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Four Reasons Oncology Needs Digital Health Innovation

by **Lucie Ellis-Taitt**

Together, Merck's heads of oncology and head of digital health outline their cross-functional strategy to enhance care for cancer patients through digital tools.

Digital health has evolved significantly, transitioning from “marketing gimmicks” to essential tools that improve patient care. While there have been successes in managing chronic conditions, digital innovation in diseases like cancer is still maturing.

In an exclusive interview, Yariv Hefez, head of oncology, and Emre Ozcan, head of digital health, both from Merck KGaA's health care business, discussed efforts in developing digital tools for oncology patients and explained why now is the optimal time to invest more in digital health R&D.

Ozcan defines digital health as “tools, technologies and digital enablement to be able to increase the impact of pharmaceutical drugs.” This can take various forms, from better adherence to medication, or to greater patient engagement in their disease therapy. Today, Ozcan said the reach of digital health had expanded to include better identification of patients, greater personalization of treatment and enhanced delivery of health care.

“There was a bit of a ‘don't touch, don't change’ attitude in oncology.”

“It’s about maximizing treatment outcomes,” Hefez added. “Our mission is to turn cancer patients into cancer survivors.” Merck is taking a fresh approach to digital development and cross-functionality to better integrate digital tools into its oncology pipeline.

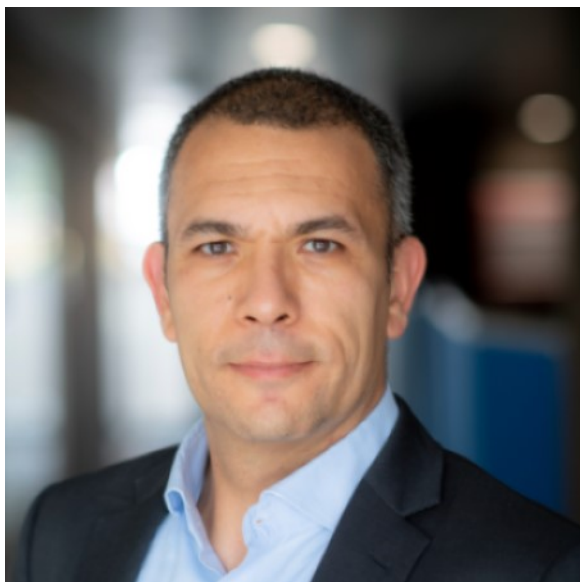
“Historically, oncology has been a bit slow and conservative in embracing technologies,” Ozcan noted. There were three reasons for this, he said. 1) The outdated idea that digital health was all about wellbeing; 2) The assumption that digital health is a young person’s hobby; and 3) Aversion to risk in cancer care.

“There was a bit of a ‘don’t touch, don’t change’ attitude in oncology. But that picture has flipped,” Ozcan said.

The pair discussed four key themes highlighting why Merck is upping its focus on digital for oncology.

1. Evolving Patient Populations

It is predicted that one in two people will experience cancer in their lifetime and younger people are now increasingly being diagnosed with the disease. This opens the door for technological solutions alongside pharmacological treatment.



EMRE OZCAN Source: Merck

Hefez highlighted one of Merck’s recent additions to its portfolio, pimicotinib that was licensed from Abbisko Therapeutics, as an example of the ideal patient population to engage with new digital health tools. Pimicotinib, an orally administered, small-molecule antagonist of colony stimulating factor-1 receptor (CSF-1R), is in a global Phase III study in tenosynovial giant cell tumor (TGCT).

TGCT is a benign tumor of the joints that can cause swelling, pain, stiffness and limited mobility of the affected joints. Treatment options for this disease, which can seriously affect patients’ quality of life, are very limited. The disease mostly affects women, often in their 20s-40s.

Hefez said the company was assessing as part of its commercialization plans, solutions for this unique patient population in Greater China. “We are thinking about tools around adherence and side effects, but also community and support,” he said. “I’m personally very excited because I feel we can really do a lot with for this population to help shape the patient journey.”

2. Greater Personalization

For other drugs, Ozcan also highlighted that cancer diagnosis and treatment in the past were not very individualized to the patient. “Technology gets to a super powerful personalization level,” he said.

As well as responding to changing dynamics around patient populations, Merck is also focused on shifting cancer care away from the hospital where possible. Ozcan asked: “Why does oncology treatment have to always take place in a hospital?” Merck is trying to “bring a lot to remote patient monitoring capabilities,” he said. This could be a win for health care systems as well, Ozcan believes. “Imagine, every other person in Europe is going to get cancer at some point, we can’t have everyone at the hospital all the time.”

Individualizing patient care via digital tools can be challenging when introducing those tools to different markets. “Drug development is essentially a global process; you don’t have different molecules in different markets. Whereas digital health is very local work,” Ozcan explained. The tools developed will be used by different people in different locations. Merck is including strategies around co-creation with patients, HCPs and other stakeholders to shape its digital health tools. “The end user needs a say in the tools they will be able to use.”

Hefez added, “We are looking at the patient journey and trying to map the intersections where digital tools can be beneficial, and we are looking at it from different dimensions.”

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3. Utilizing Available Technology

Merck is keen not to reinvent the wheel when it comes to digital health technologies. There are successful tools across many disease areas, particularly in chronic conditions such as diabetes.

The development teams ask, “Should we create something that is 100% novel for us, or should we try to piggyback on an existing platform and what are the advantages and disadvantages?” Hefez noted.

Ozcan, who took leadership in digital health at Merck around 2 years ago, noted that there were many digital tools on the market already. “Putting another into the system is not always the best approach, especially when there are usually downstream challenges” for embedding tools. Merck is instead partnering with external parties where the fit is good.

One example of this partnership approach in practice is Merck’s 2023 deal with Huma



• YARIF HEFEZ *Merck*

-
- access holistic care services
- connect with a personal support network
- and manage expectations

Therapeutics, a global digital health technology company. The pair launched a cancer treatment companion app in the UK in April this year to support bladder cancer patients. Additional markets are planned for launch in the coming year and may support delivery of care for a range of cancers.

The app is designed to support patients and caregivers in navigating the complexities of bladder cancer treatment. It aims to help patients:

understand of their treatment

have better conversations with their care team

self-track their health state

UK-based patient organizations and specialist cancer care centers were involved in piloting the treatment journey app in advance of the launch.

4. AI Is Opening Doors

“We have done several collaborations in the last couple of years to bring AI technologies into research and development,” Hefez noted. Merck is leveraging artificial intelligence across its business.

Specifically, Hefez highlighted that the oncology business was looking at AI tools to help with product launches. “The beauty with AI is that not only can you segment the market, but you can also build training models for your salesforce.” Hefez sees AI as an “enabler.” The company is also using AI to better understand market trends.

From a digital health perspective, AI technology is “giving us superpowers for consolidation and synthesis of information,” Ozcan added.

He is also excited about the prospect of using AI technology to further enhance “hyper-personalization” of digital health tools.

Looking Ahead

Ozcan said there was no “golden recipe” for developing digital health tools, but Merck had focused on demonstrating value.

“The future is drug-digital combinations. It’s a very powerful tool.”

The key measure for success when developing digital health technologies in any therapeutic area is adoption, Hefez believes. “At the end of the day, adoption is the most important KPI. We can come up with the smartest tool ever, but if there is no adoption the tool is useless.”

There was a time when almost any digital health tool could secure investment, but that period has ended. Ozcan said, “We have moved away from that world.” Now, evidence is critical. “Historically, digital could be a bit of a marketing gimmick, but that is no longer good enough,” he said. Integration into health care systems, adoption rates and adherence data are critical measures now. “Being evidence driven, especially in oncology, resonates,” he said.

The secret to success for digital health in oncology is simple, “collaboration, strategic alignment and very diligent follow-up,” said Hefez.

He has set three key goals for the oncology business in the coming 12-18 months:

1. Deliver on the existing pipeline;
2. Grow the pipeline through deals and partnerships to become a principal player in the space; and
3. Continue developing the team and its talents.

“When it comes to digital health,” Hefez added, “I would like to see us delivering across our digital health pipeline and really making sure that we do have best-in-class digital tools to really offer patients a very holistic and impactful experience.”

Ozcan is focused on scaling the digital health oncology program. He would also like to see a new

drug launched in the near future with “digital solutions baked in from day one.”

“The future is drug-digital combinations. It’s a very powerful tool,” he said.