**Department of Defense (DOD)**

**Congressionally Directed Medical Research Program**

**Melanoma Research Program (MRP) - $35 Million Request for FY 2021**

**Demonstrated Need for Additional Research Dollars**

* According to preliminary data, the Program Announcement associated with the Fiscal 2019 CDMRP Melanoma Research Program (MRP) received 163 competitive applications.
* Only 17 awards will be granted, for less than an 11 percent success rate. In comparison, for NIH, applicants experienced a 20% success rate in 2018 on awards related to applications. The lower rate of 11% would indicate several strong proposals that could advance the work, but were not funded due to insufficient resources.
* Of the 146 applications that will not be funded, 68 percent of them are considered excellent and outstanding. That translates to 99 grant applications that could have been funded with an additional appropriation.
* With 17 grants that will be funded out of Fiscal 2019 MRP appropriation, that translates to an average grant size of $500,000.
* If all the excellent grants were funded, at an average grant size of $500,00, that would require $50 million in additional funding for the MRP.
* Add that figure to the $10 million that was appropriated for the MRP for Fiscal 2019, then the program could have spent $60 million on excellent and outstanding melanoma grants.

**Skin Cancer in the Military**

* According to LCDR Dr. Karen Zeman an Oncologist at the Walter Reid National Military Medical Center:
  + Warfighters have higher rates of skin cancer compared to civilians but report low rates of skin cancer awareness and dermatologic care.
  + There are multiple reasons for an increased rate of melanoma, including inadequate sunscreen access, insufficient emphasis on sun protections, and prioritizing immediate safety concerns over preventative care.
  + Active duty service members are also exposed to significant risk factors for melanoma, such as high rates of intense UV exposure, exposure to chemicals associated with melanoma (polychlorinated biphenyls), and exposure to jet exhaust and ionizing radiation.
* According to The Pulse, the online source for the Uniformed Services University, "melanoma is the most significant cancer to affect the active duty military population."
* According to Health.mil, the official website of the Military Health System
  + From 2005 through 2014, malignant melanomas have been the most frequently diagnosed cancer among U.S. military members overall, only eclipsed by non-melanoma skin cancers.
  + Overall, rates of malignant melanoma among service members increased exponentially in relation to years of active duty.
* According to Health.Mil, based on the 10-year surveillance period from 2005 through 2014,
  + Among male service members, malignant melanoma was one of the most frequent cancer diagnoses after testicular cancer.
  + Among females, malignant melanoma was the 2nd most frequent cancer diagnoses after breast cancer.
* A 2014 Military Medicine Study found that the overall incidence rate for melanoma in active duty military personnel between 2000 and 2007 was 62% greater than the general population during the same period.
  + Melanoma rates were significantly higher for active duty warfighters over 45 than for the general population, according to an earlier 2010 study published in Military Medicine.
* A Vanderbilt School of Medicine study--citing the following statistics--only 22 percent of military personnel were made aware of the risks of sun exposure; while 77 percent reported being exposed to bright sunlight for more than 4 hours a day, with only 27 percent having regular access to sunscreen—concluded
* "The past decade of United States' combat missions, including operations in Iraq and Afghanistan, have occurred at a more equatorial latitude than the mean center of the United States population, increasing the potential for ultraviolent irradiance and the development of skin cancer.'

**Investment by CDMRP relative to deaths – lags in melanoma compared to other cancers. (*These comparisons are based on Fiscal 2019 appropriations.)***

* When comparing CDMRP appropriations to specific cancers relative to anticipated deaths; breast cancer is funded 13 times greater than melanoma, but only experiences overall a 6 times greater rate of death.  Meaning – per death – melanoma gets less than half the investment breast cancer gets relative to prevalence from CDMRP – yet it is clear from research, melanoma much more linked to environment, and thus, higher rates among military due to sun exposure.
* Compared to Prostate Cancer – while deaths due to prostate cancer are anticipate at approximately 4 times as much as melanoma, funding for prostate cancer under CDMRP is at 10 times as much as melanoma for 2019. And again - it is clear, melanoma much more linked to environment, and thus, higher rates among military due to sun exposure than the general population.

**The US is failing in melanoma prevention, and it is particularly impacting the military, a global perspective shows we can do better.**

As documented – melanoma rates among the military occur greater than among the general US population. And among the US general population – it is one of the fastest growing cancers in terms of incidence, tripling rates over three decades.  It is also one of the most environmentally driven cancers – linked to UV damage to the skin.  As such, highly preventable, but little has been invested in the US in the prevention side of melanoma.  Where substantial investment of federal government has occurred – as in Australia – it has been shown that rates can be brought down, but currently rates only going up in the US.  In 2019 – CDMRP has prioritized prevention as a focus, but we have a long way to go and need much greater investment – particularly investment – if we are to turn rates down among US at large, and particularly among warfighters who faces greater sun exposure than many others.

**The power of research in melanoma to advance the field of oncology.**

Melanoma is one of the most immunogenic cancers – meaning, while rare – one’s own immune system can sometimes mount a response without intervention, making melanoma a prime target for testing immunotherapies (2013 Science Breakthrough of the Year - Immunotherapy).  As such, melanoma has been the best space to try and test new immunotherapies, which later have moved on to treat many other cancers.  In fact, the first three checkpoint immunotherapies approved by the FDA for melanoma, have since been approved for treating more than 15 other cancers

* Cervical Cancer
* Colorectal Cancer
* Cutaneous Small Cell Carcinoma
* Gastric Cancer
* Head & Neck Cancer
* Hepatocellular (Liver) Carcinoma
* Kidney Cancer
* Liver Cancer
* Lymphomas
* Merkel Cell Carcinoma
* Small and Non-Small Cell Lung Cancers
* Renal Cell Carcinoma
* Urothelial Carcinoma
* Triple-negative Breast Cancer
* MSI-H (Microsatellite Instability High Cancers)

**An investment in melanoma treatment research has offered unparalleled returns in advancing the field of oncology at large.**