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Precision Diagnosis

Expert Perspectives

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Philips Oncology Pathways Navigator powered by Dana-Farber Cancer Institute

Dr. David Jackman, Medical Director of Clinical Pathways at the Dana-Farber Cancer Institute (DFCI), shared his perspective on the Philips Oncology Pathways Navigator powered by Dana-Farber, and the opportunities for clinicians at other institutions to leverage this approach to improve cancer care.

"The need for oncology pathways rings true for me every day," Dr. Jackman says. "We wanted to address the complexity, cost and coordination of cancer care as we tried to spread care over a larger network. We were looking for a solution that would codify best practices, support decision-making in real time to reduce unwanted variation, emphasize accrual for clinical trials, and oversee care as well as capture data from across our network."

Meaningful data, meaningfully applied

> “The number of new approvals and label expansions in lung cancer, for example, in just the past three months is striking. Trying to make sense of this across many diseases for a community practitioner, I think, is just overwhelming. A solution that can integrate this up-to-date knowledge into practice is incredibly critical.”
>
> – Dr. David M. Jackman

Clinical and executive leadership at DFCI, who had identified the creation of clinical pathways as a top priority, partnered with Philips in 2018, and over a 16-month period aggressively built and implemented a wholly new pathways platform with new workflow for users and a robust new data model to capture and report back data in a more meaningful and thorough way. DFCI went live with the platform in July 2019 and works to continuously improve the experience and content. DFCI now welcomes new sites to the platform and into the content review process.

Philips Oncology Pathways Navigator powered by Dana-Farber aligns with American Society of Clinical Oncology (ASCO) guidelines for evaluation of oncology clinical pathways programs. It features three major areas of distinction: world-class content, user experience and data analytics.

Ongoing development of content with world-class depth and granularity

Content development starts with review meetings, which are held two to four times a year for each pathway, depending on the cadence of development and innovation in a particular disease. Review meetings for lung cancer or breast cancer, for example, happen more frequently than those for GI stromal tumor. Ad hoc meetings address urgent safety concerns or game-changing approvals.

The pathways disease leadership team holds pre-review meetings a month in advance to help keep the process as efficient and high-quality as possible by reviewing usage across the platform for the specific disease, as well as calling for agenda items from all users, and also to start preparing the slides for the review meeting. The leadership team again comes together post-review to capture decisions from the meeting, finalize minutes and recordings so that any user can have access to what was discussed, and to validate content in the platform for safety and efficiency concerns.

This process creates a cycle of iteration that allows DFCI to continuously review and improve upon the content, and provides the opportunity to consider new data from, for example, the ASCO annual meeting in a timely fashion, which allows for ongoing refinement of a given pathway. Cost considerations expressed as direct drug cost comparisons are built into the pathway.

Goals of the process of content review capitalize on shared expertise.

- Expert
- Inclusive of all stakeholders
- Data-driven
- Transparency of data and any potential conflict of interest
- Cost-consciousness addressed through real cost data

Content review process

- Review usage data
- Call for agenda items from all users
- Prepare slides for review meeting

- 2-4 times per year, depending on pathway
- Ad hoc meetings for urgent safety concerns or game-changing approvals

- Capture review meeting decisions
- Finalize minutes for access by any user
- Validate content for safety and efficiency using the platform

Platform design and experience

Philips Oncology Pathways Navigator powered by Dana-Farber intuitively presents information in a branching chart, reproducing how clinicians consider each individual decision, as well as the ability to skip intervening navigation when appropriate to save steps (as for a first-line patient).

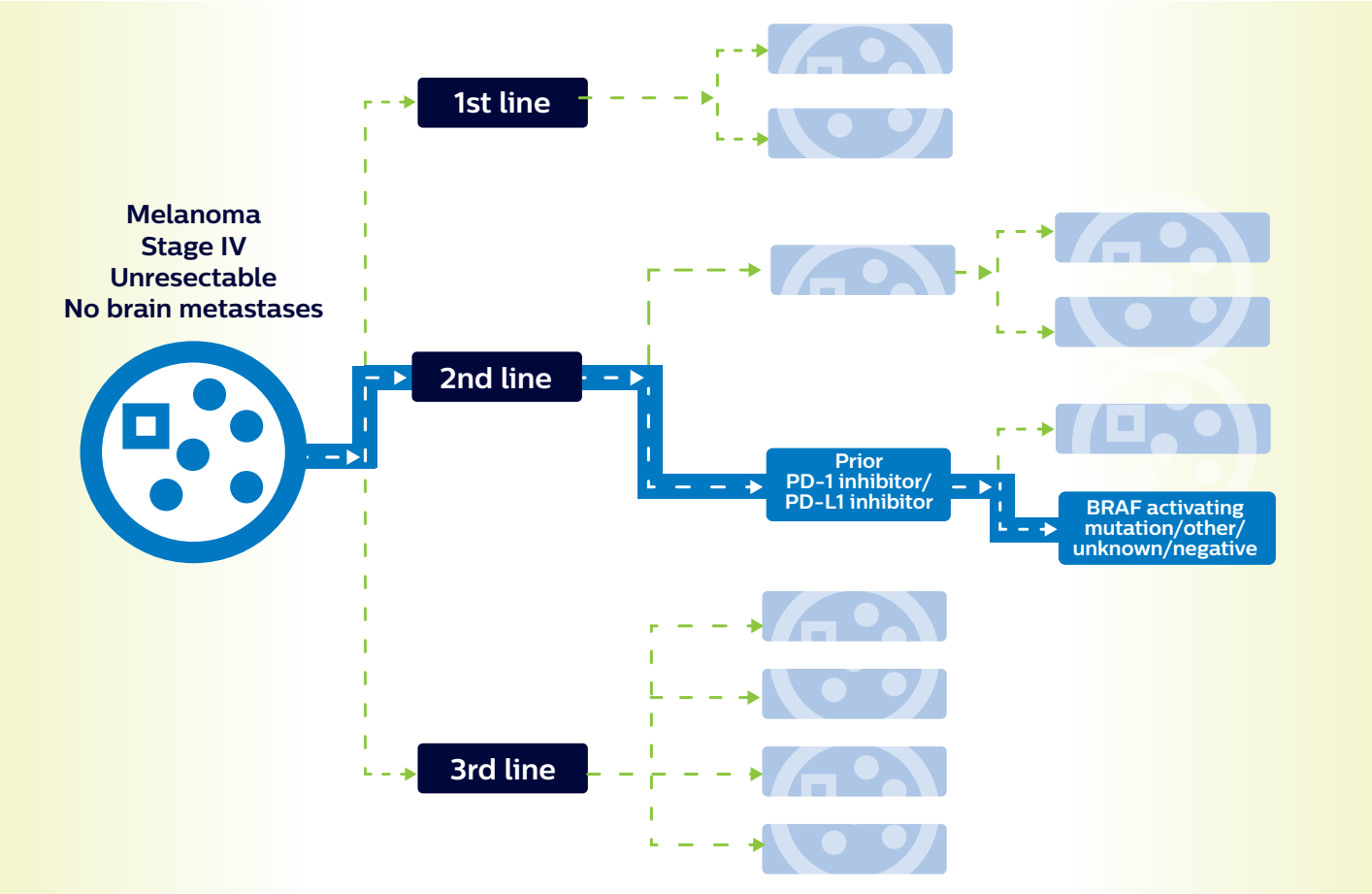
Individual decision trees list all on-pathway treatment options, as well as conditional criteria for reasonable on-pathway alternatives with links cited to documents for reference. A link to appropriate clinical trials includes easy access to the protocol, eligibility criteria and consent form. Curated side effect information for the regimen as a whole (not just by individual drug) is presented in patient–friendly language that can be imported to the patient consent form. The Philips Oncology Pathways Navigator powered by Dana-Farber captures the information necessary to provide rationales for a given course of treatment, which is helpful in obtaining prior-authorization for treatment costs.

It is also possible to choose off-pathway treatment in a way that allows clinicians to give feedback about why they are choosing a particular course of treatment, helping facilitate continuous learning for all users. A treatment library provides a comprehensive overview of doses, schedules and side effects.

The platform also provides embedded documents on managing patients in the COVID-19 pandemic.

At DFCI, the platform has been built directly into the EPIC electronic medical record system, making it easy to select an appropriate pathway in the individual patient record, but the Philips Oncology Pathways Navigator powered by Dana-Farber has been designed to be EMR-agnostic.

On-pathway treatment option decision tree



This example shows a pathway branching option for melanoma, stage IV, unresectable, with no brain metastases.

Data model and analytics

The Philips Oncology Pathways Navigator powered by Dana-Farber is a data learning machine, showing when treatments are on- and off-pathway, providing a snapshot of performance by institute and by department, and showing treatment costs and effect on survival by pathway. This also offers useful information for clinical trial decisions and the grant process.

This approach provides information not available in other ways, such as the number of times a particular drug was used first line or second line. Identifying patterns of care helps with drug forecasting, even with drugs newly approved by the FDA. This information also helps the institution make decisions about initiating or expanding clinical trials at a specific site.

> “We want to encourage participant sites to be part of building a collaborative pathway. We genuinely think our combined expertise is going to ultimately make for a more powerful tool, The knowledge from the platform can help a satellite site keep a patient local when appropriate.”
>
> – Dr. David M. Jackman

See the video
URL to come

Results from case studies are not predictive of results in other cases. Results in other cases may vary.

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