

The incidence of venous thromboembolism in atopic dermatitis: A matched cohort analysis in UK primary care: Statistical Analysis

Plan and Protocol

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List of abbreviations

Abbreviation	Full Form
AD	Atopic dermatitis
ADEPT	Anonymised Data Ethics Protocols and Transparency
BMI	Body mass index
CI	Confidence Interval
CKD	Chronic kidney disease
COPD	Chronic obstructive pulmonary disease
DOAC	Direct oral anticoagulant
DVT	Deep vein thrombosis
GEP	Good Epidemiological Practice
GP	General Practitioner
GPP	Good Pharmacoepidemiology Practices
HR	Hazard Ratio
HRT	Hormone replacement therapy
IBD	Inflammatory bowel disease
IEA	International Epidemiological Association
IMD	Index of multiple deprivation
IQR	Interquartile range
ISPE	International Society for Pharmacoepidemiology
OPCRD	Optimum Patient Care Research Database
PE	Pulmonary embolism
RA	Rheumatoid arthritis
RECORD	Reporting of studies conducted using observational routinely collected data
SD	Standard deviation
TCI	Topical calcineurin inhibitor
VTE	Venous thromboembolism

1. Introduction

1.1 Background

Atopic dermatitis

Atopic dermatitis (AD) is a chronic inflammatory skin condition that affects around 200 million people worldwide (1). The incidence of AD has risen significantly over recent decades, in particular in high income countries (2). It most commonly develops in the first year of life, although onset can occur at any age (3, 4). AD usually follows a chronic relapsing-remitting course, and maintaining disease control may require the use of ongoing treatment (5).

Whilst many AD-affected children will have resolution or improvement by late childhood (3), a substantial proportion of people will have ongoing AD into adulthood, and flare ups can occur even after long periods of remission (4, 6). Itch, discomfort and visible skin lesions can result in disturbed sleep, social embarrassment and impaired quality of life (7).

Given that the majority of AD patients are seen and treated principally in primary care in the UK, databases of electronic health records from general practitioner (GP) practices provide a rich data source from which epidemiological analyses can be derived (8).

Venous thromboembolism

Venous thromboembolism (VTE), which comprises pulmonary embolism (PE) and deep vein thrombosis (DVT), is relatively common, with an incidence in the general population of around 3 cases per 1,000 patient years (9). It is associated with significant morbidity and mortality (10, 11).

VTE occurs due to a complex interplay of acquired or inherited thrombotic tendencies alongside various risk factors including active cancer, fractures, surgery, immobility, use of oral corticosteroids, superficial vein thrombosis, and in women, pregnancy and puerperium, oral contraception, and hormone therapy (12-15). In addition to these risk factors, conditions associated with chronic inflammation are increasingly being recognised as increasing the risk of VTE. Observational data demonstrate higher VTE rates in people with chronic inflammatory diseases including ulcerative colitis, Crohn's disease, rheumatoid arthritis, psoriatic arthritis, and psoriasis compared to the general population (16-21). However, to our knowledge there have not been any large population-based studies assessing the incidence of VTE in people with AD

compared to people without the condition. Studies are also lacking as to whether known risk factors carry the same risk of VTE in people with and without AD.

1.2. Purposes of analyses

In this retrospective population-based study we will set out to establish the presence and magnitude of any excess risk of VTE in people with AD compared to a control population without AD. We will also explore potential heterogeneity in the risk of VTE across subgroups of people with AD defined by sociodemographic factors and established VTE risk factors which are prevalent in people with AD

2. Study objectives and endpoints

2.1 Study objectives

The overall purpose of this study is to examine whether VTE is higher in people with AD compared and those without, and to explore the risk in particular subgroups of people with AD such as those with higher body mass index (BMI) or using oestrogen containing contraceptives. Such insights will be valuable for clinicians in advising patients with AD regarding VTE prevention and detection and when selecting AD treatments.

2.2 Primary objective

To describe the risk of VTE in people with AD compared to a matched control population.

2.3 Secondary objectives:

- 1) To describe the risk of PE and DVT individually in people with AD compared to a matched control population.

- 2) To explore potential heterogeneity in the risk of VTE across subgroups of people with AD: by sex, age groups (18-45, 45-65, 65+), obesity, baseline use of oestrogen containing contraceptives in females, AD severity and history of allergic conditions.

2.4 Primary endpoint

The primary endpoint will be a diagnosis of VTE (a composite of PE or DVT) within 10 years starting from the index date. When both PE and DVT occur, the VTE diagnosis date will be the earliest of PE or DVT.

2.5 Secondary endpoints

- 1) Diagnosis of PE and diagnosis of DVT individually within 10 years starting from the index date. When both PE and DVT occur on the same event day this will be classified as a PE. Outcomes will be identified using previously validated, and subsequently updated, code lists.(22)
- 2) Diagnosis of VTE (a composite of PE or DVT) within 10 years starting from the index date.

2.6 Other exploratory analyses

To cover the possibility of non-recorded VTE, we will analyse a composite of VTE diagnosis in people initiated on anticoagulant prescriptions without a recorded diagnosis of atrial fibrillation or prosthetic heart valve. The potential VTE event date for those without a VTE diagnosis but started on an anticoagulant will be the date of initiation of the anticoagulant.

3 General Study Design and Plan

3.1 Study Design

This is a non-interventional matched cohort study.

3.2 Data source and Read codes

This study will use routinely collected and collated data from the Optimum Patient Care Research Database (OPCRD).(23) This database incorporates pseudonymised primary care records from up to 700 GP practices distributed across England, Wales, Scotland and Northern Ireland. The current OPCRD cohort size is over 5 million actively registered people, and historic records available for 10.1 million people. The cohort dataset can be enhanced through direct-to-patient and direct-to-care provider questionnaires.

3.3 Data extraction

Individual patient data is anonymised at the point of data extraction. Queries will be executed to extract relevant data from the OPCRD using the Read code listed in Appendix 1. All data will remain in anonymised form and will be held on a secure server. The data will not be used for any purposes other than for the research which is described in the respective protocols and which has been approved by OPC. The sponsor, Pfizer Ltd, will not have access to the individual anonymised patient data.

3.4 Inclusion-Exclusion Criteria and General Study Population

Definition of atopic dermatitis

AD will be identified using a combination of AD specific diagnosis Read and SNOMED codes, and two or more AD treatments prescribed on different dates. Diagnosis codes which are not specific for AD (e.g., hand dermatitis) are not included for AD case finding. The full list of diagnosis codes to be used is provided in Appendix 1.

The treatments used to define AD will comprise; topical emollients, topical steroids, and topical calcineurin inhibitors. We will also make our AD case definition more stringent than that used by Abuabara et al. (24) by excluding people with conditions that may be misdiagnosed or miscoded as AD in primary care; these comprise psoriasis, contact dermatitis, photodermatitis, or ichthyosis. People with diagnosis codes for one or more of these conditions at any point in the clinical record will be excluded.

Definition of AD cases (active atopic dermatitis)

AD cases are defined as those people having active AD. Active AD will be identified as being present in those people prescribed one or more treatments for their AD in the last 365 days. The treatments used to define active AD comprise all those used to define AD with the addition of systemic immunomodulatory medications, including methotrexate, azathioprine, mycophenolate, cyclosporine, or AD specific biologic therapy (dupilumab being the only one licensed at during the study period). Systemic immunomodulatory medications will not be included in the AD case definition as this may lead to incorrect identification of AD cases in people with other autoimmune conditions for which these medications are used such as rheumatoid arthritis. This approach has been demonstrated to be in good agreement with physician confirmed active AD (24).

All adults with an episode of active AD at any point between 1st Jan 2010 to 1st Jan 2015 will be included for analysis. People will be eligible for inclusion as an AD case if they have a minimum of five years of possible follow up, are aged 18 and over and have AD (using an approach derived from a validated AD case definition which is described in detail elsewhere(25)) which is active at some point during the observation period.

The study period will be a ten-year period from 1st Jan 2010 to 1st Jan 2020. Individuals must enter the study on or before 1st Jan 2015 in order to have a possible minimum follow up duration

of five years. The start of follow up (index date) for each AD case will be the start of their period of active AD. Their follow-up will end at either the earliest of the following: date of deregistration, date of reaching age 95, date of death, or date of the end of the study period (1st Jan 2020).

Definition of atopic dermatitis severity

AD severity will be defined using the approach used by Silverwood et al. in their study of cardiovascular outcomes in AD:(26) AD will be considered moderate at the prescription of a second potent topical corticosteroid treatment within one year or a first topical calcineurin inhibitor (TCI). AD will be considered severe at the first of a systemic immunosuppressant treatment (cyclosporin, azathioprine, mycophenolate, methotrexate, and biologics), phototherapy, or a dermatology referral.

Definition of Allergic conditions

Allergic conditions will comprise common allergies; allergic rhinitis, allergy to dust mites or animal dander, and food allergies e.g., nut, fruit, shellfish, eggs and cows' milk allergies. Medication and other allergies will not be included.

Definition of Anticoagulant prescriptions

Anticoagulant prescriptions will comprise vitamin K antagonists (warfarin), low molecular weight heparins, and direct-acting oral anticoagulants.

3.5 Baseline socio-economic characteristics:

Age, sex, ethnic group and socioeconomic status will comprise the sociodemographic exposures of interest. Ethnicity will be extracted from the primary care record and grouped into major UK ethnic groups; White, Black, Asian, Mixed, and Others (27). Socioeconomic status will be defined using index of multiple deprivation (IMD), the official national measure of socioeconomic status in the UK (28).

VTE history and established VTE risk factors

Baseline history of VTE will be extracted from the primary care record using the same definition as for the primary VTE endpoint. VTE risk factors have been selected based on existing literature demonstrating an established association with VTE (12, 19), clinical expertise, or their inclusion in the QThrombosis tool (29). These will comprise of age, BMI, smoking and alcohol use, evidence of reduced mobility, known thrombophilia, recent hospital admission (prior six months), and the presence of comorbidities; varicose vein surgery, chronic kidney disease (CKD) stages 4 or 5,

malignancy, heart failure, chronic obstructive pulmonary disease (COPD), inflammatory bowel disease (IBD) and rheumatoid arthritis (RA).

4 Sample size calculations

No previous studies have examined VTE risk in people with AD to provide an estimation of effect size to inform our sample size calculation. Assuming 80% power, a 1:1 ratio of AD cases to controls, and an overall probability of VTE over the study period of 1% (a conservative estimate based on a previous analysis of VTE incidence in the general population (17), a sample size of 33,899 will be required to detect a minimum clinically relevant effect size of a 20% increased risk of VTE in the AD cohort compared to population controls. We anticipate that in excess of 50,000 people in our study cohort will have an episode of active AD during the study period and so be defined as AD cases, these will be 1:1 matched to population controls providing a study cohort well in excess of this required sample size.

5 Populations to be analysed

5.1 Inclusion Criteria

All adult people (aged ≥ 18) registered with GP practices contributing data to OPCRD between January 1, 2010 and January 1, 2020, are eligible for inclusion in the study.

5.2 Exclusion Criteria

People with less than 5 years potential follow up.

People with AD that was not active during the study period.

People without AD but diagnosed with other skin conditions (psoriasis, contact dermatitis, photodermatitis, or ichthyosis).

5.3 Matching process

Each adult with active AD will be 1:1 matched at their index date using, nearest neighbour matching (30) to another person without AD (people never diagnosed either with AD or any exclusion skin condition (psoriasis, contact dermatitis, photodermatitis, or ichthyosis, Appendix 2) at the date of matching). Matching variables will comprise age, sex, duration of practice registration and within primary care practice where numbers allow. After matching, the index date for each control will be set at the index date of their matched counterpart.

5.4 AD definition exploratory analyses

We will explore other recorded dermatology conditions to ensure that the AD case definition is correctly identifying people with AD; this analysis will be performed in practices using the Read version 2 coding system where it is possible to use search terms M1% and M2% (where % is a wild card) to extract all non-infectious dermatology diagnoses.

6 Statistical Analysis

6.1 Statistical principles

The mean, standard deviation (sd) and any other statistical measures, will be reported to one decimal place. Continuous data will be summarised in the form of means, sd, median, interquartile range (IQR) and range as appropriate. Categorical data will be summarised using frequencies and proportions. Chi-squared and t-tests will be performed to compare the frequency of dichotomous variables and the values of continuous variables where relevant. 95% CIs will be reported for main effect sizes. Statistical significance will be assessed using $p < 0.05$. Actual p-values will be reported except for p-values less than 3 decimal places which will be reported as " <0.001 ". P-values >0.1 will be reported to one decimal place, p-values between 0.01 and 0.1 will be reported to 2 decimal places, and p-values between 0.001 and 0.01 will be reported to three decimal places.

The assessment of any associations with baseline characteristics and the primary endpoint will be assessed using Cox proportional hazards models. A standard set of features will be used in all multivariable models as listed in section 6.2.

Assumptions of statistical approaches will be assessed, and transformations used if necessary (although it is not anticipated that the data will violate model assumptions).

6.2 Primary Endpoint Analysis

Risk of new onset VTE will be assessed prospectively in AD cases and matched controls from the index date. The clinical codes used to define the VTE end points are listed in Appendix 3. Risk of developing each VTE condition within 10 years will then be examined using time to event analysis. Initially, unadjusted Cox proportional hazards models, stratified by matched set (AD cases versus matched controls), will be used to provide overall hazard ratios (HRs) as summary estimates for the association of the presence of active AD with the time to each VTE condition. Models will be

adjusted for baseline sociodemographic and clinical features, and VTE risk factors in multivariable analysis. These comprise of age, ethnicity, SES, number of primary care visits in the preceding year, BMI, smoking and alcohol use, evidence of reduced mobility, known thrombophilia, recent hospital admission (prior six months), and the presence of comorbidities; varicose vein surgery, CKD stages 4 or 5, malignancy, heart failure, COPD, IBD and RA. We will also control for active prescribing at baseline of the following medications: oral corticosteroids (which can be used in AD treatment), hormone therapy (oestrogen containing oral hormonal contraceptives, and hormone replacement therapy [HRT]), antiplatelet agents (aspirin or adenosine diphosphate receptor inhibitors), warfarin, and direct oral anticoagulants (DOACs). Hormonal contraceptives comprised only combined oestrogen and progestogen preparations; progesterone only contraceptives will not be included as these preparations are not associated with VTE (31). HRT comprises of systemic oestrogen only preparations. Active prescribing at baseline will be defined as an issued prescription in the 3 months preceding and/or 1 month after the person's start date. A full list of the study variables is included in Appendix 4.

6.3 Secondary Endpoint Analysis

The secondary endpoint analysis will be assessed using the same statistical principles as the primary endpoint. Only risk of the composite VTE endpoint will be applied for the subgroup analysis.

6.4 Sensitivity analysis

We will repeat the primary analysis excluding AD cases and controls (and their corresponding matched pair) with a history of VTE at cohort entry.

To evaluate the magnitude of potential bias from including as controls people who are registered with GP practices but who do not attend their practice, we will repeat the primary outcome analysis including only controls with at least one primary care consultation in the year before index date (NB this is a likely over-adjustment as the remaining controls will be less a healthy group than the general population).

To mitigate the possibility of misclassification of AD severity caused by the use of systemic treatments for other inflammatory conditions we will repeat the primary analysis and AD severity subgroup analyses in a subgroup of people without the following conditions; IBD (both ulcerative colitis and Crohn's disease) and RA.

6.5 Missing data

This study will use the missing indicator variable method as missing data are considered likely not to be missing at random, meaning multiple imputation approaches will lack validity.

Patients will need to be excluded from analyses based on a matched design if they have incomplete data in the fields (age, sex) required to run the matching process. In similar studies, the exclusion rate due to incomplete data has been low (32, 33).

7 Study Limitations

Although the data is derived from a validated and nationally representative sample of the UK, results should not be extrapolated to dissimilar populations. Important limitations of the study include the reliance on comprehensive code lists to identify any given baseline or outcome variable. This limitation is common to all studies using routinely recorded data and will be mitigated through the use of a validated approach for defining baseline and outcome parameters. (34).

Limitations exist in the amount of clinical detail presently recorded in routine primary care electronic health records. Routine primary care databases offer the benefit of large cohorts at the expense of granularity; a limitation that is universal in epidemiological studies of this type. Some analyses will be restricted to people in whom complete information is available which may introduce selection bias as a result. Finally, the data presented will be observational in nature and although attempts will be made to reduce confounding by statistical adjustment where relevant, it is not possible to exclude the possibility of residual confounding as part of the explanation for any findings.

8 Statistical software

All statistical analyses will be performed using R software version 3.4.1.

9 Ethics

This study requires approval by the Anonymised Data Ethics Protocols and Transparency (ADEPT) Committee. It has been uploaded to ClinicalTrials.gov.

The study will be conducted in accordance with legal and regulatory requirements, as well as with scientific purpose, value, and rigor and follow generally accepted research practices described in Guidelines for Good Pharmacoepidemiology Practices (GPP) issued by the International Society for Pharmacoepidemiology (ISPE), and Good Epidemiological Practice (GEP) guidelines issued by the International Epidemiological Association (IEA). Study reporting will be conducted in accordance with the RECORD (Reporting of studies conducted using observational routinely collected data) guidelines (35).

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Appendix 1

Diagnosis codes which will be used as part of an algorithm to identify people with atopic dermatitis. The included codes lists cover the three coding systems currently in use in UK primary care; Read V2, Read CTV3, SNOMED CT.

Read V2 Code	Code description
M12z1	Eczema NOS
M111.	Atopic dermatitis/eczema
M112.	Infantile eczema
M113.	Flexural eczema
M114.	Allergic (intrinsic) eczema
Read CTV3 Code	Description
X505K	Eczema
X505M	Constitutional eczema
M111.	Atopic dermatitis
M113.	Flexural atopic dermatitis
M112.	Infantile eczema
SNOMED CT ID	Description
24079001	Atopic dermatitis
402196005	Childhood atopic dermatitis (disorder)
402195009	Infantile atopic dermatitis (disorder)
402183009	Flexural atopic dermatitis
402197001	Adult atopic dermatitis
90823000	Infantile eczema
43116000	Eczema
57092006	Flexural eczema

Appendix 2

Diagnosis codes which will be used to identify AD case exclusion skin conditions.

Psoriasis	
Read V2 Code	Code description
M16..	Psoriasis and similar disorders
M161..	Other psoriasis
M1610	Psoriasis unspecified
M1611	Psoriasis annularis
M1612	Psoriasis circinata
M1613	Psoriasis diffusa
M1614	Psoriasis discoidea
M1615	Psoriasis geographica
M1616	Guttate psoriasis
M1617	Psoriasis gyrata
M1618	Psoriasis inveterata
M1619	Psoriasis ostracea
M161A	Psoriasis palmaris
M161B	Psoriasis plantaris
M161C	Psoriasis punctata
M161D	Pustular psoriasis
M161E	Psoriasis universalis
M161F	Psoriasis vulgaris
M161G	Acrodermatitis continua
M161H	Erythrodermic psoriasis
M161J	Flexural psoriasis
M161z	Psoriasis NOS
M166..	Palmoplantar pustular psoriasis
M16y..	Other psoriasis and similar disorders
M16y0	Scalp psoriasis
M16z..	Psoriasis and similar disorders NOS
Myu30	[X]Other psoriasis
N0452	Juvenile arthritis in psoriasis
Read CTV3 Code	Description
X506Y	Psoriasis
XaYOx	Pustular psoriasis
X506p	Generalised pustular psoriasis
X506q	Acute generalised pustular psoriasis
X506r	Generalised pustular psoriasis of pregnancy
X506s	Pustular psoriasis in children
X506t	Juvenile pustular psoriasis
X506u	Infantile pustular psoriasis
X506l	Localised pustular psoriasis
X506m	Palmoplantar pustular psoriasis
M07y0	Acute palmoplantar pustular psoriasis
M161A	Psoriasis palmaris

M161B	Psoriasis plantaris
X5060	Lapiere type of psoriasis
X506v	Circinate and annular pustular psoriasis
M1611	Psoriasis annularis
M1612	Psoriasis circinata
M1614	Plaque psoriasis
XaNXa	Chronic large plaque psoriasis
M1616	Guttate psoriasis
X506Z	Flexural psoriasis
X506a	Unstable psoriasis
X506b	Erythrodermic psoriasis
X506i	Scalp psoriasis
M161.	Other psoriasis
M1610	Psoriasis unspecified
M1613	Psoriasis diffusa
M1615	Psoriasis geographica
M1617	Psoriasis gyrata
M1618	Psoriasis inveterata
M161C	Psoriasis punctata
M161E	Psoriasis universalis
XaNxt	Psoriasis vulgaris
M161z	Psoriasis NOS
Myu30	[X]Other psoriasis
SNOMED CT ID	Description
9014002	Psoriasis (disorder)
402325007	Drug-exacerbated psoriasis (disorder)
402329001	Early onset psoriasis type 1 (disorder)
402332003	Onset of psoriasis in adolescence (10-20 years) (disorder)
402331005	Onset of psoriasis in childhood (1-10 years) (disorder)
402333008	Onset of psoriasis in early adulthood (20-40 years) (disorder)
402330006	Onset of psoriasis in infancy (<1 year) (disorder)
238603004	Eczematized psoriasis (disorder)
200977004	Erythrodermic psoriasis (disorder)
402335001	Familial psoriasis (disorder)
402336000	Familial psoriasis with affected first degree relative (disorder)
402337009	Familial psoriasis without affected first degree relative (disorder)
719810000	X-linked intellectual disability with seizure and psoriasis syndrome (disorder)
238600001	Flexural psoriasis (disorder)
402317005	Generalized psoriasis (disorder)
37042000	Guttate psoriasis (disorder)
402312004	Acute guttate psoriasis (disorder)
402313009	Guttate flare of psoriasis with preexisting plaques (disorder)
402322005	Hypertrophic palmar psoriasis (disorder)
402323000	Hypertrophic palmoplantar psoriasis (disorder)
238609000	K"bner psoriasis (disorder)
402334002	Late onset psoriasis type 2 (disorder)
402321003	Non-pustular psoriasis of hands (disorder)

402324006	Non-pustular psoriasis of hands and feet (disorder)
402318000	Photoaggravated psoriasis (disorder)
200965009	Plaque psoriasis (disorder)
402311006	Actively extending plaque psoriasis (disorder)
402308005	Chronic small plaque psoriasis (disorder)
402309002	Chronic guttate pattern psoriasis (disorder)
402307000	Chronic large plaque psoriasis (disorder)
402310007	Chronic stable plaque psoriasis (disorder)
200962007	Psoriasis annularis (disorder)
200963002	Psoriasis circinata (disorder)
200964008	Psoriasis diffusa (disorder)
200966005	Psoriasis geographica (disorder)
200967001	Psoriasis gyrata (disorder)
200968006	Psoriasis inveterata (disorder)
721538000	Psoriasis of anogenital region (disorder)
402315002	Psoriasis of penis (disorder)
402316001	Psoriasis of perianal skin (disorder)
402314003	Psoriasis of vulva (disorder)
402320002	Psoriasis of face (disorder)
238604005	Psoriasis of nail (disorder)
238605006	Psoriatic nail dystrophy (disorder)
238606007	Psoriatic nail pitting (disorder)
402319008	Psoriasis of scalp margin (disorder)
200971003	Psoriasis plantaris (disorder)
200972005	Psoriasis punctata (disorder)
200974006	Psoriasis universalis (disorder)
200975007	Psoriasis vulgaris (disorder)
33339001	Psoriasis with arthropathy (disorder)
238602009	Psoriasis-eczema overlap condition (disorder)
200973000	Pustular psoriasis (disorder)
402327004	Acute generalized pustular flare of preexisting plaque psoriasis (disorder)
238617008	Circinate and annular pustular psoriasis (disorder)
238612002	Generalized pustular psoriasis (disorder)
402326008	Acute generalized pustular psoriasis de novo (disorder)
238613007	Generalized pustular psoriasis of pregnancy (disorder)
238616004	Infantile pustular psoriasis (disorder)
238615000	Juvenile pustular psoriasis (disorder)
28840001	Generalized pustular psoriasis, exanthematous type (disorder)
238611009	Lapiere type of psoriasis (disorder)
81271001	Localized pustular psoriasis (disorder)
83839005	Acrodermatitis continua of Hallopeau (disorder)
784328000	Pustular psoriasis of palm of hand (disorder)
27520001	Pustular psoriasis of palms and soles (disorder)
239098009	Acropustulosis of infancy (disorder)
784327005	Pustular psoriasis of sole of foot (disorder)
200969003	Rupioid psoriasis (disorder)
238608008	Scalp psoriasis (disorder)

25847004	Seborrheic psoriasis (disorder)
238601002	Unstable psoriasis (disorder)
161562002	History of psoriasis (situation)
11188005	Psoriasisiform napkin eruption (disorder)
400069004	Nevoid psoriasis (disorder)
866341000000101	Psoriasis area and severity index score (observable entity)
239803008	Juvenile psoriatic arthritis with psoriasis (disorder)
Contact Dermatitis	
Read V2 Code	Code description
Myu21	[X]Allergic contact dermatitis due to other chemical products
Myu23	[X]Allergic contact dermatitis due to other agents
Myu24	[X]Irritant contact dermatitis due to other chemical products
Myu25	[X]Irritant contact dermatitis due to other agents
Myu26	[X]Unspecified contact dermatitis due to other chemical products
Myu27	[X]Unspecified contact dermatitis due to other agents
M12..	Contact dermatitis and other eczemas
M120.	Contact dermatitis due to detergents
M121.	Contact dermatitis due to oils and greases
M122.	Contact dermatitis due to solvents
M1220	Contact dermatitis due to chlorocompound
M1221	Contact dermatitis due to cyclohexane
M1222	Contact dermatitis due to ester
M1223	Contact dermatitis due to glycol
M1224	Contact dermatitis due to hydrocarbon
M1225	Contact dermatitis due to ketone
M122z	Contact dermatitis due to solvent NOS
M123.	Contact dermatitis due to drugs and medicaments
M1230	Contact dermatitis due to arnica
M1231	Contact dermatitis due to fungicides
M1232	Contact dermatitis due to iodine
M1233	Contact dermatitis due to keratolytics
M1234	Contact dermatitis due to mercurials
M1235	Contact dermatitis due to neomycin
M1236	Contact dermatitis due to pediculocides
M1237	Contact dermatitis due to phenols
M1238	Contact dermatitis due to scabicides
M123z	Contact dermatitis due to medicament NOS
M124.	Contact dermatitis due to other chemical products
M1240	Contact dermatitis due to acids
M1241	Contact dermatitis due to adhesive plaster
M1242	Contact dermatitis due to alkalis
M1243	Contact dermatitis due to caustics
M1244	Contact dermatitis due to dichromate
M1245	Contact dermatitis due to insecticide
M1246	Contact dermatitis due to nylon
M1247	Contact dermatitis due to plastic
M1248	Contact dermatitis due to rubber

M124z	Contact dermatitis: other chemicals NOS
M125.	Contact dermatitis due to food in contact with skin
M1250	Contact dermatitis due to cereals
M1251	Contact dermatitis due to fish
M1252	Contact dermatitis due to flour
M1253	Contact dermatitis due to fruit
M1254	Contact dermatitis due to meat
M1255	Contact dermatitis due to milk
M125z	Contact dermatitis due to food NOS
M126.	Contact dermatitis due to plants
M1260	Contact dermatitis due to lacquer tree
M1261	Contact dermatitis due to poison-ivy
M1262	Contact dermatitis due to poison-oak
M1263	Contact dermatitis due to poison-sumac
M1264	Contact dermatitis due to poison-vine
M1265	Contact dermatitis due to primrose
M1266	Contact dermatitis due to ragweed
M126z	Contact dermatitis due to plants NOS
M128.	Allergic contact dermatitis
M1280	Allergic contact dermatitis due to adhesives
M1281	Allergic contact dermatitis due to cosmetics
M1282	Allergic contact dermatitis due to drugs in contact with the skin
M1283	Allergic contact dermatitis due to dyes
M1284	Allergic contact dermatitis due to other chemical products
M1285	Allergic contact dermatitis due to food in contact with the skin
M1286	Allergic contact dermatitis due to plants, except food
M129.	Irritant contact dermatitis
M1290	Irritant contact dermatitis due to cosmetics
M1291	Irritant contact dermatitis due to drugs in contact with the skin
M1292	Irritant contact dermatitis due to other chemical products
M1293	Irritant contact dermatitis due to food in contact with the skin
M1294	Irritant contact dermatitis due to plants, except food
M12y.	Contact dermatitis due to other specified agents
M12y0	Contact dermatitis due to cosmetics
M12y1	Contact dermatitis due to cold weather
M12y2	Contact dermatitis due to dyes
M12y3	Contact dermatitis due to furs
M12y4	Contact dermatitis due to hot weather
M12y5	Contact dermatitis due to infra-red rays
M12y6	Contact dermatitis due to jewellery
M12y7	Contact dermatitis due to light (excluding sunlight)
M12y8	Contact dermatitis due to metals
M12y9	Contact dermatitis due to preservatives
M12yA	Contact dermatitis due to radiation NOS
M12yB	Contact dermatitis due to ultra-violet rays (excluding sunlight)
M12yC	Contact dermatitis due to x-rays
M12yD	Contact dermatitis due to casting materials

M12yz	Contact dermatitis: specified agent NOS
M12z.	Contact dermatitis NOS
M12zz	Contact dermatitis NOS
Read CTV3 Code	Description
Xa9CV	Contact dermatitis
X505x	Allergic contact dermatitis
X505y	Nickel sensitivity
X505z	Implant allergic nickel contact dermatitis
X5060	Ingested allergen contact dermatitis
Xa0Wg	Baboon syndrome
X5061	Photoallergic contact dermatitis
M1280	Allergic contact dermatitis due to adhesives
M1281	Allergic contact dermatitis due to cosmetics
M1282	Allergic contact dermatitis due to drugs in contact with the skin
M1283	Allergic contact dermatitis due to dyes
M1284	Allergic contact dermatitis due to other chemical products
M1285	Allergic contact dermatitis due to food in contact with the skin
M1286	Allergic contact dermatitis due to plants, except food
Myu21	[X]Allergic contact dermatitis due to other chemical products
Myu23	[X]Allergic contact dermatitis due to other agents
X5063	Irritant contact dermatitis
X5040	Fibreglass dermatitis
X5064	Acute irritant contact dermatitis
X5065	Subacute irritant contact dermatitis
X5066	Chronic irritant contact dermatitis
Xa0WJ	Swimming pool dermatitis
X505H	Cactus dermatitis
Xa13g	Coral dermatitis
M123.	Drug-induced contact dermatitis
M1230	Contact dermatitis due to arnica
M1231	Contact dermatitis due to fungicides
M1232	Contact dermatitis due to iodine
M1233	Contact dermatitis due to keratolytics
M1234	Contact dermatitis due to mercurials
M1235	Contact dermatitis due to neomycin
M1236	Contact dermatitis due to pediculocides
M1237	Contact dermatitis due to phenols
M1238	Contact dermatitis due to scabicides
M123z	Contact dermatitis due to medicament NOS
M1290	Irritant contact dermatitis due to cosmetics
M1291	Irritant contact dermatitis due to drugs in contact with the skin
M1292	Irritant contact dermatitis due to other chemical products
M1293	Irritant contact dermatitis due to food in contact with the skin
M1294	Irritant contact dermatitis due to plants, except food
Myu24	[X]Irritant contact dermatitis due to other chemical products
Myu25	[X]Irritant contact dermatitis due to other agents
X5062	Occupational allergic contact dermatitis

XE1Ar	Contact dermatitis due to adhesive plaster
X505t	Elastoplast contact dermatitis
M120.	Contact dermatitis due to detergents
M122.	Contact dermatitis due to solvents
M1220	Contact dermatitis due to chlorocompound
M1221	Contact dermatitis due to cyclohexane
M1222	Contact dermatitis due to ester
M1223	Contact dermatitis due to glycol
M1224	Contact dermatitis due to hydrocarbon
M1225	Contact dermatitis due to ketone
M122z	Contact dermatitis due to solvent NOS
M124.	Contact dermatitis due to other chemical products
M1240	Contact dermatitis due to acids
M1242	Contact dermatitis due to alkalis
M1243	Contact dermatitis due to caustics
M1244	Contact dermatitis due to dichromate
M1245	Contact dermatitis due to insecticide
M1246	Contact dermatitis due to nylon
M1247	Contact dermatitis due to plastic
M1248	Contact dermatitis due to rubber
M124z	Contact dermatitis: other chemicals NOS
M125.	Contact dermatitis due to food in contact with skin
M1250	Contact dermatitis due to cereals
M1251	Contact dermatitis due to fish
M1252	Contact dermatitis due to flour
M1253	Contact dermatitis due to fruit
M1254	Contact dermatitis due to meat
M1255	Contact dermatitis due to milk
X505u	Egg contact dermatitis
XE1As	Contact dermatitis due to food NOS
M126.	Contact dermatitis due to plants
M1260	Contact dermatitis due to lacquer tree
M1261	Contact dermatitis due to poison-ivy
M1262	Contact dermatitis due to poison-oak
M1263	Contact dermatitis due to poison-sumac
M1264	Contact dermatitis due to poison-vine
M1265	Contact dermatitis due to primrose
M1266	Contact dermatitis due to ragweed
M126z	Contact dermatitis due to plants NOS
M12y.	Contact dermatitis due to other specified agents
M12y1	Contact dermatitis due to cold weather
M12y2	Contact dermatitis due to dyes
M12y3	Contact dermatitis due to furs
M12y4	Contact dermatitis due to hot weather
M12y5	Contact dermatitis due to infrared rays
M12y6	Contact dermatitis due to jewellery
M12y7	Contact dermatitis due to light (excluding sunlight)

M12y9	Contact dermatitis due to preservatives
M12yA	Contact dermatitis due to radiation NOS
M12yB	Contact dermatitis due to ultraviolet rays (excluding sunlight)
M12yC	Contact dermatitis due to X-rays
M12yD	Contact dermatitis due to casting materials
M12yz	Contact dermatitis: specified agent NOS
X505v	Lanolin contact dermatitis
XE1At	Contact dermatitis due to cosmetics
X505w	Perfume contact dermatitis
XE1Au	Contact dermatitis due to metals
M12z.	Contact dermatitis NOS
Myu26	[X]Unspecified contact dermatitis due to other chemical products
Myu27	[X]Unspecified contact dermatitis due to other agents
XE1Aq	Contact dermatitis due to oils and greases
X505r	Grease contact dermatitis
X505s	Oil contact dermatitis
Xa3gl	Contact dermatitis - chemicals
Xa3gJ	Contact dermatitis - foods/plants
SNOMED CT ID	Description
10628511000119107	Irritant contact dermatitis caused by detergent (disorder)
10628551000119108	Irritant contact dermatitis caused by rubber
10628591000119103	Irritant contact dermatitis caused by chemical (disorder)
10628631000119103	Irritant contact dermatitis caused by metal (disorder)
10628671000119100	Allergic contact dermatitis caused by latex (disorder)
10628711000119101	Allergic contact dermatitis caused by plant material (disorder)
10628751000119100	Allergic contact dermatitis caused by pollen (disorder)
10676871000119103	Allergic contact dermatitis caused by chemical (disorder)
10761991000119101	Contact dermatitis of right upper and lower eyelids (disorder)
10901008	Contact dermatitis caused by poison sumac (disorder)
110979008	Irritant contact dermatitis (disorder)
111189002	Acute contact dermatitis (disorder)
111190006	Contact dermatitis caused by phenol (disorder)
111191005	Contact dermatitis due to other drug, NEC (disorder)
111192003	Contact dermatitis caused by insecticide
111193008	Contact dermatitis due to other non food plant (disorder)
111194002	Contact dermatitis due to other specified agents (disorder)
111209006	Photoallergic contact dermatitis
11804009	Contact dermatitis caused by solar radiation (disorder)
11873831000119107	Contact dermatitis of bilateral lower eyelids
123705009	Generalized exfoliative contact dermatitis (disorder)
126631000119108	Contact dermatitis caused by adhesive bandage (disorder)
13476007	Contact dermatitis due to fur (disorder)
156332005	Urine-induced contact dermatitis (disorder)
156338009	Contact dermatitis/eczema
156339001	Contact dermatitis due to detergents (disorder)
156340004	Contact dermatitis due to oils and greases (disorder)
156341000	Contact dermatitis due to solvents (disorder)

156342007	Drug-induced contact dermatitis (disorder)
156343002	Contact dermatitis: [chemicals] or [elastoplast allergy]
156344008	Contact dermatitis - foods/plants (disorder)
156345009	(Contact dermatitis: sun) or (Farmers skin) or (photosensitivity - sun) or (sunburn) (disorder)
156346005	Contact dermatitis: metals(& [nickel]) (disorder)
156348006	(Contact dermatitis NOS) or (discoid eczema) or (nummular eczema) (disorder)
15681161000119107	Contact dermatitis of bilateral eyelids (disorder)
16228891000119105	Allergic contact dermatitis caused by metal (disorder)
17946007	Contact dermatitis caused by fungicide (disorder)
18793008	Contact dermatitis caused by fruit (disorder)
193918001	Contact &/or allergic eyelid dermatitis (disorder)
200780008	(Contact dermatitis [& other eczemas]) or (contact eczema) or (occupational dermatitis) (disorder)
200781007	Contact dermatitis due to detergents (disorder)
200782000	Contact dermatitis due to oils &/or greases (disorder)
200783005	Contact dermatitis due to solvents (disorder)
200784004	Contact dermatitis caused by chlorocompound
200785003	Contact dermatitis caused by cyclohexane group
200786002	Contact dermatitis caused by ester (disorder)
200787006	Contact dermatitis caused by glycol
200788001	Contact dermatitis caused by hydrocarbon (disorder)
200789009	Contact dermatitis caused by ketone (disorder)
200790000	Contact dermatitis due to solvent NOS (disorder)
200791001	Contact dermatitis due to arnica (disorder)
200792008	Contact dermatitis due to fungicides (disorder)
200793003	Contact dermatitis due to iodine (disorder)
200794009	Contact dermatitis caused by keratolytic
200795005	Contact dermatitis due to mercurials (disorder)
200796006	Contact dermatitis due to neomycin (disorder)
200797002	Contact dermatitis due to pediculicides (disorder)
200798007	Contact dermatitis due to phenols (disorder)
200799004	Contact dermatitis due to scabicides (disorder)
200800000	Contact dermatitis due to medicament NOS (disorder)
200801001	Contact dermatitis due to other chemical products (disorder)
200802008	Contact dermatitis caused by acid (disorder)
200803003	Contact dermatitis due to adhesive plaster (& elastoplast) (disorder)
200804009	Contact dermatitis caused by alkali (disorder)
200805005	Contact dermatitis due to caustic
200806006	Contact dermatitis due to dichromate (disorder)
200807002	Contact dermatitis due to insecticide (disorder)
200808007	Contact dermatitis due to nylon (disorder)
200809004	Contact dermatitis due to plastic (disorder)
200810009	Contact dermatitis due to rubber (disorder)
200811008	Contact dermatitis: other chemicals NOS (disorder)
200813006	Contact dermatitis due to food in contact with skin (disorder)
200814000	Contact dermatitis due to cereals (disorder)

200815004	Contact dermatitis due to fish (disorder)
200816003	Contact dermatitis due to flour (disorder)
200817007	Contact dermatitis due to fruit (disorder)
200818002	Contact dermatitis due to meat (disorder)
200819005	Contact dermatitis due to milk (disorder)
200820004	(Contact dermatitis due to food NOS) or (egg contact dermatitis) (disorder)
200821000	Contact dermatitis caused by plants
200822007	Contact dermatitis due to lacquer tree (disorder)
200823002	Contact dermatitis caused by poison ivy (disorder)
200824008	Contact dermatitis caused by poison oak
200825009	Contact dermatitis due to poison-sumac (disorder)
200826005	Contact dermatitis due to poison-vine (disorder)
200827001	Contact dermatitis due to primrose (disorder)
200828006	Contact dermatitis due to ragweed (disorder)
200829003	Contact dermatitis due to plants NOS (disorder)
200830008	Contact dermatitis due to solar radiation (disorder)
200831007	Unspecified contact dermatitis due to solar radiation (disorder)
200836002	Photocontact dermatitis
200840006	Contact dermatitis due to solar radn NOS (disorder)
200841005	Allergic contact dermatitis (disorder)
200842003	Allergic contact dermatitis due to adhesive
200843008	Allergic contact dermatitis due to cosmetic
200844002	Allergic contact dermatitis due to drug in contact with skin
200845001	Allergic contact dermatitis due to dye
200846000	Allergic contact dermatitis due to other chemical products (disorder)
200847009	Allergic contact dermatitis caused by food in contact with skin
200848004	Allergic contact dermatitis caused by plants, except food (disorder)
200850007	Irritant contact dermatitis (disorder)
200851006	Irritant contact dermatitis due to cosmetic
200852004	Irritant contact dermatitis due to drug in contact with skin
200853009	Irritant contact dermatitis due to other chemical products (disorder)
200854003	Irritant contact dermatitis due to food in contact with skin
200855002	Irritant contact dermatitis caused by plants, except food (disorder)
200867000	Contact dermatitis due to other specified agents (disorder)
200869002	Contact dermatitis due to cold weather (disorder)
200870001	Contact dermatitis due to dyes (disorder)
200871002	Contact dermatitis due to fur
200872009	Contact dermatitis due to hot weather (disorder)
200873004	Contact dermatitis due to infrared rays (disorder)
200874005	Contact dermatitis due to jewelry (disorder)
200875006	Contact dermatitis due to light (excluding sunlight) (disorder)
200876007	(Contact dermatitis due to metals) or (nickel sensitivity) (disorder)
200877003	Contact dermatitis caused by preservatives
200878008	Contact dermatitis due to radiation NOS (disorder)
200879000	Contact dermatitis caused by ultraviolet rays (excluding sunlight)
200880002	Contact dermatitis due to X-rays (disorder)
200881003	Contact dermatitis caused by casting materials

200882005	Contact dermatitis: specified agent NOS (disorder)
200883000	Contact dermatitis NOS (disorder)
200889001	Contact dermatitis NOS (disorder)
201360000	[X]Allergic contact dermatitis due to other chemical products (disorder)
201361001	[X]Allergic contact dermatitis due to other agents (disorder)
201362008	[X]Irritant contact dermatitis due to other chemical products (disorder)
201363003	[X]Irritant contact dermatitis due to other agents (disorder)
201364009	[X]Unspecified contact dermatitis due to other chemical products (disorder)
201365005	[X]Unspecified contact dermatitis due to other agents (disorder)
22131007	Contact dermatitis due to ultraviolet rays, except sun (disorder)
22353002	Contact dermatitis due to glycol group (disorder)
23012005	Contact dermatitis caused by solvents
238506004	Contact dermatitis due to cold weather
238524002	Photoallergic contact dermatitis
238568000	Grease contact dermatitis (disorder)
238569008	Oil contact dermatitis (disorder)
238570009	Elastoplast contact dermatitis (disorder)
238571008	Egg contact dermatitis (disorder)
238572001	Lanolin contact dermatitis (disorder)
238573006	Perfume contact dermatitis (disorder)
238575004	Allergic contact dermatitis (disorder)
238576003	Allergic contact dermatitis caused by nickel implant (disorder)
238577007	Ingested allergen contact dermatitis (disorder)
238578002	Occupational allergic contact dermatitis (disorder)
238579005	Acute irritant contact dermatitis (disorder)
238580008	Subacute irritant contact dermatitis (disorder)
238581007	Chronic irritant contact dermatitis (disorder)
238583005	Saliva-induced contact dermatitis (disorder)
238584004	Feces-induced contact dermatitis (disorder)
238672005	Lichenoid allergic contact dermatitis (disorder)
247469006	Urine-induced contact dermatitis (disorder)
25664003	Contact dermatitis due to dichlorvos
26208004	Contact dermatitis due to keratolytic agent (disorder)
26532007	Contact dermatitis caused by scabicide (disorder)
267648006	Contact or allergic eyelid dermatitis (disorder)
267792000	Contact dermatitis and other eczemas (disorder)
267793005	Contact dermatitis due to oil and grease
267794004	Contact dermatitis due to food NOS (disorder)
267795003	Contact dermatitis due to cosmetics (disorder)
267796002	Contact dermatitis due to metal (disorder)
267842005	Contact dermatitis/eczema (& [allergic eczema - extrinsic] or [occupational eczema])
267843000	Contact dermatitis: [chemicals] or [elastoplast allergy] (Contact dermatitis: sun) or (Farmers skin) or (photosensitivity - sun) or (sunburn) (disorder)
267844006	Contact dermatitis: metals(& [nickel]) (disorder)
267845007	Contact dermatitis due to infra-red rays
287003002	Contact dermatitis - chemicals (disorder)

287004008	Contact dermatitis - foods/plants (disorder)
2889003	Contact dermatitis due to alkali (disorder)
291000119100	Contact dermatitis caused by chemical (disorder)
30451004	Contact dermatitis due to detergent
31948006	Contact dermatitis caused by plastic (disorder)
3226008	Contact dermatitis - chemicals
32371003	Contact dermatitis caused by neomycin (disorder)
342761000119104	Allergic contact dermatitis of right upper eyelid (disorder)
342771000119105	Allergic contact dermatitis of right lower eyelid
342781000119108	Allergic contact dermatitis of right eyelid (disorder)
342791000119106	Allergic contact dermatitis of left upper eyelid
342801000119107	Allergic contact dermatitis of left lower eyelid (disorder)
342811000119105	Allergic contact dermatitis of left eyelid (disorder)
36530008	Contact dermatitis caused by fish
39670009	Contact dermatitis due to chlorocompound group (disorder)
402249007	Allergic contact dermatitis of eyelid
402252004	Allergic contact dermatitis of perianal skin
402253009	Allergic contact dermatitis of external ear
402254003	Allergic contact dermatitis of hands
402255002	Allergic contact dermatitis of lower leg
402256001	Allergic contact dermatitis of male genitalia
402257005	Allergic contact dermatitis of female genitalia
402261004	Acute irritant contact dermatitis
402263001	Cumulative irritant contact dermatitis of hands caused by wet work
402265008	Irritant contact dermatitis of hands caused by oil and/or grease (disorder)
402266009	Irritant contact dermatitis of hands caused by solvent
402267000	Irritant contact dermatitis caused by metal swarf (disorder)
402268005	Irritant contact dermatitis caused by cement (disorder)
402269002	Irritant contact dermatitis of hands caused by cement (disorder)
402270001	Irritant contact dermatitis of hands caused by friction
402271002	Irritant contact dermatitis caused by chlorine
402272009	Irritant contact dermatitis caused by biocide (disorder)
402273004	Cumulative irritant contact dermatitis of hands
402274005	Cumulative irritant contact dermatitis
402275006	Irritant contact dermatitis caused by contact with urine and/or feces (disorder)
402276007	Irritant contact dermatitis due to incontinence
402278008	Irritant contact dermatitis due to stoma/fistula
402279000	Irritant contact dermatitis due to ileostomy
402280002	Irritant contact dermatitis due to colostomy
402281003	Irritant contact dermatitis due to urostomy
402284006	Irritant contact dermatitis due to dribbling and/or teething
402290005	Irritant contact hand dermatitis
402291009	Contact dermatitis of hands
402577002	Allergic contact dermatitis by site
402578007	Irritant contact dermatitis caused by detergent and/or wet work (disorder)
402579004	Irritant contact dermatitis caused by plant

402580001	Irritant contact dermatitis caused by oil and/or grease (disorder)
402581002	Irritant contact dermatitis caused by wood (disorder)
402582009	Irritant contact dermatitis caused by solvent (disorder)
402584005	Occupational irritant contact dermatitis
40275004	Contact dermatitis and other eczemas
403585004	Contact psychodermatitis
405244005	Urine induced contact dermatitis
40712008	Contact dermatitis caused by arnica
409784006	Contact dermatitis caused by Rhus diversiloba (disorder)
409785007	Contact dermatitis caused by Rhus quercifolia
410049000	Contact dermatitis caused by Genus Toxicodendron
419121001	Allergic contact dermatitis of pinna
419957005	Allergic contact dermatitis of external auditory canal
42409002	Contact dermatitis due to oils (disorder)
425630003	Acute irritant contact dermatitis
42733007	Contact dermatitis caused by dichromate
44210006	Contact dermatitis due to preservative (disorder)
45309006	Allergic contact dermatitis caused by secretions (disorder)
46240005	Contact dermatitis caused by rubber (disorder)
46787004	Contact dermatitis caused by light, except sun (disorder)
48681004	Contact dermatitis due to hot weather (disorder)
49186001	Contact dermatitis caused by cereal (disorder)
51221005	Chronic contact dermatitis (disorder)
51732009	Contact dermatitis due to hydrocarbon group (disorder)
5205006	Contact dermatitis due to poison ivy (disorder)
5221001	Contact dermatitis due to greases (disorder)
52811009	Contact dermatitis due to ketone group (disorder)
53930004	Contact dermatitis caused by ragweed (disorder)
55113003	Contact dermatitis due to poison oak (disorder)
55934006	Contact dermatitis caused by flour
56669003	Contact dermatitis due to ester group (disorder)
586008	Contact dermatitis caused by primrose (disorder)
58843002	Contact dermatitis due to caustic agent (disorder)
59336008	Contact dermatitis due to cold weather (disorder)
64451001	Contact dermatitis due to cyclohexane group (disorder)
65129009	Contact dermatitis caused by milk
65394002	Contact dermatitis caused by Rhus verniciflua
67445002	Contact dermatitis caused by food in contact with skin (disorder)
67607005	Contact dermatitis due to infrared rays (disorder)
68670009	Contact dermatitis of eyelid (disorder)
6888008	Contact dermatitis caused by dye (disorder)
69827001	Contact dermatitis due to X-ray
69999007	Contact dermatitis caused by plants, except food
700340008	Allergic contact dermatitis of upper eyelid (disorder)
700341007	Allergic contact dermatitis of lower eyelid
715150009	Contact dermatitis caused by Senecio jacobaea
717724001	Irritant contact dermatitis of female genitalia

717725000	Contact dermatitis of female genitalia
72057009	Contact dermatitis caused by pediculicide
724635009	Contact dermatitis of external ear
724825001	Allergic contact dermatitis caused by hairdressing product (disorder)
724828004	Irritant contact dermatitis caused by cosmetic substance
724829007	Occupational contact dermatitis
724869008	Protein contact dermatitis
72921001	Contact dermatitis caused by meat
733201000	Irritant contact dermatitis caused by dietary substance (disorder)
735758003	Irritant contact dermatitis caused by friction
735759006	Irritant contact dermatitis caused by sweat
735760001	Irritant contact dermatitis caused by body fluid
762379000	Allergic contact dermatitis caused by dental material (disorder)
762380002	Allergic contact dermatitis caused by food flavour
762381003	Allergic contact dermatitis caused by food additive (disorder)
762382005	Allergic contact dermatitis caused by agrochemical biocide
762383000	Allergic contact dermatitis caused by cutting oil
762384006	Allergic contact dermatitis caused by disinfectant (disorder)
762385007	Allergic contact dermatitis caused by allergenic hapten derived from plants or organic matter
762386008	Allergic contact dermatitis caused by rubber compound
762387004	Allergic contact dermatitis caused by systemic medicament
762388009	Irritant contact dermatitis caused by emollient substance (disorder)
762545002	Occupational allergic contact dermatitis caused by footwear (disorder)
762548000	Occupational allergic contact dermatitis caused by cosmetic
762549008	Occupational allergic contact dermatitis caused by fragrance
762552000	Occupational allergic contact dermatitis caused by dental material
762554004	Occupational allergic contact dermatitis caused by food flavor
762555003	Occupational allergic contact dermatitis caused by food additive (disorder)
762558001	Occupational allergic contact dermatitis caused by hairdressing product (disorder)
762560004	Occupational allergic contact dermatitis caused by agrochemical biocide (disorder)
762561000	Occupational allergic contact dermatitis caused by cutting oil
762562007	Occupational allergic contact dermatitis caused by disinfectant (disorder)
762566005	Occupational allergic contact dermatitis caused by metal compound
762568006	Occupational allergic contact dermatitis caused by allergenic hapten derived from plant (disorder)
762570002	Occupational allergic contact dermatitis caused by industrial preservative (disorder)
762571003	Occupational allergic contact dermatitis caused by biocide
762574006	Occupational allergic contact dermatitis caused by rubber compound
762576008	Occupational allergic contact dermatitis caused by systemic drug or medicament
762578009	Occupational allergic contact dermatitis caused by topical medicament (disorder)
762726008	Occupational allergic contact dermatitis caused by clothing
762754001	Allergic contact dermatitis caused by fragrance (disorder)
762755000	Allergic contact dermatitis caused by footwear (disorder)
762757008	Allergic contact dermatitis caused by clothing

76982008	Contact dermatitis due to poison vine
770545005	Allergic contact dermatitis caused by iodine (disorder)
770588002	Allergic contact dermatitis caused by iodophore (disorder)
770589005	Allergic contact dermatitis caused by povidone iodine (disorder)
77560002	Contact dermatitis due to adhesive plaster
78079005	Allergic contact dermatitis due to excretions
78634007	Contact dermatitis due to metal
78755001	Contact dermatitis due to cosmetics
788971005	Irritant contact dermatitis of external ear (disorder)
79927003	Contact dermatitis due to acid (disorder)
81351008	Contact dermatitis caused by radiation (disorder)
81581001	Contact dermatitis due to mercurials
83150005	Contact dermatitis due to iodine
83508001	Contact dermatitis due to nylon
85512009	Contact dermatitis due to jewellery
86062001	Contact dermatitis caused by drugs AND/OR medicine
860924005	Allergic contact dermatitis caused by alkali-metal soap (disorder)
870749003	Allergic contact dermatitis caused by usnic acid (disorder)
88718007	Subacute contact dermatitis
91487003	Urine-induced contact dermatitis
93418006	Contact dermatitis due to chromium
93419003	Contact dermatitis due to metals
10762031000119106	Contact dermatitis of left upper and lower eyelids (disorder)

Photodermatitis

Read V2 Code	Code description
M1273	Photodermatitis
M1274	Photosensitivity
M1278	Photocontact dermatitis [berloque dermatitis]
M1279	Hydroa vacciniforme
M12A0	Drug phototoxic response
M12A1	Drug photoallergic response
M1272	Hydroa aestivale
Read CTV3 Code	Description
M1273	Photodermatitis
M1274	Photosensitivity of skin
X504r	Photosensitisation reaction
X504z	Hydroa vacciniforme
X50Gr	Drug-induced photosensitivity
X50Gs	Drug phototoxic response
X50Gt	Drug photoallergic response
Xa0Wh	Drug-induced persistent light reaction
M1272	Hydroa aestivale
SNOMED CT ID	Description
111209006	Photoallergic dermatitis
123240009	Photodermatitis due to sun
12477008	Acute phototoxic dermatitis
12761008	Acute photoallergic dermatitis

Read V2 Code	Code description
200832000	Hydroa aestivale
200836002	Photocontact dermatitis [berloque dermatitis]
200837006	Hydroa vacciniforme
200857005	Drug phototoxic response
200858000	Drug photoallergic response
201015007	Hydroa aestivale
22649008	Photodermatitis
238521005	Plant photodermatitis
238523008	Photoallergic eczema
238524002	Photoallergic contact dermatitis
238525001	Polymorphic photodermatitis
238527009	Persistent light reaction
259097007	Delayed photoallergic dermatitis
259608005	Photodermatitis due to sun
27687007	Hydroa aestivale
277805004	Drug-induced persistent light reaction
363619000	Phototoxic phytotoxin
367334003	Photoallergic eczema
367484009	Photodermatitis due to sun
402168004	Acute phototoxic reaction (disorder)
402172000	Hypermelanosis due to phytophotodermatitis (disorder)
402173005	Phototoxic reaction to topical chemical (disorder)
402174004	Phototoxic reaction to dye (disorder)
402175003	Phototoxic reaction to tar or derivatives (disorder)
402176002	Phototoxic reaction to topically applied medicament (disorder)
402480004	Porphyria-induced phototoxic burn (disorder)
44483004	Phytophotodermatitis
450907007	Hydroa vacciniforme-like lymphoma (morphologic abnormality)
45832002	Pupil afferent light reaction
53597009	Phototoxic dermatitis
58306008	Acute phytophotodermatitis
58419006	Chronic phytophotodermatitis
61064008	Photodermatitis due to sun
69231004	Chronic phototoxic dermatitis
724873006	Occupational phototoxic reaction to skin contact with exogenous photoactive agent (disorder)
737249005	Photodermatitis co-occurrent and due to autoimmune disease (disorder)
737250005	Phototoxic reaction of skin caused by fragrance (disorder)
737251009	Phototoxic reaction of skin caused by cosmetic
763719001	Hydroa vacciniforme-like lymphoma (disorder)
789440003	Hydroa vacciniforme-like lymphoproliferative disorder
80346008	Drug photoallergic response
83627000	Drug phototoxic response
84326006	Phototoxicity
95349002	Phytophotodermatitis due to topical exposure to furocoumarin (disorder)
Ichthyosis	

M211.	Ichthyosis - acquired
M2116	Acquired ichthyosis
PH1..	Ichthyosis congenita
PH10.	Congenital ichthyosis, unspecified
PH11.	Harlequin fetus
PH12.	Ichthyosiform erythroderma
PH13.	Collodion baby
PH14.	Ichthyosis vulgaris
PH15.	X-linked ichthyosis
PH1y.	Other specified ichthyosis congenita
PH1y0	Nethertons syndrome
PH1z.	Ichthyosis congenita NOS
Read CTV3 Code	Description
PH1..	Congenital ichthyosis
X78C8	Ichthyosis vulgaris
X78C9	Autosomal dominant ichthyosis vulgaris
X78CB	X-linked recessive ichthyosis
X78CA	Severe ichthyoses
PH13.	Lamellar ichthyosis
X78CD	Erythrodermic lamellar ichthyosis
X78CE	Non-erythrodermic lamellar ichthyosis
X78CF	Autosomal dominant lamellar ichthyosis
X78CG	Non-bullous ichthyosiform erythroderma
X3085	Ichthyosis congenita with biliary atresia
X78CH	Bullous ichthyosis
X78CI	Bullous ichthyosiform erythroderma
X78CJ	Localised bullous ichthyosiform erythroderma
X78CK	Ichthyosis bullosa of Siemens
PH11.	Harlequin ichthyosis
X78CL	Ichthyosis hystrix
X78CM	Ichthyosis hystrix of Curth-Macklin
X78CN	Maleformatio ectodermalis generalisata of Bafverstedt
X78CO	Ichthyosis hystrix gravior of Rheydt
X78CP	Hystrix ichthyosis with deafness
X78CQ	Porcupine man
PH10.	Congenital ichthyosis, unspecified
PH1y.	Other specified ichthyosis congenita
XE1ML	Ichthyosis congenita NOS
Pyu90	[X]Other congenital ichthyosis
XE1MK	Ichthyosiform erythroderma
X78C7	Congenital ichthyosiform erythroderma
X507Q	Acquired ichthyosis
X50IK	Keratitis ichthyosis and deafness syndrome
X50IM	Atypical ichthyosis vulgaris with hypogonadism
X78BT	Nethertons syndrome
SNOMED CT ID	Description
111303009	Ichthyosiform erythroderma

12215009	Recessive congenital ichthyosiform erythroderma
13059002	Ichthyosis congenita
157017000	Integument anomalies: [ichthyosis congenita] or [Dariers] or [keratosis follicularis] or [Meiges] or [Milroys] or [Mongolian spots] or [pseudozanthoma elasticum] or [congenital NOS]
19604005	Triglyceride storage disease with ichthyosis
201053002	(Acquired ichthyosis) or (acquired keratoderma) or (hyperkeratosis NOS)
201058006	Acquired ichthyosis
20512000	Dominant congenital ichthyosiform erythroderma
205547001	Congenital ichthyosis, unspecified
205548006	Harlequin ichthyosis
205549003	Ichthyosiform erythroderma
205550003	Collodion baby
205551004	Ichthyosis vulgaris
205552006	X-linked recessive ichthyosis
205553001	Other specified ichthyosis congenita
205555008	Nethertons syndrome
205556009	(Congenital ichthyosiform erythroderma) or (alligator skin) or (ichthyosis congenita NOS)
205974009	[X]Other congenital ichthyosis
2355008	Dwarfism-ichthyosiform erythroderma-mental deficiency syndrome
235916001	Ichthyosis congenita with biliary atresia
238627002	Follicular ichthyosis
238997007	Drug-induced ichthyosiform reaction
239057002	Cutaneous syndrome with ichthyosis
239058007	Nethertons syndrome
239059004	Keratitis ichthyosis and deafness syndrome
239060009	Atypical ichthyosis vulgaris with hypogonadism
239061008	Keratosis pilaris with ichthyosis and deafness
254127001	Nethertons syndrome
254128006	Recessive congenital ichthyosiform erythroderma
254156001	Ichthyosis congenita NOS
254157005	Ichthyosis vulgaris
254158000	Autosomal dominant ichthyosis vulgaris
254160003	X-linked recessive ichthyosis
254161004	Erythrodermic lamellar ichthyosis
254163001	Non-erythrodermic lamellar ichthyosis
254164007	Autosomal dominant lamellar ichthyosis
254165008	Non-bullous ichthyosiform erythroderma
254166009	Bullous ichthyosis
254167000	Bullous ichthyosiform erythroderma
254168005	Localised bullous ichthyosiform erythroderma
254169002	Ichthyosis bullous of Siemens
254170001	Ichthyosis hystrix of Curth-Macklin
254171002	Maleformatio ectodermalis generalisata of Bafverstedt
254172009	Ichthyosis hystrix gravior of Rheydt
254173004	Hystrix ichthyosis with deafness
254174005	Porcupine man

255425009	Ichthyosiform
2625009	Keratosis-ichthyosis-deafness syndrome
267372009	Congenital non bullous ichthyosiform erythroderma
268245001	Harlequin fetus
268282005	Ichthyosiform erythroderma
268283000	Ichthyosis congenita NOS
268355000	Ichthyosis congenita
312514006	Nethertons syndrome
34638006	Lamellar ichthyosis AND trichorrhexis invaginata syndrome
3944006	X-linked ichthyosis
396228006	Ichthyosis - acquired
400166009	Ichthyosis - acquired
402368008	Ichthyosiform sarcoidosis (disorder)
402770002	Autosomal dominant ichthyosis (disorder)
402771003	X-linked recessive ichthyosis (disorder)
402772005	Autosomal recessive ichthyosis (disorder)
403777006	Lamellar ichthyosis (limited type) (disorder)
403778001	X-linked dominant ichthyosis (Happle)
403779009	Ichthyosis, cerebellar degeneration and hepatosplenomegaly (disorder)
403780007	Autosomal recessive keratitis-ichthyosis-deafness syndrome (disorder)
403781006	Photosensitivity with ichthyosis, brittle hair, impaired intelligence, decreased fertility and short stature syndrome
403782004	Ichthyosis follicularis with alopecia and photophobia (IFAP) (disorder)
54336006	Ichthyosis linearis circumflexa
55846006	Ichthyosis of eyelid
67510007	Ichthyosis hystrix
68551007	Limb reduction-ichthyosis syndrome
699315005	Neutral lipid storage disease without ichthyosis
703504006	Congenital reticular ichthyosiform erythroderma (disorder)
716097001	Ichthyosis cheek eyebrow syndrome (disorder)
717041008	Syndromic recessive X-linked ichthyosis (disorder)
717183001	Keratoderma hereditarium mutilans with ichthyosis syndrome (disorder)
718631006	Annular epidermolytic ichthyosis (disorder)
720639008	Coloboma, congenital heart disease, ichthyosiform dermatosis, intellectual disability ear anomaly syndrome (disorder)
722035007	Intellectual disability, enteropathy, deafness, peripheral neuropathy, ichthyosis, keratoderma syndrome (disorder)
722114007	Osteosclerosis, ichthyosis, premature ovarian failure syndrome
722385008	Cerebral dysgenesis, neuropathy, ichthyosis, palmoplantar keratoderma syndrome (disorder)
724277002	Congenital ichthyosis with hypotrichosis syndrome (disorder)
724278007	Neonatal sclerosing cholangitis, ichthyosis, hypotrichosis syndrome (disorder)
724837004	Keratinopathic ichthyosis (disorder)
72523005	Sex-linked ichthyosis
725588002	Bathing suit ichthyosis (disorder)
732950006	Ichthyosis, oral and digital anomalies syndrome
732952003	Congenital cataract ichthyosis syndrome
733028000	Multiple sclerosis, ichthyosis, factor VIII deficiency syndrome

733097003	Ichthyosis, intellectual disability, dwarfism, renal impairment syndrome (disorder)
763401009	Congenital ichthyosis type 4
763404001	Ichthyosis, alopecia, eclabion, ectropion, intellectual disability syndrome
763768001	Autosomal recessive exfoliative ichthyosis (disorder)
763775000	Keratosis linearis, ichthyosis congenita, sclerosing keratoderma syndrome (disorder)
765471005	X-linked intellectual disability, hypogonadism, ichthyosis, obesity, short stature syndrome
782957005	Ichthyosis
783551005	Ichthyosis, short stature, brachydactyly, microspherophakia syndrome
8691004	Ichthyosis - acquired
95334005	Senile ichthyosis

Appendix 3

Diagnosis codes which will be used to identify VTE events.

Pulmonary Embolism	
Read V2 Code	Code description
G401.	Pulmonary embolism
G4010	Post operative pulmonary embolus
G4011	Recurrent pulmonary embolism
L43..	Obstetric pulmonary embolism
L432.	Obstetric blood-clot pulmonary embolism
L4320	Obstetric blood-clot pulmonary embolism unspecified
L4321	Obstetric blood-clot pulmonary embolism - delivered
L4322	Obstetric blood-clot pulmonary embolism - delivered with postnatal complication
L4323	Obstetric blood-clot pulmonary embolism with antenatal complication
L4324	Obstetric blood-clot pulmonary embolism with postnatal complication
L432z	Obstetric blood-clot pulmonary embolism NOS
L43y.	Other obstetric pulmonary embolism
L43y0	Other obstetric pulmonary embolism unspecified
L43y1	Other obstetric pulmonary embolism - delivered
L43y2	Other obstetric pulmonary embolism - delivered with postnatal complication
L43y3	Other obstetric pulmonary embolism with antenatal complication
L43y4	Other obstetric pulmonary embolism with postnatal complication
L43yz	Other obstetric pulmonary embolism NOS
L43z..	Obstetric pulmonary embolism NOS
L43z0	Obstetric pulmonary embolism NOS, unspecified
L43z1	Obstetric pulmonary embolism NOS - delivered
L43z2	Obstetric pulmonary embolism NOS - delivered with postnatal complication
L43z3	Obstetric pulmonary embolism NOS with antenatal complication
L43z4	Obstetric pulmonary embolism NOS with postnatal complication
L43zz	Obstetric pulmonary embolism NOS
L0964	Pulmonary embolism following abortive pregnancy
Read CTV3 Code	Description
XE0Um	Pulmonary embolus
XaOYV	Recurrent pulmonary embolism
X202x	Pulmonary thromboembolism
X202y	Acute massive pulmonary embolism
X202z	Subacute massive pulmonary embolism
G4010	Postoperative pulmonary embolus
L43..	Obstetric pulmonary embolism
L432..	Obstetric blood-clot pulmonary embolism
L4320	Obstetric blood-clot pulmonary embolism unspecified
L4321	Obstetric blood-clot pulmonary embolism - delivered
L4322	Obstetric blood-clot pulmonary embolism - delivered with postnatal complication
L4323	Obstetric blood-clot pulmonary embolism with antenatal complication

L4324	Obstetric blood-clot pulmonary embolism with postnatal complication
L432z	Obstetric blood-clot pulmonary embolism NOS
L43z.	Obstetric pulmonary embolism NOS
L43z0	Obstetric pulmonary embolism NOS, unspecified
L43z1	Obstetric pulmonary embolism NOS - delivered
L43z2	Obstetric pulmonary embolism NOS - delivered with postnatal complication
L43z3	Obstetric pulmonary embolism NOS with antenatal complication
L43z4	Obstetric pulmonary embolism NOS with postnatal complication
XEOxN	Other obstetric pulmonary embolism
L43y0	Other obstetric pulmonary embolism unspecified
L43y1	Other obstetric pulmonary embolism - delivered
L43y2	Other obstetric pulmonary embolism - delivered with postnatal complication
L43y3	Other obstetric pulmonary embolism with antenatal complication
L43y4	Other obstetric pulmonary embolism with postnatal complication
L43yz	Other obstetric pulmonary embolism NOS
X012b	Operation for pulmonary embolism
X012c	Embolectomy of pulmonary artery
7A0A1	Percutaneous embolectomy of pulmonary artery
7A093	Open pulmonary embolectomy
X012d	Transluminal fragmentation of pulmonary embolus
XaBMD	[V] Personal history of pulmonary embolism
L0964	Pulmonary embolism following abortive pregnancy
14AC.	H/O: pulmonary embolus
SNOMED CT ID	Description
155326007	(Pulmonary embolism) or (pulmonary infarct) (disorder)
308159008	[V] Personal history of pulmonary embolism
315761003	[V] Personal history of pulmonary embolism
50206009	Abortion with pulmonary embolism
706870000	Acute pulmonary embolism
17263003	Amniotic fluid pulmonary embolism
200294005	Amniotic fluid pulmonary embolism - delivered (disorder)
200295006	Amniotic fluid pulmonary embolism - delivered with postnatal complication (disorder)
200298008	Amniotic fluid pulmonary embolism NOS (disorder)
200293004	Amniotic fluid pulmonary embolism unspecified (disorder)
200296007	Amniotic fluid pulmonary embolism with antenatal complication (disorder)
200297003	Amniotic fluid pulmonary embolism with postnatal complication (disorder)
233936003	AMPE - Acute massive pulmonary embolism
133971000119108	Chronic pulmonary embolism
58123006	Failed attempted abortion with pulmonary embolism
430801003	Family history of pulmonary embolism (situation)
10761511000119101	History of pulmonary embolism on long-term anticoagulation therapy
55589000	Illegal abortion with pulmonary embolism
441746000	Infarction of lung due to iatrogenic pulmonary embolism
51096002	Legal abortion with pulmonary embolism

200288002	Obstetric air pulmonary embolism - delivered (disorder)
200289005	Obstetric air pulmonary embolism - delivered with postnatal complication (disorder)
200286003	Obstetric air pulmonary embolism (disorder)
200292009	Obstetric air pulmonary embolism NOS (disorder)
200287007	Obstetric air pulmonary embolism unspecified (disorder)
	Obstetric air pulmonary embolism with antenatal complication (disorder)
200290001	Obstetric air pulmonary embolism with postnatal complication (disorder)
200291002	Obstetric blood-clot pulmonary embolism - delivered (disorder)
200301007	Obstetric blood-clot pulmonary embolism - delivered with postnatal complication
200302000	Obstetric blood-clot pulmonary embolism (disorder)
200299000	Obstetric blood-clot pulmonary embolism NOS
200305003	Obstetric blood-clot pulmonary embolism unspecified (disorder)
200300008	Obstetric blood-clot pulmonary embolism with antenatal complication
200303005	Obstetric blood-clot pulmonary embolism with postnatal complication
237341004	Obstetric pulmonary embolism
156273009	Obstetric pulmonary embolism (disorder)
200320009	Obstetric pulmonary embolism NOS
200326003	Obstetric pulmonary embolism NOS
200322001	Obstetric pulmonary embolism NOS - delivered
	Obstetric pulmonary embolism NOS - delivered with postnatal complication
200323006	Obstetric pulmonary embolism NOS with antenatal complication
200325004	Obstetric pulmonary embolism NOS with postnatal complication
200321008	Obstetric pulmonary embolism NOS, unspecified
267284008	Obstetric pyaemic and septic pulmonary embolism
200308001	Obstetric pyaemic and septic pulmonary embolism - delivered
200312007	Obstetric pyaemic and septic pulmonary embolism NOS
	Obstetric pyaemic and septic pulmonary embolism with antenatal complication
200310004	Obstetric pyemic and septic pulmonary embolism
	Obstetric pyemic and septic pulmonary embolism - delivered with postnatal complication
200306002	Obstetric pyemic and septic pulmonary embolism
	Obstetric pyemic and septic pulmonary embolism - delivered with postnatal complication
200309009	Obstetric pyemic and septic pulmonary embolism unspecified
	Obstetric pyemic and septic pulmonary embolism with postnatal complication
200311000	Obstetric pyemic and septic pulmonary embolism
50286006	Obstetrical pulmonary embolism
233217004	Operation for pulmonary embolism
200313002	Other obstetric pulmonary embolism
267285009	Other obstetric pulmonary embolism
200315009	Other obstetric pulmonary embolism - delivered (disorder)
	Other obstetric pulmonary embolism - delivered with postnatal complication (disorder)
200316005	Other obstetric pulmonary embolism NOS
200314008	Other obstetric pulmonary embolism unspecified (disorder)
200317001	Other obstetric pulmonary embolism with antenatal complication
200318006	Other obstetric pulmonary embolism with postnatal complication

45015000	Other obstetrical pulmonary embolism, NEC
200284000	Puerperal pulmonary embolism
194882001	Pulmonary embolism
266292008	Pulmonary embolism
59282003	Pulmonary embolism
723859005	Pulmonary embolism as current complication following acute myocardial infarction (disorder)
860680001	Pulmonary embolism due to and following ectopic pregnancy
860681002	Pulmonary embolism due to and following molar pregnancy (disorder)
198855003	Pulmonary embolism following abortive pregnancy
663008	Pulmonary embolism following molar AND/OR ectopic pregnancy
10759311000119104	Pulmonary embolism in childbirth (disorder)
713078005	Pulmonary embolism on long-term anticoagulation therapy (disorder)
1001000119102	Pulmonary embolism with infarction
438773007	Recurrent pulmonary embolism (disorder)
441557008	Septic pulmonary embolism
82153002	Spontaneous abortion with pulmonary embolism
233937007	Subacute massive pulmonary embolism
417113001	Suspected pulmonary embolism (context-dependent category)
609480009	Termination of pregnancy complicated by pulmonary embolism
82153002	Miscarriage with pulmonary embolism (disorder)
860681002	Pulmonary embolism due to and following molar pregnancy (disorder)

Deep Vein Thrombosis

Read V2 Code	Code description
G801.	Deep vein thrombosis
G8010	Phlebitis of the femoral vein
G8011	Phlebitis of the popliteal vein
G8012	Phlebitis of the anterior tibial vein
G8013	Phlebitis of the dorsalis pedis vein
G8014	Phlebitis of the posterior tibial vein
G8015	Deep vein phlebitis of the leg unspecified
G8016	Thrombophlebitis of the femoral vein
G8017	Thrombophlebitis of the popliteal vein
G8018	Thrombophlebitis of the anterior tibial vein
G8019	Thrombophlebitis of the dorsalis pedis vein
G801A	Thrombophlebitis of the posterior tibial vein
G801B	Deep vein thrombophlebitis of the leg unspecified
G801C	Deep vein thrombosis of leg related to air travel
G801D	Deep vein thrombosis of lower limb
G801E	Deep vein thrombosis of leg related to intravenous drug use
G801F	Deep vein thrombosis of peroneal vein
G801G	Recurrent deep vein thrombosis
G801H	Unprovoked deep vein thrombosis
G801J	Provoked deep vein thrombosis
G801z	Deep vein phlebitis and thrombophlebitis of the leg NOS
8CMWA	On deep vein thrombosis care pathway
SP122	Post operative deep vein thrombosis

L414.	Postnatal deep vein thrombosis
L4140	Postnatal deep vein thrombosis unspecified
L4141	Postnatal deep vein thrombosis - delivered with postnatal complication
L4142	Postnatal deep vein thrombosis with postnatal complication
L414z	Postnatal deep vein thrombosis NOS
L413.	Antenatal deep vein thrombosis
L4130	Antenatal deep vein thrombosis unspecified
L4131	Antenatal deep vein thrombosis - delivered
L4132	Antenatal deep vein thrombosis with antenatal complication
L413z	Antenatal deep vein thrombosis NOS
14A81	H/O: Deep Vein Thrombosis
ZV128	[V] Personal history DVT - deep vein thrombosis
G8020	Thrombosis of vein of leg
Read CTV3 Code	Description
Xa9Bs	Deep vein thrombosis
X205n	Ileofemoral deep vein thrombosis
X205m	Lower venous segment thrombosis
XaQIV	Deep venous thrombosis of peroneal vein
X76Lg	Phlegmasia alba dolens
Xa1aj	Phlegmasia alba dolens - obstetric
X76Lh	Phlegmasia caerulea dolens
SP122	Postoperative deep vein thrombosis
L413.	Antenatal deep vein thrombosis
L4130	Antenatal deep vein thrombosis unspecified
L4131	Antenatal deep vein thrombosis - delivered
L4132	Antenatal deep vein thrombosis with antenatal complication
L413z	Antenatal deep vein thrombosis NOS
XE0xL	Postnatal deep vein thrombosis
L4140	Postnatal deep vein thrombosis unspecified
L4141	Postnatal deep vein thrombosis - delivered with postnatal complication
L4142	Postnatal deep vein thrombosis with postnatal complication
L414z	Postnatal deep vein thrombosis NOS
XaJxo	Deep vein thrombosis of leg related to intravenous drug use
Xallo	Deep vein thrombosis of leg related to air travel
Xacve	Provoked deep vein thrombosis
Xacd	Unprovoked deep vein thrombosis
XaZ43	Recurrent deep vein thrombosis
XaC0s	Thrombosis of vein of lower limb
XaBMc	[V] Personal history DVT - deep vein thrombosis
14A81	H/O: Deep Vein Thrombosis
XaaBG	On deep vein thrombosis care pathway
XE0VY	Deep vein phlebitis and thrombophlebitis of the leg
G801z	Deep vein phlebitis and thrombophlebitis of the leg NOS
X205e	Deep thrombophlebitis
Xa205l	High venous segment venous thrombosis
G8016	Thrombophlebitis of femoral vein
G8017	Thrombophlebitis of popliteal vein

G801B	Thrombophlebitis of the leg unspecified
G802.	Phlebitis and thrombophlebitis of leg NOS
Gyu80	[X] Phlebitis and thrombophlebitis/oth deep vessels/low extremites
SNOMED CT ID	Description
195403006	(Deep vein phlebitis and thrombophlebitis of the leg) or (deep vein thrombosis)
315760002	[V] Personal history deep vein thrombosis
285381000119104	Acute deep vein thrombosis of bilateral femoral veins
293491000119107	Acute deep vein thrombosis of left iliac vein
15711401000119105	Acute deep vein thrombosis of left lower limb following procedure
651000119108	Acute deep vein thrombosis of lower limb (disorder)
293481000119109	Acute deep vein thrombosis of right iliac vein
15708401000119100	Acute deep vein thrombosis of right lower limb following procedure
15708201000119101	Acute deep vein thrombosis of right upper limb following procedure
132251000119101	Acute deep venous thrombosis of popliteal vein (disorder)
132271000119105	Acute deep venous thrombosis of thigh (disorder)
285381000119104	Acute deep vein thrombosis of bilateral femoral veins (disorder)
136781000119101	Acute deep venous thrombosis of lower extremity as complication of procedure (disorder)
132261000119104	Acute deep venous thrombosis of tibial vein (disorder)
134961000119104	Acute deep venous thrombosis of axillary vein (disorder)
156268003	Antenatal deep vein thrombosis
200232006	Antenatal deep vein thrombosis - delivered
200234007	Antenatal deep vein thrombosis NOS
200231004	Antenatal deep vein thrombosis unspecified
200233001	Antenatal deep vein thrombosis with antenatal complication
49956009	Antepartum deep vein thrombosis
225999004	At risk of deep vein thrombosis
293461000119100	Chronic deep vein thrombosis of left iliac vein (disorder)
709687000	Chronic deep vein thrombosis of pelvic vein
293451000119102	Chronic deep vein thrombosis of right iliac vein
132131000119102	Chronic deep venous thrombosis of calf (disorder)
132191000119103	Chronic deep venous thrombosis of femoral vein (disorder)
132201000119100	Chronic deep venous thrombosis of iliofemoral vein (disorder)
503421000000105	Deep vein thrombosis enhanced services administration stage 1 service level (finding)
132141000119106	Chronic deep venous thrombosis of lower extremity (disorder)
132091000119104	Chronic deep venous thrombosis of lower limb due to coronary artery bypass grafting (disorder)
132151000119108	Chronic deep venous thrombosis of popliteal vein (disorder)
132171000119104	Chronic deep venous thrombosis of thigh (disorder)
132221000119109	Chronic deep venous thrombosis of upper extremity (disorder)
136751000119108	Chronic deep venous thrombosis of upper extremity as complication of procedure (disorder)
503451000000100	Deep vein thrombosis enhanced services administration stage 2 service level (finding)
503481000000106	Deep vein thrombosis enhanced services administration stage 3 service level (finding)
132551000119104	Chronic thrombosis of subclavian vein (disorder)
16750002	Deep thrombophlebitis

444325005	Deep vein thrombosis of bilateral lower extremities (disorder)
134399007	Deep vein thrombosis of leg related to air travel
366830006	Deep vein thrombosis of leg related to air travel
366911007	Deep vein thrombosis of leg related to air travel
413956008	Deep vein thrombosis of leg related to intravenous drug use (disorder)
860699005	Deep vein thrombosis of lower extremity due to intravenous drug use
366912000	Deep vein thrombosis of lower limb
17920008	Deep vein thrombosis of portal vein
14534009	Deep vein thrombosis of splenic vein
401186003	Deep vein thrombosis screening
155454004	Deep vein thrombosis-non obst.
266328001	Deep vein thrombosis-non obst.
267361004	Deep vein thrombosis-obstetric
128053003	DVT
128057002	DVT - Deep vein thrombosis of lower limb
404223003	DVT - Deep vein thrombosis of lower limb
200235008	DVT: [postnatal] or [obstetric phlegmasia alba dolens]
438785004	Deep venous thrombosis of tibial vein (disorder)
132161000119105	Chronic deep venous thrombosis of tibial vein (disorder)
703277001	Deep venous thrombosis of femoropopliteal vein (disorder)
427775006	Deep venous thrombosis of profunda femoris vein (disorder)
161508001	History of deep vein thrombosis
141911000119100	History of recurrent deep vein thrombosis
234044007	Ileofemoral deep vein thrombosis
156264001	Obstetric venous problems (& [deep vein thrombosis] or [varicose vein]) (disorder)
156269006	Postnatal deep vein thrombosis
200237000	Postnatal deep vein thrombosis - delivered with postnatal complication
200239002	Postnatal deep vein thrombosis NOS
200236009	Postnatal deep vein thrombosis unspecified
200238005	Postnatal deep vein thrombosis with postnatal complication
213220000	Postoperative deep vein thrombosis
56272000	Postpartum deep vein thrombosis
439993001	Prevention of deep vein thrombosis (regime/therapy)
710167004	Recurrent deep vein thrombosis (disorder)
431883007	Referral to deep vein thrombosis clinic (procedure)
432805000	Suspected deep vein thrombosis (situation)
978441000000108	Provoked deep vein thrombosis (disorder)
978421000000101	Unprovoked deep vein thrombosis (disorder)
869721000000104	Deep vein thrombosis care pathway (regime/therapy)
128055005	Deep venous thrombosis of pelvic vein (disorder)
443210003	Deep venous thrombosis of peroneal vein (disorder)
141911000119100	History of recurrent deep vein thrombosis (situation)
15708361000119109	Acute deep vein thrombosis of left lower limb following coronary artery bypass graft (disorder)
15708241000119104	Acute deep vein thrombosis of right lower limb following coronary artery bypass graft (disorder)
429098002	Thromboembolism of vein (disorder)

Appendix 4

Below is a list of the variables to be extracted and utilised for the study

Variable	Role	Data source(s)	Operational definition
Atopic Dermatitis	Case definition	OPCRD	As defined using the codes listed in Appendix 1
Atopic Dermatitis severity	Case definition	OPCRD	As defined using the codes listed in Appendix 1 and the approach described in section 3.4.
Atopic Dermatitis exclusion conditions	Case definition	OPCRD	As defined using the codes listed in Appendix 2
Pulmonary embolism (PE)	Study outcome	OPCRD	As defined using the codes listed in Appendix 3
Deep vein thrombosis (DVT)	Study outcome	OPCRD	As defined using the codes listed in Appendix 3
Age	Baseline characteristic, predictor variable	OPCRD	Defined as age at the start of follow up
Gender	Baseline characteristic, predictor variable	OPCRD	Primary care recorded patient gender
Socioeconomic status (SES)	Baseline characteristic, predictor variable	OPCRD	Defined using patient index of multiple deprivation quintile
Ethnicity	Baseline characteristic, predictor variable	OPCRD	Defined using office of national statistics census categories using clinically coded ethnicity data
Smoking status	Baseline characteristic, predictor variable	OPCRD	Using most recent clinically recorded smoking status information
Alcohol use	Baseline characteristic, predictor variable	OPCRD	Using most recent clinically recorded

			alcohol use status information
Body mass index (BMI)	Baseline characteristic, predictor variable	OPCRD	Defined using most recent clinically recorded BMI information
Death	Censoring event	OPCRD	Identified from coding in the clinical record
Deregistration from GP	Censoring event	OPCRD	Identified from coding in the clinical record
Atrial fibrillation	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Angina	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Myocardial infarction	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Congestive heart failure	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Stroke	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Diabetes type	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Hyperlipidaemia	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Hypertension	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Chronic kidney disease stages 3-5	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition and lab test results
Chronic obstructive pulmonary disease,	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Asthma	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Chronic liver disease	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Dementia	Baseline characteristic, predictor variable	OPCRD	Identified using clinical codes for the condition
Immunotherapy use	Potential predictor variable	OPCRD	Identified using prescription records for immunotherapy

Phototherapy treatment	Potential predictor variable	OPCRD	Identified using prescription records and clinical codes for phototherapy
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