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Objectives

- To evaluate cost of care and cost differences among patients with early and late stages of melanoma who received care within a large network of US community oncology clinics

Methods

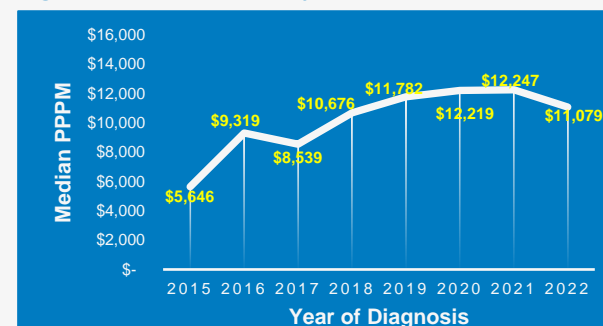
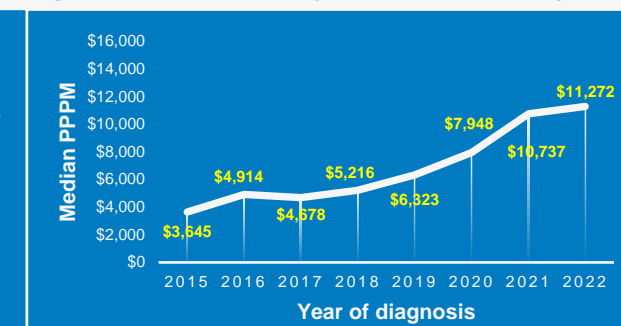
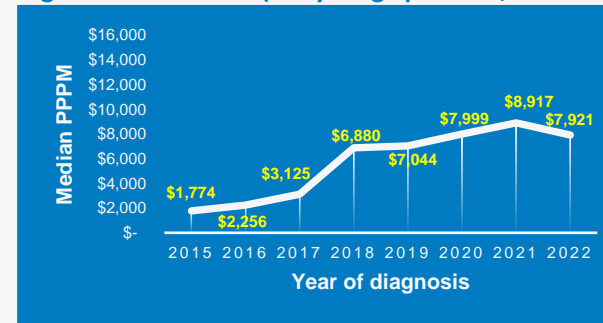
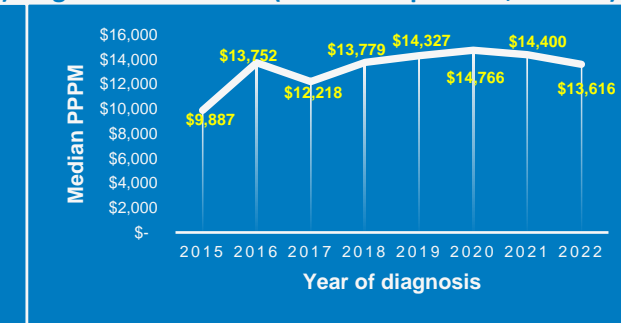
- Adult patients diagnosed with melanoma in The US Oncology Network from October 2015 through June 2022, treated with chemotherapy and have linked electronic health records (HER) and claims data were included.
- EHR data were retrospectively sourced from the iKnowMed™ (iKM) oncology-specific EHR that captures outpatient practice encounter histories for nearly 40% of US community oncology practices.
- All costs were paid amount for outpatient services, standardized to 2022 US dollars (\$), and analyzed descriptively as cost per patient per month (PPPM) longitudinally since 2015.

Results

- The study included 5,111 patients across all 4 US census divisions (Table 1)
- The median (Q1, Q3) age was 67 (57, 75).
- The majority of total costs (median PPPM: \$10,796) were chemotherapy (\$9,385).
- The median outpatient costs significantly increased since 2015 ($P<0.001$) with cost data censored within 12 months after the diagnosis date (Figure 1) and with all available follow-up (Figure 2).
- The outpatient costs for metastatic patients were significantly higher than early-stage patients ($p<0.001$) (Figure 3, 4)

Table 1: Outpatient Cost by Patient's Characteristics

Characteristics	N (%)	Median (Q1, Q3) PPPM
Overall cost	5,111 (100%)	\$10,796 (3,907, 16,004)
Chemotherapy cost	5,111 (100%)	\$9,385 (2,004, 15,103)
Early stage (non-metastatic)	2,173 (43%)	\$6,012 (1,167, 12,268)
Metastatic stage	2,938 (57%)	\$13,756 (7,586, 20,195)
Female	2,213 (39%)	\$9,117 (2,836, 15,044)
Male	3,451 (61%)	\$11,744 (7,850, 16,844)
Age group		
<65	2,188 (43%)	\$12,202 (5,056, 18,277)
65-74	1,530 (30%)	\$10,579 (3,167, 15,239)
75-84	1,061 (21%)	\$9,292 (2,962, 14,585)
85+	332 (6%)	\$9,098 (2,970, 13,286)
Race		
Black	44 (1%)	\$13,432 (8,011, 22,920)
White	4,288 (84%)	\$10,758 (3,817, 15,946)
Asian	23 (<1%)	\$8,306 (1,262, 14,857)
Other	73 (1%)	\$12,453 (5,919, 18,305)
Not documented	683 (13%)	\$11,105 (4,049, 16,051)
Region		
Midwest	1,027 (20%)	\$9,849 (3,319, 14,899)
Northeast	325 (6%)	\$12,658 (1,240, 17,019)
South	1,865 (37%)	\$10,158 (2,964, 15,862)
West	1,894 (37%)	\$11,765 (4,614, 16,988)
Rural	335 (7%)	\$10,261 (3,583, 15,166)
Urban	4,776 (93%)	\$10,882 (3,916, 16,051)
Insurance		
Medicare	2,974 (58%)	\$9,923 (3,167, 14,896)
Medicaid	324 (6%)	\$10,207 (4,001, 15,721)
Commercial	1,783 (35%)	\$12,449 (5,133, 18,743)
Other	30 (1%)	\$5,731 (495, 17,918)
Year of diagnosis		
2015 (partial year)	390 (7%)	\$5,646 (1,233, 13,850)
2016	623 (11%)	\$9,319 (2,508, 18,225)
2017	751 (13%)	\$8,539 (2,487, 14,517)
2018	900 (16%)	\$10,676 (3,734, 15,258)
2019	821 (15%)	\$11,782 (4,863, 16,053)
2020	755 (13%)	\$12,219 (5,009, 16,487)
2021	780 (14%)	\$12,247 (5,796, 17,124)
2022 (partial year)	644 (11%)	\$11,079 (5,326, 16,380)

Figure 1: Cost PPPM (all patients; 12 Mon)**Figure 2: Cost PPPM (all patients; all follow-up)****Figure 3: Cost PPPM (early-stage patients; 12 Mon)****Figure 4: Cost PPPM (metastatic patients; 12 Mon)**

Strengths/Limitations

- A strength is that the study data were sourced from linked EHR and claims databases of a large network of US community oncology practices.
- Cost information is limited to closed claims for outpatient services received within The Network.
- Since all patients in this study received chemotherapy within The Network, these results may not be generalizable to patients with melanoma who received other treatments or care outside The Network.
- Results were not adjusted for patient characteristics that may influence costs.

Conclusions

- To the best of our knowledge, this is the largest real-world study of costs on melanoma patients treated in the US community setting.
- The cost of treating melanoma has increased over time, especially for patients with early-stage diseases, and is significantly higher among patients with metastatic disease.
- These results may provide oncology stakeholders with insights into how advancements in melanoma treatments influence costs and the cost benefits of identifying melanoma prior to metastasis.