GSK Oncology R&D Update
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Increased oncology focus via BD and governance

16* assets in clinical development; potential for 3 launches in 2020

**Innovation**

**Mechanism**

- PARP inhibitor (Zejula, niraparib)
- Anti-BCMA ADC (GSK 2857916)
- PD-1 antagonist (TSR-042, dostarlimab)
- M7824 (TGFβ trap/anti-PDL1 bispecific)
- ICOS agonist (GSK3359609)
- OX40 agonist (GSK3174998)
- NY-ESO-1 TCR-T
g- BET inhibitor (GSK525762)
- PRMT5 inhibitor (GSK3326595)
- TIM-3 antagonist (TSR-022)
- PI3K beta inhibitor (GSK2636771)
- TLR4 agonist (GSK1795091)
- NY-ESO-1 ImmTAC (GSK3537142)
- LAG-3 (TSR-033)
- PRMT1 inhibitor (GSK3368715)
- RIP1k inhibitor (GSK3145095)

**Phase I (FTIH)**

- First line maintenance ovarian, other solid tumours under investigation
- Multiple myeloma
- Endometrial, Ovarian, NSCLC, breast cancer**
- NSCLC, biliary tract cancer**
- Solid tumours
- Solid and heme malignancies
- Sarcoma, solid and heme malignancies
- Solid tumours, heme malignancies
- Solid tumours, heme malignancies
- NSCLC
- Cancer
- Cancer
- Cancer
- Cancer
- Pancreatic Cancer

**Phase II (dose expansion)**

- Cancer
- Cancer
- Cancer
- Cancer
- Cancer

**Phase III (pivotal)**

- Cancer
- Cancer
- Cancer
- Cancer
- Cancer

† In-license or other alliance relationship with third party
* Pending closure of transaction with Merck KGaA, Darmstadt, Germany
** Studies planned for 2019
New alliance with Merck* is an opportunity to further accelerate our oncology strategy

Current clinical status

- Encouraging NSCLC data presented
- Phase II underway versus pembrolizumab as 1L in patients with PD-L1+ advanced NSCLC
- 8 clinical development studies ongoing or expected to start in 2019

Complements existing assets

- Immuno-modulatory biological mechanism fits with our new R&D approach
- Potential for novel combinations with existing pipeline assets (ICOS, TLR4)
- Potential to explore combinations with IO assets in the recently acquired TESARO pipeline

* Merck KGaA, Darmstadt, Germany
PARP inhibitors: wider application than has been appreciated

PARP Inhibitors: The First Synthetic Lethal Targeted Therapy

- PARP inhibitors have transformed the treatment of ovarian cancer
- Prior to the publication of TESARO’s NOVA study, PARP inhibitors were thought to only benefit patients with gBRCA
- Evidence is mounting that suggest there is a significant opportunity to help many more patients (HRD positive – and potentially “all comers”) – in the first line maintenance (1LM) setting

PARP: poly ADP-ribose polymerase; HRD: homologous recombination deficiency

High grade serous ovarian cancer*

- gBRCA (15%)
- non-gBRCA HRD+ (35%)
- non-gBRCA HRD- (50%)

* As per Myriad test – HRD+ percentage may be higher

High grade serous ovarian cancer*
**July 2018**

- Initiated DREAMM-2 4L monotherapy pivotal study
  - 1st subject dosed early July
  - Planned to recruit 130 patients

- Announced broad development plan
  DREAMM-1 to -10 studies:
  - 4/3L in mono and combo
  - 2L in combo with SoC
  - 1L in combo with novel and SoC agents

- 83 patients treated on ‘916 at end July 2018

**February 2019**

- DREAMM-2 enrolled faster than expected
  - Planned 130 patients enrolled by Oct 2018
  - High study screening rate meant additional 68 patients enrolled by end December 2018

- Updated DREAMM-1 study shows mPFS with 3.4mg/kg of 12.0 months; publication in leading journal expected shortly

- Initiated DREAMM-6 combination pilot study; recruiting well

- 297 patients treated on ‘916 at end Jan 2019

SOC: standard of care

mPFS: months of progression free survival
Q&A