy *UBS Investment Bank, Research Division - Analyst*

Yes. Okay. All right. And just one quick follow-up on (inaudible). I mean, another really good quarter. So just trying to get a sense of how much of this is new center add versus same-store sales. I think you guys have talked about new center adds sort of not as much of a focus more focused on driving adoption, higher at existing centers. Can you just talk about whether that continues? Are you seeing more new centers come on board? Any color there? That would be great.

Angela L. Wirick *AtriCure, Inc. - CFO*

Yes, Danielle, I'd say across the board, the new centers add very little revenue to any individual quarter and that's to a T for each of the franchises. When I think about each area of the business, we do continue to add accounts. I'd say in some places, like our pain management business at a much faster pace than other areas like our EPi-Sense accounts. That being said, we are adding new accounts just at a slower pace. So the revenue that you're seeing in the first quarter of 2024 is largely from existing customers with some incremental pieces from newer accounts that over time will become a much higher revenue contribution.

Operator

Our next question comes from Daniel Stauder with Citizens JMP.

Daniel Walker Stauder *JMP Securities LLC, Research Division - VP & Equity Research Analyst*

So just my first one just on international sales. EnCompass Clamp has its European launch later this year. And then I think you said that EPi-Sense will also be introduced internationally and you're coming off a strong growth year outside the U.S. in 2023. So just wanted to ask how should we be thinking about international sales contributions this year at a high level as we modeling throughout the year?

Angela L. Wirick *AtriCure, Inc. - CFO*

Yes, Danny, when we look at our international business, just really pleased with the developments and the activities of that team over the past several years, leading to an accelerated growth rate. You saw that throughout 2023, and that repeated in this first quarter to start 2024. Our expectations are both of those products, the steerable EPi-Sense device. We do have the original EPi-Sense device on the market, but the steerable device, EPi-Sense ST is right now in the process of a launch. We expect that to be a nice catalyst for that business where they just have done very much fewer converged procedures. So we're hoping that, that's a nice catalyst for that area of the business.

And then the EnCompass Clamp, our hope is that, that's much later in 2024 once we've been through EU MDR approval and ready to launch on that. But our hope is that that's a really solid catalyst for our open ablation business, much like you've seen here in the U.S. I think we're all aware that pricing a bit more sensitivity in the international markets, but I think ease of use of the device in the differentiated technology give us a lot of confidence that this is going to be a really great product for that market. So longer term, we've said, look, U.S. and international generally at the same growth rates. I think you've got a lot of reasons based on historical performance and some of the catalysts in our international markets to say that, that might be bigger leading edge of growth.

Daniel Walker Stauder *JMP Securities LLC, Research Division - VP & Equity Research Analyst*

Great. And then just one follow-up on the pain management side. You've talked about the Plus and the MAX helping with the time aspect, but just wanted to ask more about progress in gaining direct reimbursement. I know there's a handful of studies in this area, but what in your mind moves the needle in terms of gaining reimbursement for these products?

Michael H. Carrel *AtriCure, Inc. - CEO, President & Director*

I think the key to reimbursement on pain management is clinical data, clinical evidence showing a combination of cost savings in some way, whether it's length of stay or fewer calls or return visits back to the ER and hospital that happen a lot in some of these cases because of the pain that somebody experiences 2, 3, 4 weeks out, that is, quite frankly, really helped out by the use of our Cryo Nerve Block.

In addition to that, if there are studies that are being done that kind of demonstrate the true reduction in opioid use afterwards. We've seen some studies, but I think you've got to have enough studies that are out there. We funded a lot of these studies. It's going to take some time, though. We saw that in cardiac surgery. It took us about 8 years. And I know that sounds like a really long time. But through papers that were written over time, that were studied to show the benefits of treating Afib at the time of cardiac surgery. You're now starting to see CMS over the last two years increase reimbursement quite dramatically for that. And I believe the same thing will happen eventually for pain management, but we just need a lot more studies to be done, and we're helping fund a lot of those.

Operator

Our next question comes from Mike Matson with Needham & Company.

Michael Stephen Matson ***Needham & Company, LLC, Research Division - Senior Analyst***

So Mike, when you were at our conference a few weeks ago, you mentioned that you were working on launching or developing, I guess, clamps that would use PFA for open ablation. I just wanted to see if you could give us an update on that, kind of any timing and what would be required? Is it a new clamp? Or is it just a new generator?

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Yes. As we did mention briefly, we have been working on -- work in that particular area. It's got a combination of generator and clamp and quite frankly, other technologies as well to be distributed across our product line. No update on timing. I mean, we believe that we need to have all of the energy sources available for our customers. And so we think PFA is an exciting new technology that we're going to make sure we have incorporated into the procedures that we've basically been a part of for many, many years.

Still early to give any kind of specific updates on what that looks like. A product like that's going to have to go through some clinical work and regulatory work, et cetera. So there's definitely work to be done on that front. But from a product standpoint, we've made a lot of progress.

Michael Stephen Matson ***Needham & Company, LLC, Research Division - Senior Analyst***

Okay. And then just on the LeAAPS trial. So obviously, doing really well, enrolling pretty fast. Do you -- when -- and if it's successful, do you think that it would create kind of a class effect and benefit any of the products clips that are out there? Or do you think it would really be just specific to AtriClip? I mean, I know you would be the one with indication, but for stroke or I guess, prophylactic use. But do you think that would kind of help out your competitor to any degree as well?

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Well, I mean, to your point, I mean, let's start -- I mean, we're investing in this trial because we believe it's the right thing to do for patient care for the long term. And number one, it's going to be our product exclusively use. So it's going to be a 6,500 patient trial. The product that's going to be used to get the stroke label is going to be the AtriClip. That's what we'll have the stroke label. Our competitor products would not have that.

Is that a differentiator? Absolutely. There's no question about it that once we're able to get that kind of label, it should be a differentiator. However, if somebody else has a product on the market and somebody feels like they want to use that product and believe that, that product has some benefits to it, I'm sure there'll be some level of a class effect on that point. At that point, we're talking about 1.5 million patients around the globe that will be using some sort of clip just in cardiac surgery, not including what's going to be used in any other area. So to me, obviously, you're going to have competition.

I mentioned it earlier, when you build big multibillion-dollar markets, you're going to have competition and competition is going to get some level of share during that period of time. We saw it in TAVR. We saw it in the occlusion market. And in both those cases, they've created multibillion dollar markets and the competition has been there as well. And then it becomes who's got the best clinical evidence, who's got the best product in the market.

Operator

And our next question comes from Suraj Kalia with Oppenheimer.

Suraj Kalia ***Oppenheimer & Co. Inc., Research Division - MD & Senior Analyst***

Mike, Angie, can you hear me all right?

Angela L. Wirick ***AtriCure, Inc. - CFO***

We can hear you.

Suraj Kalia ***Oppenheimer & Co. Inc., Research Division - MD & Senior Analyst***

Perfect. So Mike, a couple of questions your way. One is in terms of a PFA clamp. For open, I understand, but can you walk us through the -- I believe in your prepared remarks, you talked about the complementarity you were seeing with your existing clamp with PFA catheters. In long-standing persistent AF, PFA, I believe they have just started clinical trials, right? So we don't have any data yet. And I'm curious if you could just kind of thread the needle for us as to how it is complementary in terms of the clamp and PFA catheters.

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Yes, the complementary aspects, think about PFA catheter today, if it's going to do the pulmonary veins, that's exactly what is being used and has been used with CONVERGE. When you do a CONVERGE procedure and you do a lot of the back wall ablation, in our trial, it was RF. In our upcoming trial and a lot of the usage today, it's with cryo doing just the PVI on it and kind of finishing out the veins. PFA can be used very similar to that. So the EPs may choose to use that instead of using their cryo or their RF when they complement it with what they're getting from the epicardial surface approach that we bring to the table.

We absolutely believe and has been shown clinical trial after clinical trial, but when you add epicardial to endocardial, you get a much more durable, long-lasting lesion and you get almost double the success rate as a result of that. And so you're definitely -- you are starting to see people begin to use that, both in Europe and in the U.S. to complement what they're doing. They're just kind of using that instead of some other catheter that they would have otherwise used when they were doing the endocardial portion.

Suraj Kalia ***Oppenheimer & Co. Inc., Research Division - MD & Senior Analyst***

So Mike, just to be clear, and forgive me for belaboring this. The argument being made is that PFA doesn't achieve transmurality .

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

No, no. I'm not saying PFA it is. What I'm suggesting is PFA works incredibly well, and we've seen the data from the results in these -- and most of them have been for the pulmonary veins. And so CONVERGE does a really good backlog ablation to areas that catheters don't typically get to or get to very well. And that they can't get transmural for a variety of reasons, some of which is the safety reasons, some of which is that there are fat pads and other things, and there are differences between the epicardial surface and the endocardial surface, where the epi and the endo together getting much better results.

The endocardial products do very well doing the pulmonary veins, as you well know, Suraj. And so I'm not saying that they don't get transmural, they get transmural in the veins, for sure, and we've seen that. And I think you've seen that with the PFA technology that they've been doing a very good job on the veins, for sure.

Suraj Kalia ***Oppenheimer & Co. Inc., Research Division - MD & Senior Analyst***

Got it. And Mike, I know -- forgive me, I have to ask, could you quantify the impact of LARIAT in the quarter? Obviously, LARIAT is MIS, you have AtriClip MIS. You have AtriClip open and then Penditure open. Just kind of quantifying these two buckets, what impact you saw from, let's say, from Penditure for open and LARIAT for MIS.

Angela L. Wirick ***AtriCure, Inc. - CFO***

Yes. Suraj, on the LARIAT question, it's roughly 50 basis points of growth impact for the company overall for the quarter. When you exclude LARIAT, again, it was an outsized kind of Q1 in 2023, we saw a decline throughout 2023, and just a very soft first quarter, again, a very limited number of users with this particular product, supported by a 510(k) clearance, but not other clinical data otherwise.

And on the open AtriClip side of our business, I just would reiterate that we drove growth of 15.4% for the quarter and feel really good about those results.

Operator

I'm showing no further questions at this time. I would now like to turn it back to Mike Carrel, President and Chief Executive Officer, for closing remarks.

Michael H. Carrel ***AtriCure, Inc. - CEO, President & Director***

Great. Thank you again, everyone, for joining us on the call today. Another great quarter for AtriCure and enjoyed the question-and-answer session here. Everybody, have a great evening. Bye now.

Operator

This concludes today's conference call. Thank you for participating. You may now disconnect. .