at a glance™

CHECKPOINT THERAPEUTICS

Recent Events: ***A continuing flow of positive interim data is validating Checkpoint Therapeutics' two lead cancer candidates. The most advanced is Cosibelimab (a/k/a CK-301), designed to compete with the likes of Merck's Keytruda® and Regeneron's Libtayo® in the $25 billion and growing checkpoint inhibitor annual market. A potentially pivotal Phase 1 trial is over one-third enrolled with the next interim data update expected in 2H 2020 and the full dataset expected in 2021. Continued positive results are expected to support a filing for FDA approval to treat the second deadliest skin cancer, cutaneous squamous cell carcinoma, representing a $1+ billion annual market. Also in the pipeline is CK-101 which is being developed for patients who cannot tolerate the side effects of Tagrisso®, a $3.5 billion AstraZeneca drug for lung cancer.***

Key Considerations

- **Checkpoint is one of eleven biopharma/medical companies founded by Fortress Biotech (Nasdaq: FBIO).**
- **Checkpoint recently completed a $20 million equity financing, expected to provide funding through 2021, including the releases of interim and full pivotal datasets to support the FDA filing for approval of its lead molecule, Cosibelimab, a checkpoint inhibitor currently being developed for cutaneous squamous cell carcinoma (cSCC), the second most prevalent skin cancer ($1 billion+ market), and non-small cell lung cancer (NSCLC), the most common form of lung cancer ($10 billion+ market).**
- **Incoming interim data on checkpoint inhibitor Cosibelimab puts it on par with current therapies for cSCC and NSCLC in terms of efficacy and may ultimately show it to have more durable therapeutic activity with fewer side effects.**
- **More data on Cosibelimab will issue during 2H20.**
- **On January 13, 2020, Checkpoint announced that the FDA confirmed the company's plan to submit Cosibelimab for full approval as a treatment for metastatic cSCC based on safety and efficacy data from the ongoing open-label, multi-center Phase 1 clinical trial.**
- **Checkpoint expects Cosibelimab to grab market share quickly through disruptive pricing in a billion-dollar market where the one currently approved drug costs $150K or more a year.**
- **A second compound, CK-101, is being developed by Checkpoint specifically to address key deficiencies of AstraZeneca's blockbuster lung cancer drug, Tagrisso – currently selling at an annualized rate of roughly $3.5 billion.**

Checkpoint Therapeutics, Inc.

(Nasdaq: CKPT)

Recent Price:	**$1.67**
Shares O/S:	**55 Million**
Approx MktCap:	**$90 Million**
Fiscal Year Ends:	**Dec. 31**

Published: May 2020

Overview

Multi-billion-dollar-a-year drugs usually remain blockbusters until their patents expire – unless someone comes up with a better mousetrap. And if they do, they don't need a big share of a billion-dollar plus market to have a good business.

One way of doing this is to develop a lower cost alternative to the blockbuster – an especially viable and noble strategy these days when big drug companies often charge $150K or more a year for their blockbuster drugs.

Another way is to capitalize on a blockbuster's weak points – unacceptable side effects among certain users, for example.

These 'warm spots in a hot kitchen' strategies underpin Checkpoint's business and technical programs and define its portfolio of immuno-oncology agents and targeted drugs.

Checkpoint's anti-PD-L1 monoclonal antibody (Cosibelimab-a/k/a CK-301) is being developed as a potentially better and lower-cost alternative in the fast growing $25 billion checkpoint inhibitor immuno-oncology market, now dominated by Merck's Keytruda and a handful of others.

Cosibelimab interim data has shown efficacy on par with the current first line checkpoint therapies in cSCC and NSCLC and, if current trends continue, it may prove to be safer with a more durable therapeutic effect.

Checkpoint's second compound, a tumor-targeted agent, is CK-101 for lung cancer, specifically designed for potentially better safety and at least as good efficacy as AstraZeneca's Tagrisso, currently on its way to $8 billion in annual sales, according to analysts.

Roughly 13 percent of Tagrisso users discontinue therapy due to side effects – a roughly $1 billion slice of the market Checkpoint hopes to serve with an equally effective, but safer alternative. Interim data suggests CK-101 can meet those objectives.

Notable & Upcoming

4Q19- Checkpoint completed an equity raise of $20 million in November 2019. March 31, 2020 cash and cash equivalents stood at $21.5 million

1Q20-FDA confirmed plan to submit Cosibelimab (CK-301) for full approval in cSCC upon successful completion of ongoing Phase 1 trial

2H20-Interim data expected from ongoing trial of Cosibelimab in cSCC

2021-Topline full dataset from Cosibelimab in cSCC

2021-Possible start of Ph 3 registration trial of CK-101 in NSCLC with EGFR mutations

2021-Planned filing for FDA approval of Cosibelimab (CK-301) in cSCC

When it comes to combination therapies – the new wave in the treatment of many difficult cancers—Checkpoint's strategy brings another cost advantage: since it is developing the two parts of a typical combo therapy – immune system enhancers and targeted drugs – it can price the combo lower than if it owned only one of the parts.

Checkpoint has a collaboration with TG Therapeutics (Nasdaq: TGTX) under which TGTX is developing Cosibelimab in liquid tumors. Checkpoint is eligible for royalties and milestone payments from TGTX with their success.

Checkpoint I-O Program

Cosibelimab (CK-301) is an anti-PD-L1 agent, in-licensed from the Dana Farber Cancer Institute. It belongs to a proven class of molecules known as checkpoint inhibitors, for which Checkpoint Therapeutics is named.

Just like the first six PD-1 and PD-L1 checkpoint inhibitors (Opdivo®, Keytruda®, Libtayo®, Tecentriq®, Bavencio®, and Imfinzi®), Checkpoint's candidate enables native killer T-cells to attack cancer cells by unblocking one of the tumor's main defense mechanisms.

In the case of Cosibelimab, the unblocking is accomplished by binding to the ligand PD-L1, the tumor's protective shield, allowing killer T-cells to 'see' and attack the previously hidden tumor cells.

But it may be doing more. Interim data released at scientific symposia in May and September 2019 revealed that Cosibelimab, unlike currently marketed checkpoint inhibitors, has a half-life that supports sustained high (greater than 99 percent) tumor target occupancy to unleash the killer T-cells, with the added benefit of also pulling in the natural killer cells of the immune system for potential enhanced efficacy in certain cancers.

This especially strong activity may provide greater cancer killing power than currently approved PD-1 and PD-L1 inhibitors.

In the latest interim data, released September 30, 2019 at ESMO (largest oncology conference in Europe), Cosibelimab achieved Overall Response Rates (ORRs) of 50 percent in cSCC and 40 percent in NSCLC, essentially the same as ORR results achieved in other studies by the two current first line therapies – Libtayo® (47 percent ORR in metastatic cSCC), and Keytruda (40 percent ORR in first line NSCLC).

The Phase 1 trial transitioned into a potentially pivotal trial based on the quality and strength of interim data, especially in cSCC. The study is on track to announce updated interim data later this year and a full pivotal dataset next year for cSCC, with ORR as the primary endpoint, the same endpoint that led to Libtayo's approval in cSCC – a large market with roughly 7,000 deaths annually in the US alone.

The timing of the Cosibelimab trial suggests that a filing for approval (a Biologics License Application, or BLA) with the FDA could occur in 2022.

Today, there are literally hundreds of clinical trials underway at scores of company, university and government labs teaming approved checkpoint inhibitors with tumor-targeted agents in the quest for more durable remission rates.

If you own both parts of the combo (like Checkpoint) you're in the very best position to control pricing of the package. But many innovators working in this area own only one part of the combination, which means they're not likely to have full control of pricing –a decided disadvantage.

Tumor-Targeted Agent CK-101

Checkpoint's third generation EGFR (epidermal growth factor receptor) inhibitor is currently in a Phase 1 clinical trial in non-small cell lung cancer (NSCLC).

The first two generations of EGFR inhibitor drugs showed strong performance in NSCLC but they only work for about 10 months, on average, due to tumors forming resistance. Third generation EGFR inhibitors prevent this initial resistance, leading to much longer benefit.

The first third-generation EGFR inhibitor (Tagrisso [AstraZeneca] initially approved as second line therapy in 2015 and then as first line in 2018) works very well in NSCLC patients, but 13 percent of the patients experience significant cardiovascular, lung, skin or other toxicities, causing them to discontinue Tagrisso therapy.

Encouraging safety and efficacy data from the ongoing Phase 1 trial of CK-101 was last reported September 24, 2018 at the International Association for the Study of Lung Cancer World Conference in Toronto. The data showed CK-101 to be efficacious against NSCLC with EGFR mutations, with a potentially differentiated safety profile versus Tagrisso.

Key data highlights from the CK-101 trial so far include: 100 percent disease control rate (stable disease or better), 84 percent of patients with tumor lesion reductions, a 53 percent overall response rate and no treatment-limiting side effects reported.

Additional data is being evaluated to decide the optimal dose for a Phase 3 registration trial expected to start in 2021 in 1st line (treatment-naïve) EGFR mutant NSCLC patients.

The Phase 3's primary endpoint will be progression free survival—the same basis on which Tagrisso was approved.

But the differentiated safety profile shown so far by CK-101 will be the key to a strong market entry, first addressing the 13 percent of EGFR mutant NSCLC patients who discontinue Tagrisso therapy, and then the broader population, since there is no test to tell in advance who will suffer Tagrisso's side effects.

In a word, Checkpoint could capture a sizable piece of what is projected to become a $8 billion market in the next five years, up from roughly $3.5 billion today.

Summary

- **With a pivotal data announcement expected in 2021, Checkpoint Therapeutics should soon be viewed as a 'near-term revenue opportunity', highly sought after by large biotech and pharma with upcoming patent expiries and the need to replace and grow their revenue.**
- **Checkpoint's Cosibelimab a/k/a CK-301, an anti-PD-L1 checkpoint inhibitor, is being developed as a potentially better and lower cost alternative to current therapies in the $25 billion checkpoint market. Interim data suggests it is at least as effective and potentially safer than current I-O therapies.**
- **CK-101 is aimed at the current $3.5 billion (and growing) annual market AstraZeneca created by the launch of Tagrisso for EGFR mutant lung cancer patients. Checkpoint's candidate is designed to sidestep some of the treatment limiting side effects of Tagrisso, which are experienced by roughly 13 percent of users.**
- **Cash and cash equivalents stood at $21.5 million at March 31, 2020.**

For additional information, contact:

Redington, Inc. • CT 203 222-7399 • NY 212 926-1733 • www.redingtoninc.com
Checkpoint Therapeutics, Inc. • 781 652-4500 • www.checkpointtx.com