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Data obtained through Sentinel are intended to complement other types of evidence such as preclinical studies, clinical trials, postmarket studies, and adverse event reports, all of which are used by FDA to inform regulatory decisions regarding medical product safety. The information contained in this report is provided as part of FDA's commitment to place knowledge acquired from Sentinel in the public domain as soon as possible. Any public health actions taken by FDA regarding products involved in Sentinel queries will continue to be communicated through existing channels.

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The following report contains a description of the request, request specifications, and results from the modular program run(s).

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Overview for Request: cder_mpl1r_wp082

Request ID: cder_mpl1r_wp082

Request Description: The goal of this request was to observe the trends of incident and prevalent diagnosis codes for malignant melanoma and non-melanoma skin cancer across the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) era into the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) era. The official start date of ICD-10-CM codes in claims data was October 1, 2015.

Sentinel Modular Program Tool Used: Cohort Identification and Descriptive Analysis (CIDA) tool, version 5.1.2

Data Source: This request was run against a 5% randomized sample of 121 million patients in the Truven Health MarketScan® Commercial and Medicare Supplemental Databases for the time period of October 1, 2010 to September 30, 2016. See Appendix A for a list of dates of available in the MarketScan databases.

Study Design: This request was designed to identify incident and prevalent outcomes and observe trends over time. The number of qualifying members with the outcomes of interest were calculated overall and stratified by year and month.

Outcomes of Interest: Members with ICD-9-CM and ICD-10-CM diagnosis codes for malignant melanoma and non-melanoma skin cancer were captured. ICD-9-CM codes were mapped to ICD-10-CM codes using the forward-backward mapping (FBM)¹ method using the Centers for Medicare & Medicaid Services (CMS) General Equivalence Mappings (GEMs). See Appendices B and C for specific codes.

Cohort Eligibility Criteria: Members included in the cohorts were required to be enrolled in plans with medical coverage. The following age groups were included: 0-19, 20-44, 45-64 and 65+ years.

Incident Cohorts: Members included in the incident cohorts were required to be continuously enrolled in plans with medical coverage for at least 183 days prior to melanoma diagnosis, during which gaps in coverage of up to 45 days were allowed. Incident malignant melanoma diagnosis were defined as no previous melanoma diagnosis in the 183 days preceding the index date with respect to ICD-9-CM and ICD-10-CM codes. Incident non-melanoma skin cancer diagnosis were defined as no previous melanoma diagnosis in the 183 days preceding the index date with respect to ICD-9-CM and ICD-10-CM codes. Members contributed a maximum of one index date per ICD era. That is, members could contribute only one qualifying index date in the ICD-9-CM era (October 1, 2010 - September 30, 2015), but were also able to contribute one qualifying index date in the ICD-10-CM era (October 1, 2015 - September 30, 2016).

Prevalent Cohorts: Members in the prevalent cohorts were required to be enrolled in plans with medical coverage for at least one day. All qualifying index dates that occurred between October 1, 2010 and September 30, 2016 were included.

Limitations: Algorithms used to define outcomes are imperfect; thus, it is possible that there may be misclassification. Therefore, data should be interpreted with this limitation in mind.

Please see Appendix D for the specifications of parameters used in the analyses for this request.

Notes: Please contact the Sentinel Operations Center Query Fulfillment Team (qf@sentinelssystem.org) for questions and to provide comments/suggestions for future enhancements to this document.

MarketScan is a registered trademark of Truven Health Analytics, part of the IBM Watson Health business.

¹Fung et al, eGEMs 2016;4(1):Article 4

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Glossary of Terms for Analyses Using **Cohort Identification and Descriptive Analysis (CIDA) Tool***

Amount Supplied - number of units (pills, tablets, vials) dispensed. Net amount per NDC per dispensing.

Blackout Period - number of days at the beginning of a treatment episode that events are to be ignored. If an event occurs during the blackout period, the episode is excluded.

Care Setting - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency Department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or Missing (U). The Care Setting, along with the Principal Diagnosis Indicator (PDX), forms the Care Setting/PDX parameter.

Ambulatory Visit (AV) - includes visits at outpatient clinics, same-day surgeries, urgent care visits, and other same-day ambulatory hospital encounters, but excludes emergency department encounters.

Emergency Department (ED) - includes ED encounters that become inpatient stays (in which case inpatient stays would be a separate encounter). Excludes urgent care visits.

Inpatient Hospital Stay (IP) - includes all inpatient stays, same-day hospital discharges, hospital transfers, and acute hospital care where the discharge is after the admission date.

Non-Acute Institutional Stay (IS) - includes hospice, skilled nursing facility (SNF), rehab center, nursing home, residential, overnight non-hospital dialysis and other non-hospital stays.

Other Ambulatory Visit (OA) - includes other non overnight AV encounters such as hospice visits, home health visits, skilled nursing facility visits, other non-hospital visits, as well as telemedicine, telephone and email consultations.

Cohort Definition (drug/exposure) - indicates how the cohort will be defined: 01: Cohort includes only the first valid treatment episode during the query period; 02: Cohort includes all valid treatment episodes during the query period; 03: Cohort includes all valid treatment episodes during the query period.

Days Supplied - number of days supplied for all dispensings in qualifying treatment episodes.

Eligible Members - number of members eligible for an incident treatment episode (defined by the drug/exposure and event washout periods) with drug and medical coverage during the query period.

Enrollment Gap - number of days allowed between two consecutive enrollment periods without breaking a "continuously enrolled" sequence.

Episodes - treatment episodes; length of episode is determined by days supplied in one dispensing or consecutive dispensings bridged by the episode.

Episode Gap - number of days allowed between two (or more) consecutive exposures (dispensings/procedures) to be considered the same treatment episode.

Event Deduplication - specifies how events are counted by the Modular Program (MP) algorithm: 0: Counts all occurrences of a health outcome of interest (HOI) during an exposure episode; 1: de-duplicates occurrences of the same HOI code and code type on the same day; 2: de-duplicates occurrences of the same HOI group on the same day (e.g., de-duplicates at the group level).

Exposure Episode Length - number of days after exposure initiation that is considered "exposed time."

Exposure Extension Period - number of days post treatment period in which the outcomes/events are counted for a treatment episode. Extensions are added after any episode gaps have been bridged.

Lookback Period - number of days wherein a member is required to have evidence of pre-existing condition (diagnosis/procedure/drug dispensing).

Maximum Episode Duration - truncates exposure episodes after a requester-specified number of exposed days. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Member-Years - sum of all days of enrollment with medical and drug coverage in the query period preceded by an exposure washout period all divided by 365.25.

Minimum Days Supplied - specifies a minimum number of days in length of the days supplied for the episode to be considered.

Minimum Episode Duration - specifies a minimum number of days in length of the episode for it to be considered. Applied after any gaps are bridged and extension days added to the length of the exposure episode.

Monitoring Period - used to define time periods of interest for both sequential analysis and simple cohort characterization requests.

Principal Diagnosis (PDX) - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the Caresetting/PDX parameter.

Query Period - period in which the modular program looks for exposures and outcomes of interest.

Treatment Episode Truncation Indicator - indicates whether the exposure episode will be truncated at the occurrence of a requester-specified code.

Washout Period (drug/exposure) - number of days a user is required to have no evidence of prior exposure (drug dispensing/procedure) and continuous drug and medical coverage prior to an incident treatment episode.

Washout Period (event/outcome) - number of days a user is required to have no evidence of a prior event (procedure/diagnosis) and continuous drug and medical coverage prior to an incident treatment episode.

Years at Risk - number of days supplied plus any episode gaps and exposure extension periods all divided by 365.25.

*all terms may not be used in this report

Modular Program Report



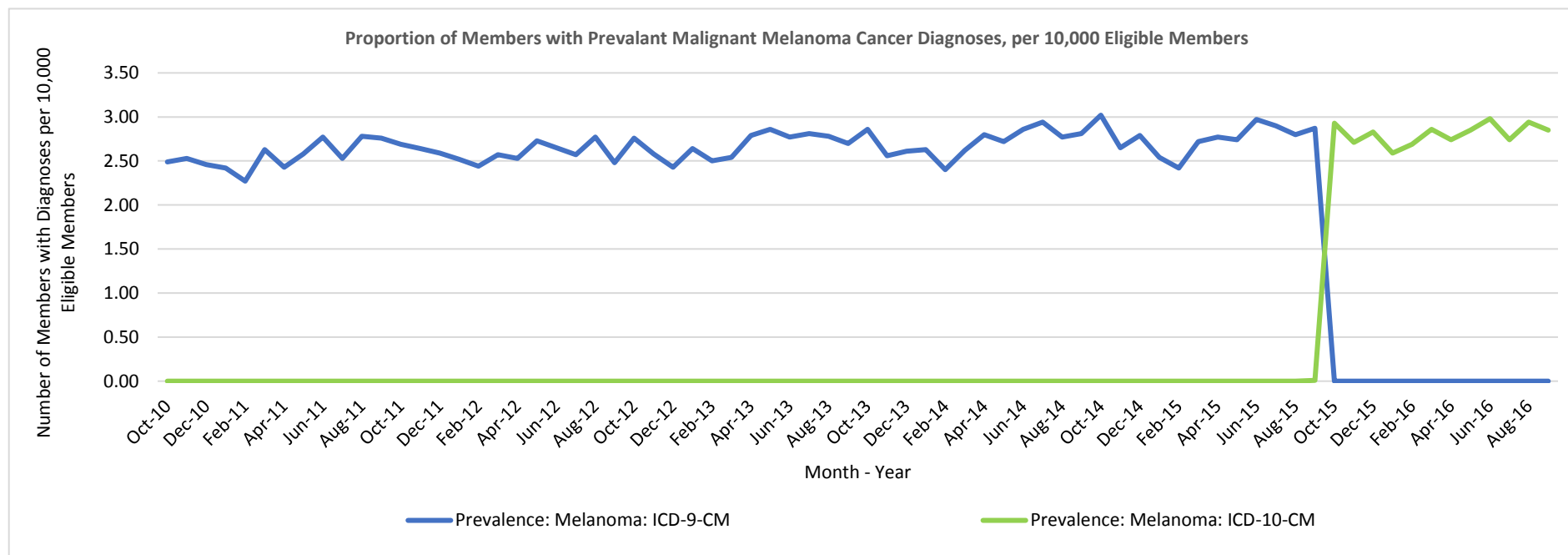
Table 1. Summary of Incident and Prevalent Diagnoses of Malignant Melanoma and Non-Melanoma Skin Cancer using International Classification of Diseases, Ninth and 10th Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes, between October 1, 2010 and September 30, 2016

	Members with Diagnosis Codes	Number of Diagnosis Codes	Eligible Members	Members with Diagnosis Codes / 10,000 Eligible Members
Malignant Melanoma				
Incident Diagnoses Defined by ICD-9-CM Codes (October 1, 2010 to September 30, 2016)				
	216,464	216,464	102,534,420	21.11
Incident Diagnoses Defined by ICD-10-CM Codes (October 1, 2010 to September 30, 2016)				
	33,657	33,657	102,534,420	3.28
Prevalent Diagnoses Defined by ICD-9-CM Codes (October 1, 2010 to September 30, 2016)				
	258,588	1,208,350	117,675,380	21.97
Prevalent Diagnoses Defined by ICD-10-CM Codes (October 1, 2010 to September 30, 2016)				
	43,797	148,168	117,675,380	3.72
Non-Melanoma Skin Cancer				
Incident Diagnoses Defined by ICD-9-CM Codes (October 1, 2010 to September 30, 2016)				
	1,614,231	1,614,231	102,482,616	157.51
Incident Diagnoses Defined by ICD-10-CM Codes (October 1, 2010 to September 30, 2016)				
	236,994	236,994	102,482,616	23.13
Prevalent Diagnoses Defined by ICD-9-CM Codes (October 1, 2010 to September 30, 2016)				
	1,858,807	5,588,770	117,675,380	157.96
Prevalent Diagnoses Defined by ICD-10-CM Codes (October 1, 2010 to September 30, 2016)				
	292,818	676,700	117,675,380	24.88

Modular Program Report



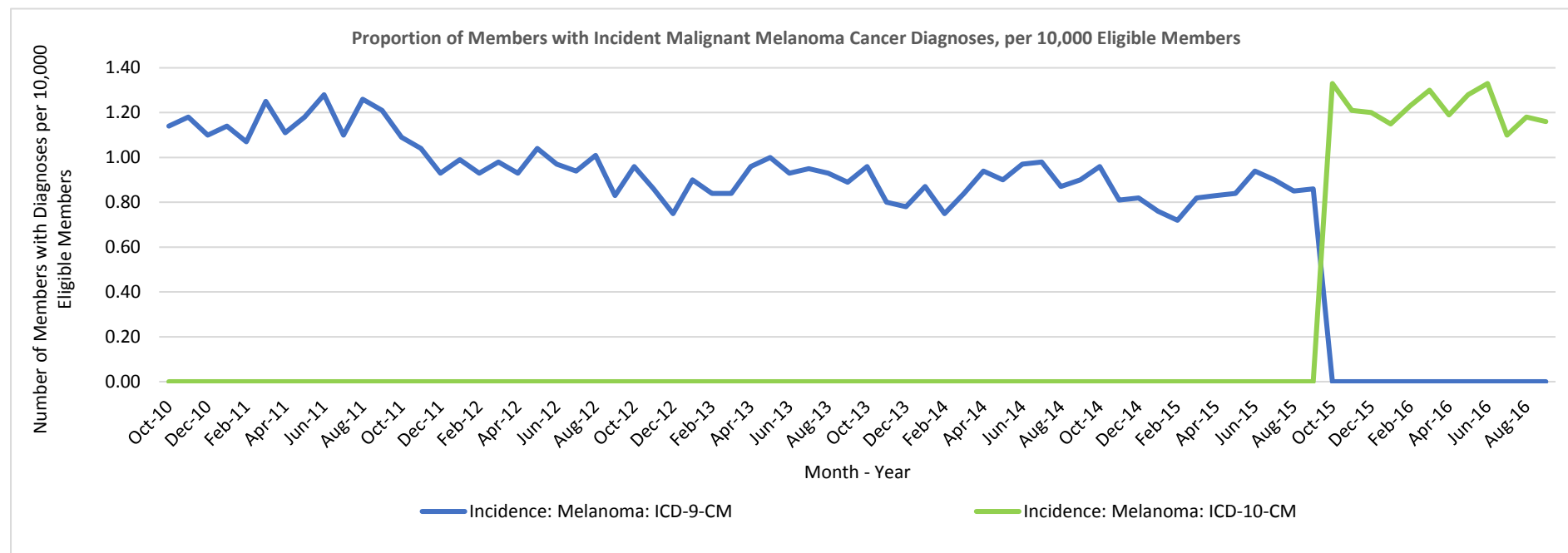
Figure 1. Number of Members with Prevalent Malignant Melanoma Cancer Diagnoses, per 10,000 Eligible Members between October 1, 2010 and September 30, 2016 by Month-Year



Modular Program Report



Figure 2. Number of Members with Incident Malignant Melanoma Cancer Diagnoses, per 10,000 Eligible Members between October 1, 2010 and September 30, 2016 by Month-Year

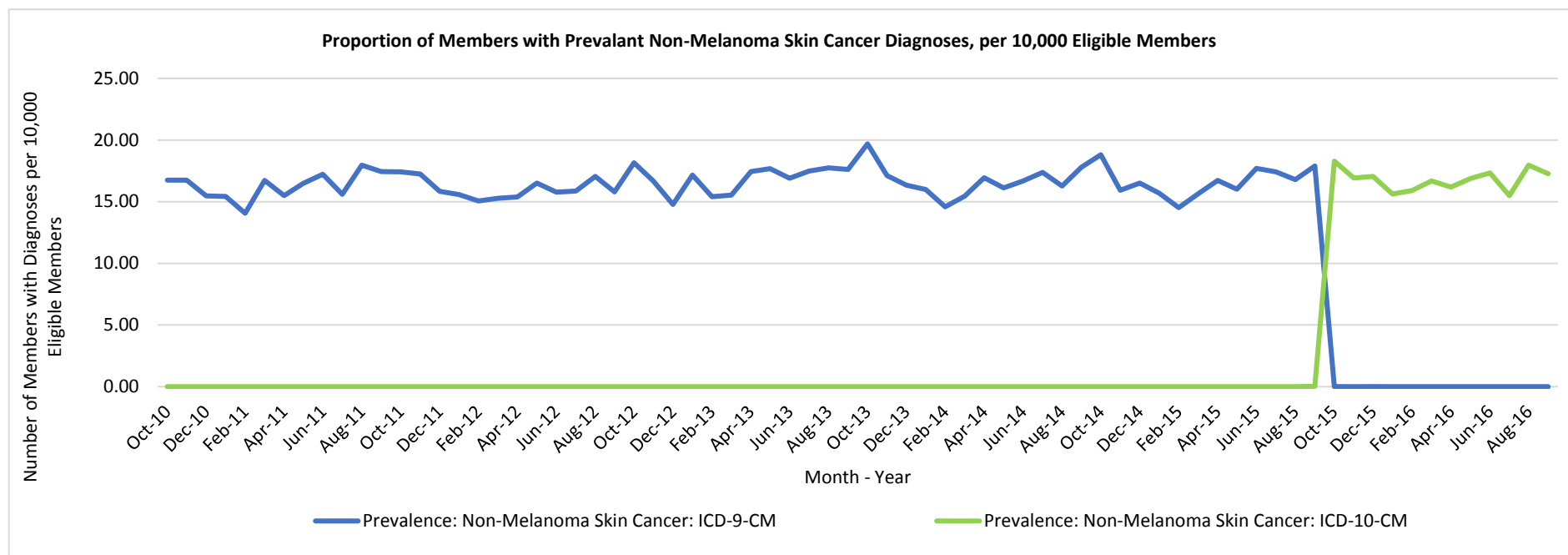


¹Only the first valid incident diagnoses date per individual during the query period is included in the ICD-9-CM and the ICD-10-CM eras.

Modular Program Report



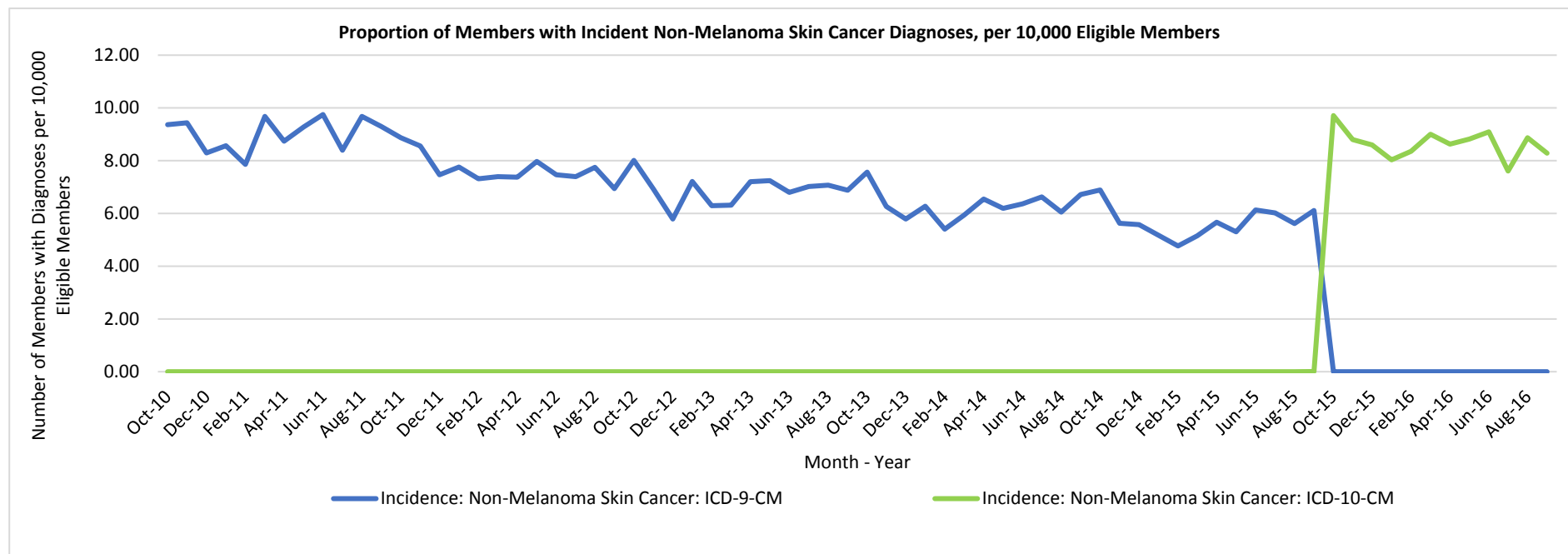
Figure 3. Number of Members with Prevalent Non-Melanoma Skin Cancer Diagnoses, per 10,000 Eligible Members between October 1, 2010 and September 30, 2016 by Month-Year



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Figure 4. Number of Members with Incident Non-Melanoma Skin Cancer Diagnoses, per 10,000 Eligible Members between October 1, 2010 and September 30, 2016 by Month-Year



¹Only the first valid incident diagnoses date per individual during the query period is included in the ICD-9-CM and the ICD-10-CM eras.

Modular Program Report



Appendix A. Dates Available for Truven Health MarketScan Commercial and Medicare Supplemental Databases

Databases	Start Date	End Date
MarketScan Commercial and Medicare Supplemental Databases ¹	1/1/2010	9/30/2016

¹ The MarketScan Databases represent a 5% randomized sample of 121 million patients.

Appendix B. List of International Classification of Diseases, Ninth and 10th Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Malignant Melanoma

Code	Description	Code Category	Code Type
ICD-9-CM			
172	Malignant melanoma of skin	DX	09
172.0	Malignant melanoma of skin of lip	DX	09
172.1	Malignant melanoma of skin of eyelid, including canthus	DX	09
172.2	Malignant melanoma of skin of ear and external auditory canal	DX	09
172.3	Malignant melanoma of skin of other and unspecified parts of face	DX	09
172.4	Malignant melanoma of skin of scalp and neck	DX	09
172.5	Malignant melanoma of skin of trunk, except scrotum	DX	09
172.6	Malignant melanoma of skin of upper limb, including shoulder	DX	09
172.7	Malignant melanoma of skin of lower limb, including hip	DX	09
172.8	Malignant melanoma of other specified sites of skin	DX	09
172.9	Melanoma of skin, site unspecified	DX	09

Appendix B. List of International Classification of Diseases, Ninth and 10th Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Malignant Melanoma

Code	Description	Code Category	Code Type
ICD-10-CM (Forward Backward Mapping)			
C43.0	Malignant melanoma of lip	DX	10
C43.10	Malignant melanoma of unspecified eyelid, including canthus	DX	10
C43.11	Malignant melanoma of right eyelid, including canthus	DX	10
C43.12	Malignant melanoma of left eyelid, including canthus	DX	10
C43.20	Malignant melanoma of unspecified ear and external auricular canal	DX	10
C43.21	Malignant melanoma of right ear and external auricular canal	DX	10
C43.22	Malignant melanoma of left ear and external auricular canal	DX	10
C43.30	Malignant melanoma of unspecified part of face	DX	10
C43.31	Malignant melanoma of nose	DX	10
C43.39	Malignant melanoma of other parts of face	DX	10
C43.4	Malignant melanoma of scalp and neck	DX	10
C43.51	Malignant melanoma of anal skin	DX	10
C43.52	Malignant melanoma of skin of breast	DX	10
C43.59	Malignant melanoma of other part of trunk	DX	10
C43.60	Malignant melanoma of unspecified upper limb, including shoulder	DX	10
C43.61	Malignant melanoma of right upper limb, including shoulder	DX	10
C43.62	Malignant melanoma of left upper limb, including shoulder	DX	10
C43.70	Malignant melanoma of unspecified lower limb, including hip	DX	10
C43.71	Malignant melanoma of right lower limb, including hip	DX	10
C43.72	Malignant melanoma of left lower limb, including hip	DX	10
C43.8	Malignant melanoma of overlapping sites of skin	DX	10
C43.9	Malignant melanoma of skin, unspecified	DX	10
D03.0	Melanoma in situ of lip	DX	10
D03.10	Melanoma in situ of unspecified eyelid, including canthus	DX	10
D03.11	Melanoma in situ of right eyelid, including canthus	DX	10
D03.12	Melanoma in situ of left eyelid, including canthus	DX	10
D03.20	Melanoma in situ of unspecified ear and external auricular canal	DX	10
D03.21	Melanoma in situ of right ear and external auricular canal	DX	10
D03.22	Melanoma in situ of left ear and external auricular canal	DX	10
D03.30	Melanoma in situ of unspecified part of face	DX	10
D03.39	Melanoma in situ of other parts of face	DX	10
D03.4	Melanoma in situ of scalp and neck	DX	10
D03.51	Melanoma in situ of anal skin	DX	10
D03.52	Melanoma in situ of breast (skin) (soft tissue)	DX	10
D03.59	Melanoma in situ of other part of trunk	DX	10
D03.60	Melanoma in situ of unspecified upper limb, including shoulder	DX	10
D03.61	Melanoma in situ of right upper limb, including shoulder	DX	10
D03.62	Melanoma in situ of left upper limb, including shoulder	DX	10
D03.70	Melanoma in situ of unspecified lower limb, including hip	DX	10
D03.71	Melanoma in situ of right lower limb, including hip	DX	10
D03.72	Melanoma in situ of left lower limb, including hip	DX	10
D03.8	Melanoma in situ of other sites	DX	10
D03.9	Melanoma in situ, unspecified	DX	10

Appendix C. List of International Classification of Diseases, Ninth and 10th Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Non-Melanoma Skin Cancer

Code	Description	Code	Code Type
ICD-9-CM		Category	
173	Other and unspecified malignant neoplasm of skin	DX	09
173.0	Other and unspecified malignant neoplasm of skin of lip	DX	09
173.00	Unspecified malignant neoplasm of skin of lip	DX	09
173.01	Basal cell carcinoma of skin of lip	DX	09
173.02	Squamous cell carcinoma of skin of lip	DX	09
173.09	Other specified malignant neoplasm of skin of lip	DX	09
173.1	Other and unspecified malignant neoplasm of eyelid, including canthus	DX	09
173.10	Unspecified malignant neoplasm of eyelid, including canthus	DX	09
173.11	Basal cell carcinoma of eyelid, including canthus	DX	09
173.12	Squamous cell carcinoma of eyelid, including canthus	DX	09
173.19	Other specified malignant neoplasm of eyelid, including canthus	DX	09
173.2	Other and unspecified malignant neoplasm of skin of ear and external auditory canal	DX	09
173.20	Unspecified malignant neoplasm of skin of ear and external auditory canal	DX	09
173.21	Basal cell carcinoma of skin of ear and external auditory canal	DX	09
173.22	Squamous cell carcinoma of skin of ear and external auditory canal	DX	09
173.29	Other specified malignant neoplasm of skin of ear and external auditory canal	DX	09
173.3	Other and unspecified malignant neoplasm of skin of other and unspecified parts of face	DX	09
173.30	Unspecified malignant neoplasm of skin of other and unspecified parts of face	DX	09
173.31	Basal cell carcinoma of skin of other and unspecified parts of face	DX	09
173.32	Squamous cell carcinoma of skin of other and unspecified parts of face	DX	09
173.39	Other specified malignant neoplasm of skin of other and unspecified parts of face	DX	09
173.4	Other and unspecified malignant neoplasm of scalp and skin of neck	DX	09
173.40	Unspecified malignant neoplasm of scalp and skin of neck	DX	09
173.41	Basal cell carcinoma of scalp and skin of neck	DX	09
173.42	Squamous cell carcinoma of scalp and skin of neck	DX	09
173.49	Other specified malignant neoplasm of scalp and skin of neck	DX	09
173.5	Other and unspecified malignant neoplasm of skin of trunk, except scrotum	DX	09
173.50	Unspecified malignant neoplasm of skin of trunk, except scrotum	DX	09
173.51	Basal cell carcinoma of skin of trunk, except scrotum	DX	09
173.52	Squamous cell carcinoma of skin of trunk, except scrotum	DX	09
173.59	Other specified malignant neoplasm of skin of trunk, except scrotum	DX	09
173.6	Other and unspecified malignant neoplasm of skin of upper limb, including shoulder	DX	09
173.60	Unspecified malignant neoplasm of skin of upper limb, including shoulder	DX	09
173.61	Basal cell carcinoma of skin of upper limb, including shoulder	DX	09
173.62	Squamous cell carcinoma of skin of upper limb, including shoulder	DX	09
173.69	Other specified malignant neoplasm of skin of upper limb, including shoulder	DX	09
173.7	Other and unspecified malignant neoplasm of skin of lower limb, including hip	DX	09
173.70	Unspecified malignant neoplasm of skin of lower limb, including hip	DX	09
173.71	Basal cell carcinoma of skin of lower limb, including hip	DX	09
173.72	Squamous cell carcinoma of skin of lower limb, including hip	DX	09
173.79	Other specified malignant neoplasm of skin of lower limb, including hip	DX	09
173.8	Other and unspecified malignant neoplasm of other specified sites of skin	DX	09
173.80	Unspecified malignant neoplasm of other specified sites of skin	DX	09
173.81	Basal cell carcinoma of other specified sites of skin	DX	09
173.82	Squamous cell carcinoma of other specified sites of skin	DX	09
173.89	Other specified malignant neoplasm of other specified sites of skin	DX	09
173.9	Other and unspecified malignant neoplasm of skin, site unspecified	DX	09
173.90	Unspecified malignant neoplasm of skin, site unspecified	DX	09
173.91	Basal cell carcinoma of skin, site unspecified	DX	09
173.92	Squamous cell carcinoma of skin, site unspecified	DX	09
173.99	Other specified malignant neoplasm of skin, site unspecified	DX	09

Appendix C. List of International Classification of Diseases, Ninth and 10th Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Non-Melanoma Skin Cancer

Code	Description	Code	Code Type
ICD-10-CM (Forward Backward Mapping)			
C44.00	Unspecified malignant neoplasm of skin of lip	DX	10
C44.01	Basal cell carcinoma of skin of lip	DX	10
C44.02	Squamous cell carcinoma of skin of lip	DX	10
C44.09	Other specified malignant neoplasm of skin of lip	DX	10
C44.101	Unspecified malignant neoplasm of skin of unspecified eyelid, including canthus	DX	10
C44.102	Unspecified malignant neoplasm of skin of right eyelid, including canthus	DX	10
C44.109	Unspecified malignant neoplasm of skin of left eyelid, including canthus	DX	10
C44.111	Basal cell carcinoma of skin of unspecified eyelid, including canthus	DX	10
C44.112	Basal cell carcinoma of skin of right eyelid, including canthus	DX	10
C44.119	Basal cell carcinoma of skin of left eyelid, including canthus	DX	10
C44.121	Squamous cell carcinoma of skin of unspecified eyelid, including canthus	DX	10
C44.122	Squamous cell carcinoma of skin of right eyelid, including canthus	DX	10
C44.129	Squamous cell carcinoma of skin of left eyelid, including canthus	DX	10
C44.191	Other specified malignant neoplasm of skin of unspecified eyelid, including canthus	DX	10
C44.192	Other specified malignant neoplasm of skin of right eyelid, including canthus	DX	10
C44.199	Other specified malignant neoplasm of skin of left eyelid, including canthus	DX	10
C44.201	Unspecified malignant neoplasm of skin of unspecified ear and external auricular canal	DX	10
C44.202	Unspecified malignant neoplasm of skin of right ear and external auricular canal	DX	10
C44.209	Unspecified malignant neoplasm of skin of left ear and external auricular canal	DX	10
C44.211	Basal cell carcinoma of skin of unspecified ear and external auricular canal	DX	10
C44.212	Basal cell carcinoma of skin of right ear and external auricular canal	DX	10
C44.219	Basal cell carcinoma of skin of left ear and external auricular canal	DX	10
C44.221	Squamous cell carcinoma of skin of unspecified ear and external auricular canal	DX	10
C44.222	Squamous cell carcinoma of skin of right ear and external auricular canal	DX	10
C44.229	Squamous cell carcinoma of skin of left ear and external auricular canal	DX	10
C44.291	Other specified malignant neoplasm of skin of unspecified ear and external auricular canal	DX	10
C44.292	Other specified malignant neoplasm of skin of right ear and external auricular canal	DX	10
C44.299	Other specified malignant neoplasm of skin of left ear and external auricular canal	DX	10
C44.300	Unspecified malignant neoplasm of skin of unspecified part of face	DX	10
C44.301	Unspecified malignant neoplasm of skin of nose	DX	10
C44.309	Unspecified malignant neoplasm of skin of other parts of face	DX	10
C44.310	Basal cell carcinoma of skin of unspecified parts of face	DX	10
C44.311	Basal cell carcinoma of skin of nose	DX	10
C44.319	Basal cell carcinoma of skin of other parts of face	DX	10
C44.320	Squamous cell carcinoma of skin of unspecified parts of face	DX	10
C44.321	Squamous cell carcinoma of skin of nose	DX	10
C44.329	Squamous cell carcinoma of skin of other parts of face	DX	10
C44.390	Other specified malignant neoplasm of skin of unspecified parts of face	DX	10
C44.391	Other specified malignant neoplasm of skin of nose	DX	10
C44.399	Other specified malignant neoplasm of skin of other parts of face	DX	10
C44.40	Unspecified malignant neoplasm of skin of scalp and neck	DX	10
C44.41	Basal cell carcinoma of skin of scalp and neck	DX	10
C44.42	Squamous cell carcinoma of skin of scalp and neck	DX	10
C44.49	Other specified malignant neoplasm of skin of scalp and neck	DX	10
C44.500	Unspecified malignant neoplasm of anal skin	DX	10
C44.501	Unspecified malignant neoplasm of skin of breast	DX	10
C44.509	Unspecified malignant neoplasm of skin of other part of trunk	DX	10
C44.510	Basal cell carcinoma of anal skin	DX	10
C44.511	Basal cell carcinoma of skin of breast	DX	10
C44.519	Basal cell carcinoma of skin of other part of trunk	DX	10
C44.520	Squamous cell carcinoma of anal skin	DX	10
C44.521	Squamous cell carcinoma of skin of breast	DX	10
C44.529	Squamous cell carcinoma of skin of other part of trunk	DX	10
C44.590	Other specified malignant neoplasm of anal skin	DX	10
C44.591	Other specified malignant neoplasm of skin of breast	DX	10
C44.599	Other specified malignant neoplasm of skin of other part of trunk	DX	10

Appendix C. List of International Classification of Diseases, Ninth and 10th Revisions, Clinical Modification (ICD-9-CM and ICD-10-CM) Diagnosis Codes Used to Define Non-Melanoma Skin Cancer

Code	Description	Code	Code Type
		Category	
C44.601	Unspecified malignant neoplasm of skin of unspecified upper limb, including shoulder	DX	10
C44.602	Unspecified malignant neoplasm of skin of right upper limb, including shoulder	DX	10
C44.609	Unspecified malignant neoplasm of skin of left upper limb, including shoulder	DX	10
C44.611	Basal cell carcinoma of skin of unspecified upper limb, including shoulder	DX	10
C44.612	Basal cell carcinoma of skin of right upper limb, including shoulder	DX	10
C44.619	Basal cell carcinoma of skin of left upper limb, including shoulder	DX	10
C44.621	Squamous cell carcinoma of skin of unspecified upper limb, including shoulder	DX	10
C44.622	Squamous cell carcinoma of skin of right upper limb, including shoulder	DX	10
C44.629	Squamous cell carcinoma of skin of left upper limb, including shoulder	DX	10
C44.691	Other specified malignant neoplasm of skin of unspecified upper limb, including shoulder	DX	10
C44.692	Other specified malignant neoplasm of skin of right upper limb, including shoulder	DX	10
C44.699	Other specified malignant neoplasm of skin of left upper limb, including shoulder	DX	10
C44.701	Unspecified malignant neoplasm of skin of unspecified lower limb, including hip	DX	10
C44.702	Unspecified malignant neoplasm of skin of right lower limb, including hip	DX	10
C44.709	Unspecified malignant neoplasm of skin of left lower limb, including hip	DX	10
C44.711	Basal cell carcinoma of skin of unspecified lower limb, including hip	DX	10
C44.712	Basal cell carcinoma of skin of right lower limb, including hip	DX	10
C44.719	Basal cell carcinoma of skin of left lower limb, including hip	DX	10
C44.721	Squamous cell carcinoma of skin of unspecified lower limb, including hip	DX	10
C44.722	Squamous cell carcinoma of skin of right lower limb, including hip	DX	10
C44.729	Squamous cell carcinoma of skin of left lower limb, including hip	DX	10
C44.791	Other specified malignant neoplasm of skin of unspecified lower limb, including hip	DX	10
C44.792	Other specified malignant neoplasm of skin of right lower limb, including hip	DX	10
C44.799	Other specified malignant neoplasm of skin of left lower limb, including hip	DX	10
C44.80	Unspecified malignant neoplasm of overlapping sites of skin	DX	10
C44.81	Basal cell carcinoma of overlapping sites of skin	DX	10
C44.82	Squamous cell carcinoma of overlapping sites of skin	DX	10
C44.89	Other specified malignant neoplasm of overlapping sites of skin	DX	10
C44.90	Unspecified malignant neoplasm of skin, unspecified	DX	10
C44.91	Basal cell carcinoma of skin, unspecified	DX	10
C44.92	Squamous cell carcinoma of skin, unspecified	DX	10
C44.99	Other specified malignant neoplasm of skin, unspecified	DX	10

Modular Program Report



Appendix D. Specifications Defining Parameters Used in this Request

Sentinel's Cohort Identification and Descriptive Analysis (CIDA) tool will be used to compare the frequency of diagnoses for a selection of health outcomes using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) versus Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes.

Enrollment Gap: 45 Days

Age Groups: 0-44, 45-64, 65+ years

Enrollment Requirement: 183 days for incidence scenarios; 0 days for prevalence scenarios

Coverage Requirement: Medical coverage

Event

Scenario	Query Start Date	Query End Date	Event	Event Code Type	Incident w/ Respect To	Washout (days)	Cohort Definition	Care Setting
1	10/1/2010	9/30/2016	Malignant Melanoma	ICD-9-CM	ICD-9-CM or ICD-10-CM	183	01	Any
2	10/1/2010	9/30/2016	Malignant Melanoma	ICD-10-CM	ICD-9-CM or ICD-10-CM	183	01	Any
3	10/1/2010	9/30/2016	Malignant Melanoma	ICD-9-CM	N/A	0	02	Any
4	10/1/2010	9/30/2016	Malignant Melanoma	ICD-10-CM	N/A	0	02	Any
5	10/1/2010	9/30/2016	Non-Melanoma Skin Cancer	ICD-9-CM	ICD-9-CM or ICD-10-CM	183	01	Any
6	10/1/2010	9/30/2016	Non-Melanoma Skin Cancer	ICD-10-CM	ICD-9-CM or ICD-10-CM	183	01	Any
7	10/1/2010	9/30/2016	Non-Melanoma Skin Cancer	ICD-9-CM	N/A	0	02	Any
8	10/1/2010	9/30/2016	Non-Melanoma Skin Cancer	ICD-10-CM	N/A	0	02	Any

ICD-9-CM and ICD-10-CM are provided by Optum360. ICD-10-CM codes were mapped from ICD-9-CM codes using the Centers for Medicare and Medicaid Services General Equivalence Mappings.