[349] LEVERAGING AI-BASED ALGORITHMS AND DEEP LEARNING FOR PROSTATE CANCER DIAGNOSTICS

Joseph Mossel[1], Judith Sandbank[2], Daphna Laifenfeld[1], Chaim Linhart[1], [1] Ibex Medical Analytics Ltd, [2] Institute of Pathology, Maccabi Healthcare Services; Ibex Medical Analytics

- **Investment Rationale**

  Ibex is comprised of a team of entrepreneurs, data scientists, and medical and diagnostics experts, and is transforming cancer diagnostics. We have forged a unique and strategic partnership with Maccabi, and are developing AI-driven algorithms in digital pathology, leading to rapid, accurate and objective cancer diagnostics, a multi-billion dollar market.

- **Business Strategy**

  We have deployed a Second Read system that provides a safety net for pathologists in Maccabi, and are working on deploying such systems in additional institutes and geographies.

- **Core Technology**

  Cancer diagnosis relies on visual examination by pathologists, is labor-intensive and subjective. We developed AI-based software that identifies various cell types/features within whole slide images of prostate biopsies that can lead to rapid and accurate diagnosis. The algorithm (AUC=0.98) was trained on thousands of image samples and identified a misdiagnosis in retrospective samples as well as in a clinical setting.

- **Product Profile/Pipeline**

  Ibex Second Read system for prostate cancer is deployed in Maccabi's Mega lab, the first and only AI-based diagnostic product ever deployed in a pathology institute, and was already able to reverse a life-threatening misdiagnosis. We have a strategic partnership with Maccabi, and ongoing collaborations with Philips and several academic institutes.

- **What's Next?**

  We are expanding our algorithms to additional indications, in parallel to deployment in additional institutes and geographies and establishment of a regulatory path for a decision-aiding tool in wide global use. Finally, we will be developing novel algorithmic tests for treatment selection in cancer therapy based on combined pathology, clinical, and laboratory data. We are currently raising a round A.