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Q4 2018 Fluidigm Corp Earnings Call

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PRESENTATION

Operator

Good day, ladies and gentlemen, and welcome to the Fluidigm Fourth Quarter 2018 Financial Results Conference Call. (Operator Instructions) As a reminder, this call is being recorded.

I would now turn the conference over to your host, Ms. Agnes Lee. Ma'am, you may begin.

Agnes Lee Fluidigm Corporation - VP of IR

Thank you and good afternoon, everyone. Welcome to the Fluidigm Fourth Quarter 2018 Earnings Conference Call.

At the close of the market today, Fluidigm released its financial results for the quarter ended December 31, 2018. I'd also like to let everyone know that we have posted supplemental financials to our company website.

During this call, we will review our results and provide commentary on recent commercial activity, market trends and our strategic business initiatives.

Presenting for Fluidigm today will be Chris Linthwaite, our President and CEO; and Vikram Jog, our CFO.

During the call and subsequent Q&A session, we will make forward-looking statements about events and circumstances that have not yet occurred, including plans and projections for our business, future financial results and market trends and opportunities. Examples include statements about anticipated results, our strategic initiatives, demand for our products, revenue growth and operating expense trends and guidance for consumables pull-through in 2019 and revenue, operating expenses and cash flow for the first quarter of 2019. These statements are subject to substantial risks and uncertainties that may cause actual events or results to differ materially from current expectations. Information on these risks and uncertainties and other information affecting our business and operating results is contained in our annual report on Form 10-K for the year ended December 31, 2017 as well as in our 10-Qs and other filings with the SEC. The forward-looking statements in this call are based on information currently available to us and Fluidigm disclaims any obligation to update these forward-looking statements, except as may be required by law.

During the call, we will also present some financial information on a non-GAAP basis. Non-GAAP information is not prepared under a comprehensive set of accounting rules and should only be used to supplement in understanding of the company's operating results as reported under U.S. GAAP. We encourage you to carefully consider our results under GAAP as well as our supplemental non-GAAP information and the reconciliation between these presentations. Reconciliations between GAAP and non-GAAP operating results are presented in the table accompanying our earnings release, which can be found in the Investors section of our website.

I will now turn the call over to Chris, our President and CEO.

Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

Thank you, Agnes. Good afternoon, everyone. Thank you for joining our fourth quarter and full year 2018 earnings call.



In brief, we had a fantastic quarter to cap off a year notable for our return to double-digit growth, improved cash flow dynamics and thoughtful management of the balance sheet. I'm proud of the hard work and dedication of our employees around the world and I'm inspired by the scientific progress in disease research we are powering.

In 2018, we began sharing details of our strategic perspectives on the importance of the human immunome. We implemented a road map for positioning Fluidigm as a vital life sciences tools provider for unlocking the power of the immune system. The core elements of our business model revolve around the 3 points of leverage: 1, delivering customer-centric innovation; 2, establishing an instrument footprint at leading translational research and biopharmaceutical companies; and 3, integrating consumable solutions and software tools that speed up experimental design and analysis.

Complementing this market-oriented plan, we are investing in operational improvement and quality systems while judiciously managing expenses. Finally, we've made major improvements in our balance sheet, restructuring our debt obligations and raising new capital through a common stock offering in December. Innovation, growth, continuous improvement, financial discipline. We think this approach is a recipe for sustained value creation.

Turning to the details. We've issued several recent press releases that I encourage you all to read and digest. When read in combination with the information we will share in this call, you will get a full picture of the strong and sustainable drivers powering our business.

First, as detailed in our earnings release this afternoon, we ended the year with 17% revenue growth in the fourth quarter, powered by an impressive 48% growth in mass cytometry as well as strong operational execution across the board. Every region contributed to this performance and while mass cytometry will get the majority of the attention today, microfluidic space consumables grew in double-digits in 2018 as our sales efforts yielded results.

Second, we announced a great customer success story that illustrates a larger theme. We succeed as our customers succeed. Caprion Biosciences, a leading contract research organization, purchased incremental Helios capacity to support its burgeoning backlog of pharma and biotech projects. They focus on preclinical and clinical research support. Their sales team presents our value proposition every week as part of a larger biomarker story, and demand has grown steadily since they first offered the service. The storyline has played out at CROs in other geographies.

Third, thematically, large consortium are forming worldwide to tackle the scientific complexity of the immunome. In our announcement, we highlight a consortium of pharmaceutical and European research institutions that have mobilized to evaluate immune function and disease progression. Mass cytometry powers a prominent arm of this research, both our suspension and imaging application. We surpassed 600 mass cytometry publication, a 50% growth versus 2017, with 20 publications on imaging cytometry in the years since commercial launch.

Fourth, we are committed to innovation as evidenced by our REAP-seq protocol development in concert with scientists at Merck. We released details on this item just last week.

Let's turn to a discussion of our revenue performance by geographic region. All regions did well this quarter, highlighted by double-digit growth in 2 of the 3 regions as compared to Q4 2017.

The Americas delivered 19% growth. As you will recall, we made significant changes in our sales organization during a tumultuous 2017. Entering 2018, we signaled growing conviction around the new team and strategy, and they delivered results. Furthermore, our sales funnel health augers well for 2019 as more translational research centers seek transformative technologies.

In mass cytometry, our team is executed on a market development effort at comprehensive center -- or cancer centers, achieving a 50% penetration level. Furthermore, their focus on consumables and solution selling such as our first-in-class human immune monitoring panel ensures that new customers get the results they seek, which in turn drives demand for incremental system orders, a virtuous cycle of market growth.



On the microfluidics side of the ledger, our focused selling team has established new accounts and nurtured key accounts with outreach programs supplemented by the efforts of an inside sales group. We secured a major order related to the NIH-backed All of Us Research Program, an ambitious personalized medicine initiative that aims to sequence 1 million people in the United States. Fluidigm's microfluidics platform will power the sample identification tracking of human samples for a major sequencing center. We remain optimistic that these strategies will generate recurring success in 2019.

Shifting to EMEA. Revenues were up 7%. European consumables and service revenue increased Q4 compared to Q4 2017. Similar to the Americas, customers have been investing in differentiated technologies, particularly those related to immune response and research. A number of our CyTOF sales in the region were associated with capacity constraints at U.K. accounts as well as consortium demand in Europe. In addition, we added a new instrument sale at a major research center in Belgium. In general, biopharma-sponsored clinical studies at research institutions appears to be driving incremental demand both in terms of consumables and instruments as sample volumes grow in these multiyear programs. This growth dynamic reflects a pattern we see around the world. Finally, a few key microfluidics customers generated significant growth and their prospects give us optimism for 2019 sales.

As an aside, continued growth in Switzerland drove our decision to transition to a direct sales model in that country, which should increase margins and revenue over time. As we scale our business, we expect this trend to continue elsewhere.

Rounding up the geographic review. Asia Pacific was our top performer on a percentage basis. Revenues were up 26% in that region, powered by exceptional performance in China and Japan. In addition, we added our first mass cytometry services CRO in Korea, which is very exciting. You may recall, we placed our first system in Korea earlier this year after we switched distributors.

Our business growth in China remains robust. The team in China continues to execute. I can't say enough positive things about the team and our expanding partnerships in the country. We remain bullish on China growth and our success transcends instrument placements. For instance, the largest single order for the human immune monitoring panel in the period came from a Chinese customer.

Similarly, we are excited about the Japan market. We have an excellent team in Japan and they landed a major Hyperion win in the period at a leading national cancer center funded by a major regional pharmaceutical company. You can see in this Japan story the global theme I have discussed elsewhere in my comments. Overall, funding and market demand is strong for our differentiated value proposition. We are strengthening our prospects across mass cytometry and microfluidics throughout Asia.

Changing gears. I will give some additional market color that illustrates our prospects for growth. Today, we announced partnership in the TIMID Consortium, working with 11 pharma and translational medical centers across Europe. CyTOF imaging and suspension will be combined with other technologies to explore the common cellular basis of T cell-driven immune-mediated inflammatory diseases or IMIDs. This research will advance the understanding of immunology and disease, informing more effective treatments of inflammatory diseases ranging from inflammatory bowel disease, type 1 diabetes, celiac disease and arthritis. Some of these diseases are treated with medications that have side effects and do not always suppress inflammatory immune responses. These diseases impact millions of people around the world and we are proud to be associated with this ambitious program.

On a different note, integrating software and preconfigured content is a key element of our growth strategy. Today, we announced a co-marketing agreement with Indica Labs to promote their automated software solution for Imaging Mass Cytometry, expanding the suite of products available to cytometrists and pathologists. The solution supplements the existing image analysis tools and reflects growing interest in building out a broad ecosystem of analysis products. Faster image analysis promotes consumables growth and eventually, demand for additional capacity.

With over 50 commercial-grade Imaging Mass Cytometry systems sold, we are clearly the global market leader in this emerging field. Our commercially-proven instrument, in contrast with the marketing claims of other potential market entrants, provide extraordinarily high quality and real images. We offer a large and growing library of verified antibodies and we enable image analysis via multiple commercial-grade software tools, all at the 1 micron level, which is the optimal resolution for single-cell and subcellular interrogation. We are excited by the potential for highly multiplexed imaging technologies. As it is for digital, spatial information in a single-cell level becomes the standard in disease and clinical research.



The power of CyTOF is being profiled at leading industry forums. In January, I delivered a talk on the IO track or immuno-oncology track at the Precision Medicine World Conference. This meeting showcases innovative technologies, initiatives and case studies that enable the translation of precision medicine into direct health care improvements.

At the conference, a leading pathologist, Dr. Kurt Schalper of Yale University, described his immuno-oncology work in human non-small cell lung cancer using Imaging Mass Cytometry to decipher the tumor microenvironment using highly multiplexed panels. He revealed the value of spatial context in the deep analysis of intact tumors. This type of analysis is critical to understand the sensitivity and resistance of certain tumors to immune checkpoint blockers.

A related talk was delivered in November to more than 2,000 researchers at SITC, the premier immunotherapy conference in Washington, D.C. CyTOF is moving into the mainstream and our opportunity funnel reflects this growing interest.

To round out this discussion, a few notable peer review publications point to an even deeper market opportunity. In the journal, Cell Metabolism, researchers in Switzerland and the United States published the results from an exciting clinical research study. Using highly multiplexed imaging from Imaging Mass Cytometry, they were able to provide a map of the Human Type 1 Diabetes Progression using human pancreas tissue that could inform future disease treatment paradigms.

Another important study was published a couple of weeks ago in Nature Immunology. In this study, researchers used Imaging Mass Cytometry to characterize and provide spatial localization of human fetal intestinal CD4+ T cells. The researchers revealed that exposure to foreign antigen triggered the formation of T cells in human fetuses. These results suggest that immune priming in utero prepares the infant for the massive influx of bacteria that occurs immediately after birth.

CyTOF is taking a prominent role in informing the immunome, leading to a better understanding of immune function and its linkage to disease. These publications offer additional steps forward as researchers utilize the power of our transformative technologies to change lives.

Expanding for a moment beyond CyTOF, increasingly, researchers are using both mass cytometry and microfluidics technology together to uncover new insight into the human immunome. Providing a combined view of the immune cell population and the circulating proteins that regulate them, Dr. Petter Brodin from the Karolinska Institute, successfully characterized the development of the immune system in newborn children, demonstrating an important relationship to the microbiome. Dr. Amir Horowitz from the Icahn School of Medicine at Mount Sinai is using a similar approach to investigate the role of natural killer cells in microbial infections and cancer, with the emphasis on the development of better cancer immunotherapy. In an increasingly multi-omics world, Fluidigm is well-positioned to prosper.

I'll now turn the call over to Vikram, our CFO, for a complete review of our financial results.

Vikram Jog Fluidigm Corporation - CFO & Principal Accounting Officer

Thanks, Chris, and good afternoon, everyone.

Total revenue was \$32.3 million in Q4 2018, an increase of 17% year-over-year. Mass cytometry revenue of \$19.1 million increased 48% year-over-year and 7% sequentially. We had strong sales of both Helios and Hyperion Imaging System and are seeing multisystem placements as customers expand capacity to meet their needs.

Mass cytometry consumables and service revenue also delivered robust year-over-year growth in the fourth quarter, reflecting increasing utilization of our installed base. Consumables pull-through tracked above the high end of our 2018 guidance of \$60,000 to \$65,000.

Microfluidics revenue of \$13.2 million decreased 11% year-over-year but increased 19% sequentially in the fourth quarter. Consumables, which comprises the bulk of our microfluidics business, had a strong quarterly performance, growing both year-over-year and sequentially. This was, however, offset by declines in instrument and service revenues. Pull-through from our microfluidics platforms was



higher than our guidance range this quarter with the exception of C1 pull-through, which remained significantly below our projected range.

As you may remember, a significant portion of our microfluidics consumables revenue is tied to a small number of customers. Similar to last year, we received a number of large orders at year-end. We continue to expect quarter-over-quarter variability in microfluidics revenue as we execute on our strategy to focus on key accounts and grow the business with new applications and partnerships that align with our strategy.

Continuing a practice that we began 2 years ago, we are providing a snapshot of our active installed base of instruments at year-end 2018 in our earnings release. Our mass cytometry installed base increased by 20% during 2018, reflecting strong growth in instrument sales, while our microfluidics installed base declined by 7% due to headwinds in our single-cell business and our focus on high-throughput customers. While the total active installed base of instruments has declined, consumables revenue and pull-through are expected to grow in 2019. I will provide more details later.

Before I move into our regional discussion, I wanted to note that starting this quarter, we are adjusting our regions to be consistent with our internal financial reporting and peers. As a result, we will talk about our geographies as the Americas region, which includes the United States, Latin America and Canada; EMEA and Asia Pacific. We have also provided historical breakdowns of the new geographies to help adjust your models.

In the fourth quarter, we recorded strong year-over-year revenue growth across all our main geographies. The Americas grew 19%, driven primarily by mass cytometry. EMEA grew 7%, driven primarily by microfluidics and mass cytometry consumables. And Asia Pacific grew 26%, driven by mass cytometry and microfluidics consumables sales.

Turning next to our operating performance. We are executing on our strategic initiatives to improve financial discipline and operating efficiency while investing in our growth initiatives.

GAAP product margin of 56.4% was up 840 basis points year-over-year and up 440 basis points sequentially in the fourth quarter. The year-over-year and sequential increases in product margins were due to favorable manufacturing capacity utilization and product mix, coupled with fixed amortization over a higher revenue in the fourth quarter of 2018.

Non-GAAP product margin of 69.6% in the fourth quarter was up 620 basis points year-over-year and up 360 basis points sequentially. Non-GAAP product margin excludes depreciation, amortization and stock-based compensation expense.

Operating expenses in the fourth quarter increased approximately 30% year-over-year to \$29.9 million on a GAAP basis and \$24.4 million on a non-GAAP basis. In the fourth quarter of 2017, there was a favorable \$3 million litigation settlement recorded as an offset to operating expenses. In addition, the fourth quarter of 2018 was impacted by higher employee expenses.

GAAP net loss for the fourth quarter was \$14.8 million compared to \$10.5 million for the same period last year and \$14.8 million in the third quarter. Year-over-year, GAAP net loss was higher primarily due to noncash interest associated with the convertible debt exchange in 2018 and the impact of a favorable litigation settlement in the fourth quarter of 2017.

The non-GAAP net loss for the fourth quarter was \$2.4 million compared to \$3 million for the year-ago period and \$5.2 million in the third quarter. The sequential improvement was due to higher gross margin.

Please note, reconciliation tables between our GAAP and non-GAAP measures are provided at the end of our earnings press release that we issued earlier today.

Moving on now to cash flow and the balance sheet. Accounts receivable decreased to \$16.7 million at the end of the fourth quarter from \$18.4 million at the end of the third quarter, driven by higher revenue and collection. DSO was 46 days in the fourth quarter compared to 57 days at the end of the third quarter and 49 days at the end of the prior year quarter. Cash, cash equivalents and short-term



investments were \$95.4 million at the end of Q4, including net proceeds of \$59.5 million from our common stock offering in December. Excluding these proceeds, cash flow in the quarter was a positive \$100,000. Cash flow was better than expected, primarily driven by better collections in the quarter. At the end of Q4, our borrowing base under our asset base revolving credit facility was \$12.3 million.

Before moving on to guidance, I wanted to note that approximately \$14 million of our outstanding convertible bonds were voluntarily converted into common stock in Q1 of 2019 with the early conversion incentives that were part of the bonds issued in 2018. These bonds, you may recall, were issued in exchange for our 2014 bonds. Please refer to the Form 8-K we filed on March 2018 for additional details on the conversion term.

And now on to guidance for the first quarter of 2018 -- '19. Total revenue is projected to be between \$28 million and \$31 million. GAAP operating expenses are projected to be \$29.5 million to \$30.5 million. Non-GAAP operating expenses are projected to be \$26.5 million to \$27.5 million, excluding stock-based compensation of approximately \$2 million and depreciation and amortization expense of approximately \$1 million.

Total cash outflow is projected to be \$20 million to \$22 million, including total annual incentive compensation and retention bonus payment of \$10.8 million, a semi-annual interest payment of \$2.8 million and other seasonal increases in working capital and other employee-related expenses. We expect cash burn to be significantly lower for subsequent quarters in 2019.

Finally, for 2019, we are expecting growth in consumables pull-through. Our projected annual -- annualized consumables pull-through per system is as follows: Mass cytometry, \$73,000 to \$78,000; BioMark and EP1 in aggregate, \$44,000 to \$50,000; and Access Array and Juno, \$25,000 to \$30,000. Please note that since C1 is no longer a material contributor to our revenue, we will not be providing consumables pull-through guidance for 2019.

And with that, I will turn the call back to Chris for closing remarks.

Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

Thank you, Vikram.

In 2018, with each passing quarter, we generated momentum around the world. We entered 2019 -- or we enter 2019 with a solid backlog and exciting funnel of sales opportunities across academic, translational research, CROs and cancer centers. There's ample headroom for growth across all of our lines of business, including mass cytometry where, for the third consecutive quarter, placements at new accounts represent about 2/3 of total unit sales in the period.

We are a major market participant in powering immunome research via multi-omic platforms, including Helios, Juno, Access Array, C1 and BioMark. We are the clear market leader in multiplexed image analysis of tissue via Hyperion.

From a shareholder perspective, I'm confident that our long-term strategy of innovation, revenue growth and operating excellence, coupled with smart balance sheet management, will drive value. Increasingly, we will see an acceleration of recurring revenue streams as our installed base grows.

I'd like to thank our over 500 employees for their contributions this quarter and over the course of the year. After 2 years of effort, we are leaner and more productive than ever. Collectively, we've made huge strides to move Fluidigm forward after a challenging period in our history.

We are humbled by our customers' ambitions to transform the treatment of human disease through a greater understanding of immune function. We are inspired to make their job easier through continued innovation and reward shareholders for their trust in our organization and our management team.

With that, I'd like to open the line for questions.



QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Our first question comes from Doug Schenkel of Cowen and Company.

Adam Joseph Wieschhaus Cowen and Company, LLC, Research Division - Associate

This is Adam Wieschhaus on for Doug. There was a raise in pull-through guidance for each of the 3 segments you disclosed, with mass cytometry being the most pronounced. Is the increased mass cytometry utilization being primarily driven by a particular customer segment such as the pharma success you've noted in your prepared remarks, the CROs or maybe those that received the imaging module? Or is it pretty much across the board?

Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

Hi, Adam. This is Chris. So yes, I think I can't point -- we can't point to one segment. I think you grabbed some -- generally across the board, we've seen good pull-through from all segments. There is probably a slight bias towards, certainly, CROs as we've seen some of those rapid acceleration, hence the capacity expansion story that we shared during the course of the call.

As far as the split between Hyperion or imaging-based consumables and suspension-based, we've actually -- I think we've talked about this in the past that we had modeled that there might be some potential deterioration in our pull-through, but as you can see from our recommended guidance that we're not seeing any declination or decrease in the pull-through rates based between the mix of Hyperion's imaging technology versus suspension.

Anything you want to add there, Vikram?

Vikram Jog Fluidigm Corporation - CFO & Principal Accounting Officer

Yes. So in addition to customer type, clearly, it's our intent to increase the routine use of our technology and, hence, the news releases that we've been putting out regarding the adoption of our technology by CRO. So that's clearly one driver. As the technology goes more and more into routine use, that pull-through will increase.

The other driver is the release of panel products that we've been putting out from time to time. The human immune monitoring panel is one example and we've had previous examples. So we are driving on both vectors to increase pull-through of our mass cytometry platform.

Adam Joseph Wieschhaus Cowen and Company, LLC, Research Division - Associate

Okay. Great. And I think you also noted that your installed base in your microfluidics segment declined over the course of 2018. I was just hoping to get any color on how we should think about the pacing of placements versus retirements for that segment over 2019? Are we at a point where you think that, that installed base has stabilized?

Vikram Jog Fluidigm Corporation - CFO & Principal Accounting Officer

As we have said and pointed out, there's a couple of factors that I would refer to. One is that the bulk of this business is now consumables. We haven't released the exact numbers, but more and more, consumables is the significant portion of the microfluidics business.

And the other way to think about this is that a lot of the decline in the active installed base has been as a result of the headwinds that we experienced in our single-cell business. And as those headwinds dissipate and as the year-over-year comparison becomes less challenging, that factor will become less pronounced.

The other factor that we pointed to is that we are increasingly going to be focused and have been focused on high-throughput customers. So more and more, this business will be characterized by fewer number of instrument placements and higher throughput. And one manifestation of that is the continuing increase in the pull-through guidance that we put out for the BioMark, EP1 platform in 2019 even as compared to 2018.



Adam Joseph Wieschhaus Cowen and Company, LLC, Research Division - Associate

Okay. Maybe if I could just add one more in. I think your press release mentioned a trend in multisystem placements of the Helios, but I think in the back half of your comments you mentioned that 2/3 of the instruments are still going to new customers. Can you provide any color on what that funnel looks like for the Helios instrument? Is it largely related to existing customers? Or is it largely towards new customers?

Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

Yes. I think the simplest answer is we're continuing -- we're seeing a continuation of the 3-quarter trend in which we are continuing to recruit new customers to the technology base and there's not a material shift in the kind of forward-looking funnel as it relates to that mix. We really talked about relatively small numbers here so the percentages could shift from period to period, but the overall trend has been quite consistent. And it's extremely encouraging. I think this kind of continues to reinforce our hypothesis that we're a -- we have a relatively small market share in a very large market that's got tremendous opportunity. And it's probably expanding on 2 vectors, both the absolute out-of-the-market growth opportunities expanding as well as the total addressable market for us.

Operator

Our next question comes from Paul Knight of Janney Montgomery.

Paul Richard Knight Janney Montgomery Scott LLC, Research Division - MD, Head of Healthcare Research & Senior Equity Research Analyst

On the customer base, is it specifically in immuno-oncology? Is that the application, do you believe? And then the follow-on to that is tell me the things that they're saying about why this intake/uptake is happening now. Is it the number of probes you can do? Is it the speed? What are they liking here?

Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

There's a couple of ways to answer the question. As we've talked about, we can see in a rearward-facing view -- thanks, Paul, first of all, for the compliment. Second is we can look in a rearward-facing view when we see the publications to see what the mix of those publications are. And I -- as you can -- we can see in the numbers that immuno-oncology and IO (inaudible) is probably the single largest demand driver as you look at publications. However, there's a number of segments that are coming on quite strong, and that's why I think opportunities or situations similar to the TIMID announcement that we had earlier today really highlights -- we've talked hundreds of diseases that are impacted by the immune system and immune function, so understanding the immune system and its implications for diseases such as diabetes and IBS and celiac disease and so on and so forth, we think this is just the tip of the iceberg for what the potential is for the instrument system. So we don't have always perfect knowledge as far as the exact primary driver for what a customer has purchased the system. We can see the patterns after it's used to then really totally discern how they're unlocking that technology. And we're certainly seeing the stories broaden as it relates to the applications.

As far as into the overall -- other drivers as you talked about, so the data, for instance, in Kurt Schalper's presentation, this will be on imaging. So he highlighted a panel that he designed that was -- I believe it was a 28-marker panel at Yale. And so he talked about kind of the unparalleled capabilities, that there's no other technology quite like it that allows, from an imaging perspective, to get both the sensitivity levels that he requires, the real images that he, as a pathologist, want to be able to see and assess. So they can look at the percentage of the tumors into an absolute scoring system based upon how he traditionally had scored tumors and then be able to deduce that or reduce that down to a digital and absolutely analytical number. And then to be able to hit against that very high parameter panel, I think this is really indicative of where the headroom that we have available to us and how researchers, as they're realizing how many -- what they can do with this larger design space, they're finding more and more -- they're running into their experiments more and more scenarios where they can lock into this large design space overall.

Paul Richard Knight Janney Montgomery Scott LLC, Research Division - MD, Head of Healthcare Research & Senior Equity Research Analyst

And Chris, could you talk to the level of backlog build, nature of backlog as it -- as you wrapped up the quarter?



Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

We did not address that question or that topic specifically on our prepared remarks, but I can assure you that this was not a situation which we burn backlog. Really, we feel very comfortable with what we're setting up to come into the year. And we're just -- we have certainly strong growth throughout the back half of the year in general.

And we talked about at the very beginning of the year of -- entering 2018 that we thought it was maybe a back end-loaded story. We can see the opportunities building in the pipeline and we had a really good -- we did a really nice job in the back half of 2018 in turning those opportunities into sales. And we didn't have to do it. We've continued to add to the overall -- I think the volume, the breadth and the quality and the depth of the funnel. So as we've kind of shared in the prepared comments, we're seeing around the world, multiple geographies, it's not a one-segment story. We're seeing some more industrial players come online now. We added an additional cancer center in the United States during the period although we didn't talk about that in the highlights. So we're really pleased about the progress we're making.

Operator

(Operator Instructions) Our next question comes from Bill Quirk of Piper Jaffray.

William Robert Quirk Piper Jaffray Companies, Research Division - MD and Senior Research Analyst

First question for me, I want to go back to the guidance adjustment for mass cytometry consumables, the 20% increase. I guess, can you unpack that a little bit for us? How much of that -- of the guidance increase is based on what you were seeing throughout 2018 versus perhaps a word on kind of how the visibility for the consumables looks as we get into 2019?

Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

Well, I guess, you're specifically asking about mass cytometry or are you talking about kind of all of the technologies, Bill? Just to make sure we're very specific.

William Robert Quirk Piper Jaffray Companies, Research Division - MD and Senior Research Analyst

Specific to mass cytometry.

Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

Okay, just to make sure. Okay. So as we've highlighted, we've continued to -- we saw continued strength throughout the course of the year. We had -- as our past practice has been, we provided a guidance range at the beginning of the year and then we'd give updates when there's a significant or material adjustment around performance, up or down around that. As you know, each quarter, we tended to see and cite kind of above target for what we've had modeled our pull-through likely to be, that we are on the high end of those ranges.

So we continue to see that velocity grow or kind of intensity grow pull-through. We had some apprehension or perhaps not even apprehension, I guess, concern or sensitivity, the fact that we were new in -- with the Hyperion technology and we weren't sure what the impact might be on a blended basis on pull-through. We haven't seen any particular negative impact from that mix. And we continue to add to our installed base and such, why you can generally see some very strong consumables numbers around the world.

So that's -- this is probably our best foot forward, our best guess for how that dynamic might play out going forward in 2019. And I think we're trying to just find the right sweet spot to help give you enough information to build models.

William Robert Quirk Piper Jaffray Companies, Research Division - MD and Senior Research Analyst

Good. Fair enough. And then a couple of questions for Vikram. I guess, first and obviously, we continue to see some really nice improvement in gross margin and maybe talk to how sustainable that is as we look into '19. And then secondly, you guys have done a really nice job here of late. You're establishing next quarter forward guidance and beating that. Have you contemplated going back to giving annual guidance? If so, why or why not and if maybe that's something we can expect in the future?



Vikram Jog Fluidigm Corporation - CFO & Principal Accounting Officer

Bill, on gross margin, I think we had consistently talked about -- when the gross margins were deteriorating, we had talked to you about the main reason being underutilization of capacity. And as we've seen capacity being utilized with increased sales growth, those margins have come right back. So that's something that we had predicted. We are certainly pleased with the results and I think that is definitely sustainable.

We've also talked about in the past but it's worthwhile recalling that as of April of 2018, we appointed a worldwide head of operations and his goals are to get continuous cost improvement just as matter of course. And so the additional capacity utilization, along with the emphasis on manufacturing, operation -- operational efficiency and supply chain management, we believe should lead to increased performance at the gross margin level.

In terms of guidance, right now, at least for the foreseeable future, we intend going ahead with our quarterly guidance. It seems to be working for us. And right now, we don't feel any compelling reason to make a change.

Stephen Christopher Linthwaite Fluidigm Corporation - President, CEO & Director

Just to add, Vikram, I think on -- from a gross margin perspective, I think there's -- we saw, as you said before, it's going to reinforce. There's a lot of levers that we have to pull to generate continued improvement in this area. I think Brad has really -- as you touched on, really, Brad has just gotten started for us and laying out a road map over a multiyear plan for us. And you can look at our headcount levels, we've been flat on headcount over after 2 years. We actually came down significantly in our headcount levels from 2 years ago and we've managed to maintain increasing volumes with flat headcount. And so I think we've got a lot of levers left to pull and we've reserved the flexibility to go for price as needed in order to drive volume at these key commercial accounts. And the key pivot we're making is moving more into the supplied market space, which is going to end with this nice gross margin set up and a long multiyear road map for improvements here. It's lining up very well with our customer-centric strategy to go after those higher volume accounts.

Operator

Ladies and gentlemen, that is our last question. I'd like to turn the conference back over to Agnes Lee for any closing remarks.

Agnes Lee Fluidigm Corporation - VP of IR

Great. Thanks a lot, Valerie.

We'd like to thank everyone for attending our call today. A replay of this call will be available on the Investors section of our website.

This concludes the call and we look forward to the next update following the close of the first quarter of 2019. Please reach out to me if there are any further questions. Good afternoon, everyone.

Valerie, you can now close the call.

Operator

Ladies and gentlemen, this does conclude today's conference. Thank you for your participation. You may now all disconnect.

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