



Standardised MedDRA Queries (SMQs)



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Course Overview

- Review content of the MedDRA Data Retrieval and Presentation: Points to Consider document
- Review key principles in use of MedDRA to develop queries
- Discuss the features of Standardised MedDRA Queries (SMQs) including:
 - Background and data characteristics
 - Impact of MedDRA versioning on SMQs
 - Benefits/limitations of SMQs

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Course Overview (cont)

- Demonstration of SMQ Analysis Tool embedded in MedDRA browsers
- SMQ Applications
- Two clinical scenarios for the use of SMQs
- Discuss the creation of customized searches
- Conclude with question and answer session

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MedDRA Data Retrieval and Presentation: Points to Consider

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MedDRA Data Retrieval and Presentation: Points to Consider (DRP:PTC)

**MedDRA® DATA RETRIEVAL AND PRESENTATION:
POINTS TO CONSIDER**
ICH-Endorsed Guide for MedDRA Users
on Data Output

Release 3.21

March 2021

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- Provides data retrieval and presentation options for industry or regulatory purposes
- Most effective when used in conjunction with MedDRA Term Selection: PTC document
- Recommended to be used as basis for individual organization's own data retrieval conventions

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MedDRA Data Retrieval and Presentation: PTC (cont)

- Developed by a working group of the ICH Management Committee
- Updated annually in step with the March release of MedDRA
- Complete versions available in English, Japanese, Chinese, Korean, and Spanish
- Condensed versions available for other MedDRA languages
- Available on MedDRA and JMO websites

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Data Retrieval PTC Points Addressed

- General Principles
 - Quality of Source Data
 - Documentation of Data Retrieval and Presentation Practices
 - Do Not Alter MedDRA
 - Organisation-Specific Data Characteristics
 - Characteristics of MedDRA that Impact Data Retrieval and Analysis
 - MedDRA Versioning
- General Queries and Retrieval
- Standardised MedDRA Queries
- Customised Searches

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MedDRA Versioning

- MedDRA is updated twice a year
 - 1 March X.0 release (all levels)
 - 1 September X.1 release (LLT and PT levels only)
- Version used in data retrieval and presentation should be documented
- Resources:
 - “What’s New” document
 - Version report
 - MedDRA Version Analysis Tool (MVAT)
- Terms used for queries should be in same version as data being queried

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MedDRA Version Analysis Tool (MVAT)

- Web-based (<https://tools.meddra.org/mvat>)
- Free to all users
- Features
 - Version Report Generator (produces exportable report comparing any two versions)
 - Data Impact Report (identifies changes to a specific set of MedDRA terms or codes uploaded to MVAT)
 - Search Term Change (identifies changes to a single MedDRA term or code)

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MedDRA Version Analysis Tool (MVAT) (cont)

- User interface and report output available in all MedDRA languages
- Ability to run reports on supplemental changes
- Option to run reports on secondary SOC changes
- Watch the two-part webinar on the use of MVAT under “Tools” tab on the “Training Materials” page of MedDRA website

<https://www.meddra.org/training-materials>

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Using MedDRA to Develop Queries

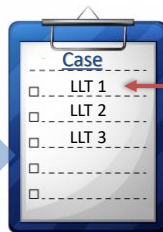
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What is a Query?

Clinical Trial Database
Safety Database



"Hit"

Query

| SMQ |
|------|
| PT |
| LLT |
| LLT |
| LLT1 |
| PT |
| LLT |
| LLT |
| LLT |

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General Tips for Building Queries with MedDRA

- Define the condition
- Develop inclusion/exclusion criteria
- Good browser is key component
- Search “non multi-axial” and “other/support” SOCs
- Search a term’s “neighbors”, including secondary locations
- Use grouping terms where applicable
- Avoid using LLTs (Exception: species information at LLT level in SOC *Infections and infestations*)
- Store for future use
- Review for impact of new MedDRA versions

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Standardised MedDRA Queries (SMQs)

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Standardised MedDRA Queries (SMQs)

- Groupings of terms from one or more MedDRA SOCs related to medical condition or area of interest
- Terms relate to signs/symptoms, diagnoses, syndromes, physical findings, laboratory and other test data, etc.
- Intended to aid in case identification

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SMQs in Production - Examples

As of Version 24.0, a total of 108 level 1 SMQs in production

- Agranulocytosis
- Anaphylactic reaction
- Central nervous system vascular disorders
- Convulsions
- COVID-19
- Depression and suicide/self-injury
- Hepatic disorders
- Hypersensitivity
- Ischaemic heart disease
- Lack of efficacy/effect
- Medication errors
- Osteonecrosis
- Peripheral neuropathy
- Pregnancy and neonatal topics
- Pseudomembranous colitis
- Rhabdomyolysis/myopathy
- Severe cutaneous adverse reactions
- Shock
- Systemic lupus erythematosus

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SMQ Data Characteristics

- MedDRA term inclusion
- Broad/narrow
- Algorithms
- Hierarchy
- SMQ status/term status within an SMQ
- Term versioning in an SMQ

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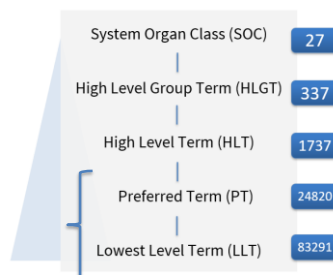
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MedDRA Term Inclusion

- SMQs are constructed at MedDRA PT level
- LLTs that are subordinate to an included PT are also included



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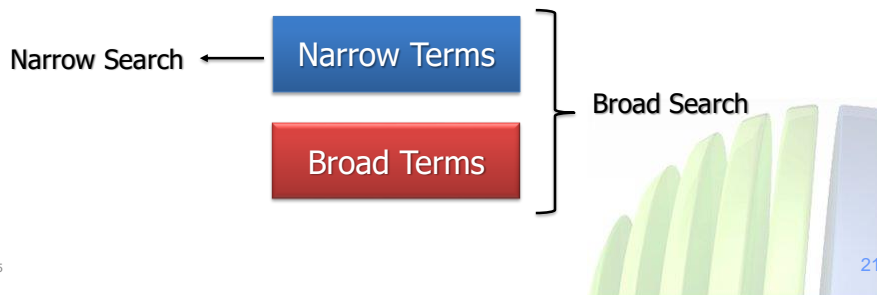
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Narrow and Broad Searches

- “**Narrow**” scope – specificity (cases highly likely to be condition of interest)
- “**Broad**” scope – sensitivity (all possible cases)
- “Broad search” = All broad + all narrow terms



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Narrow vs. Broad Example

Lactic acidosis (SMQ)

Narrow search terms

- Blood lactic acid increased
- Hyperlactacidaemia
- Lactic acidosis

Broad Search Terms

- Acid base balance abnormal
- Acidosis
- Anion gap abnormal
- Anion gap increased
- Blood alkalisation therapy
- Blood bicarbonate abnormal
- Blood bicarbonate decreased
- Blood gases abnormal
- Blood lactic acid abnormal
- Blood pH abnormal
- Blood pH decreased
- Carbon dioxide combining power abnormal
- Carbon dioxide combining power decreased
- Coma acidotic
- Kussmaul respiration
- Metabolic acidosis
- PCO2 abnormal
- PCO2 decreased
- Urine lactic acid increased

Definition

Lactic acidosis is a form of high anion gap metabolic acidosis - Intrinsic cardiac contractility may be depressed, but inotropic function can be normal because of catecholamine release - Peripheral arterial vasodilatation and central vasoconstriction can be present - Central nervous system function is depressed, with headache, lethargy, stupor, and, in some cases, even coma - Glucose intolerance may occur - Characterized by an increase in plasma L-lactate - Acidosis is seldom significant unless blood lactate exceeds 5 mmol/l - Clinical presentation in type B lactic acidosis: o Symptoms: hyperventilation or dyspnea, stupor or coma, vomiting, drowsiness, and abdominal pain o Onset of symptoms and signs is usually rapid accompanied by deterioration in the level of consciousness.

Source

1. Braunwald E, Fauci A, Kasper D. Harrison's Principles of Internal Medicine. 15th Edition, 2001 pp 285-92. Weatherall D, Ledingham J and Warrell D. Oxford Textbook of Medicine. Third edition, 1996; volume 2 pp 1541-44

Note

Testing in two regulatory databases confirmed that the term list is adequate, in one regulatory database, the term "acidosis" identified cases, but this may be a phenomenon of the database characteristics (coding of verbatims to terms of an older terminology or other coding conventions).

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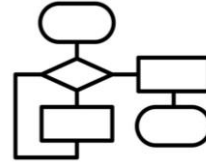
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Algorithmic SMQs

- Some SMQs are designed to utilize algorithms



- Better case identification among broad search terms may result if cases are selected by a defined combination of selected terms

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Algorithmic SMQ Example (cont)

| <i>Anaphylactic reaction (SMQ)</i> | |
|---|---|
| Category A = Narrow search terms | Category B = Upper airway/Respiratory |
| <ul style="list-style-type: none"> • Anaphylactic reaction • Anaphylactic shock • Anaphylactic transfusion reaction • Anaphylactoid reaction • Anaphylactoid shock • Circulatory collapse • Dialysis membrane reaction • Kounis syndrome • Procedural shock • Shock • Shock symptom • Type I hypersensitivity | <ul style="list-style-type: none"> • Acute respiratory failure • Asthma • Bronchial oedema |
| | Category C = Angioedema/Urticaria, etc. |
| | <ul style="list-style-type: none"> • Allergic oedema • Angioedema • Erythema |
| | Category D = Cardiovascular/Hypotension |
| | <ul style="list-style-type: none"> • Blood pressure decreased • Blood pressure diastolic decreased • Blood pressure systolic decreased |

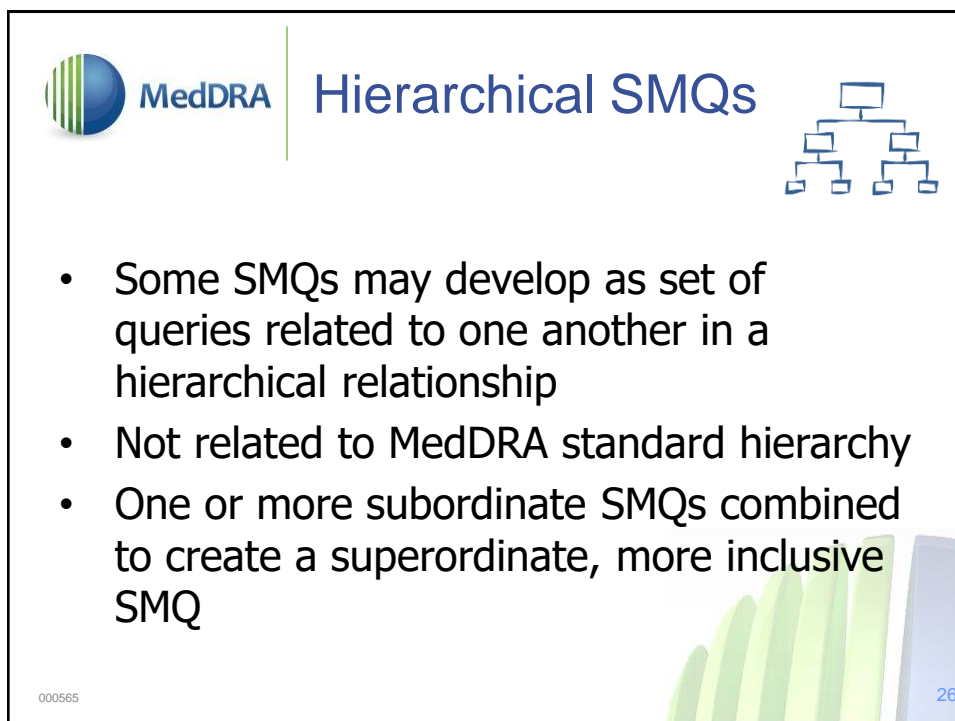
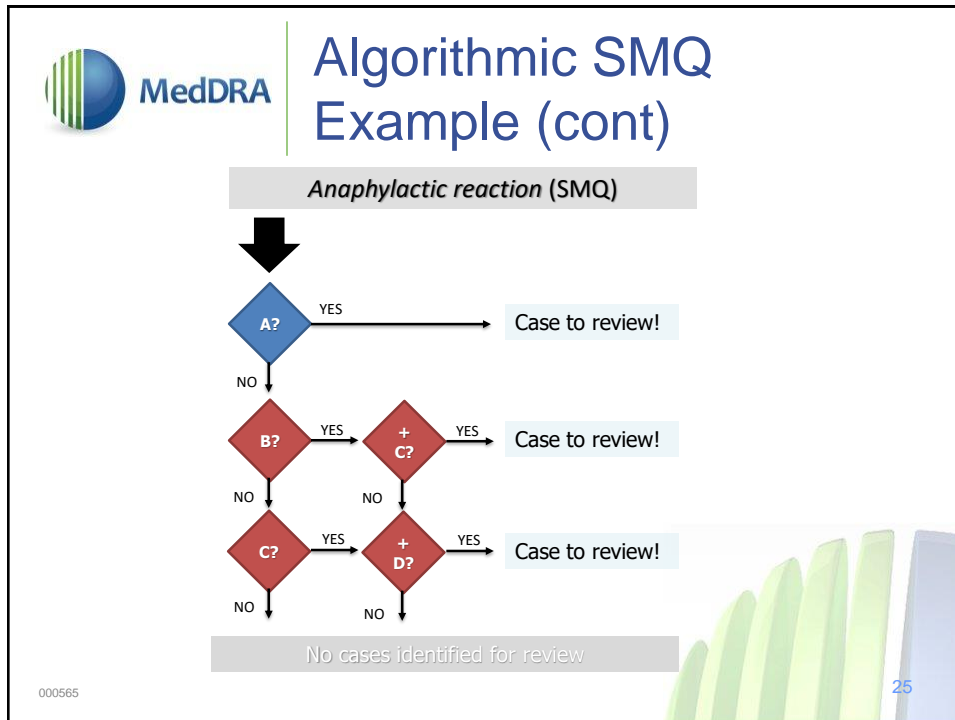
A case =

- Term Category **A** (Narrow terms)
- or** – Term from Category **B** **and** term from Category **C**
- Term from **either** [Category **B** or Category **C**] **plus** Term from Category **D**

Not all Category B, C, and D terms are shown

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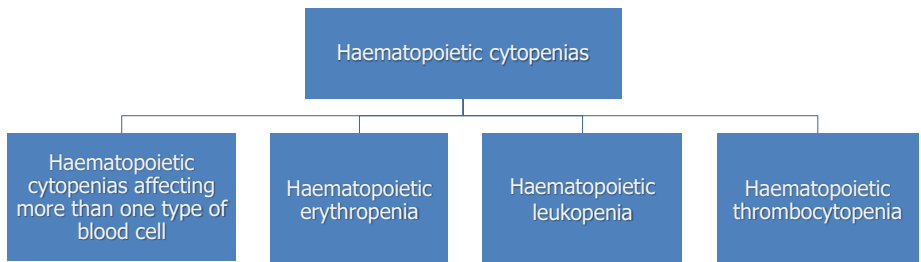
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Hierarchical SMQ Example



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SMQ Status/Term Status

- Each SMQ has a status (Active/Inactive)
- Similar in concept to MedDRA currency
- Terms assigned to an SMQ also have a status flag
 - Once a term is added to an SMQ, it will always be included in the SMQ but the status may be inactive

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SMQ Versioning

- It is recommended that organizations use the SMQs with data coded with the same version of MedDRA
 - Match the MedDRA version of the SMQ with the MedDRA version of the coded data
 - Mismatches of SMQ and MedDRA coded data could produce unexpected results

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SMQ Versioning (cont)

- Example of PT added to SMQs in MedDRA Version 23.0:
 - PT *Hormone receptor positive breast cancer* in SMQ *Breast malignant tumours*
- Using version 22.1 SMQs which do not contain these PTs would fail to identify cases coded to these terms in a database using MedDRA Version 23.0

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SMQ Benefits and Limitations



Benefits

- Application across multiple therapeutic areas
- Validated reusable search logic
- Standardized communication of safety information
- Consistent data retrieval
- Maintenance by MSSO/JMO



Limitations

- Do not cover all medical topics or safety issues
- Will evolve and undergo further refinement even though they have been tested during development

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Browser Demonstration SMQ View

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Using the SMQ Analysis Tool in the MedDRA Browsers

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MSSO's MedDRA Browsers



MedDRA Desktop Browser (MDB)

Download MDB and release files from MedDRA website

MedDRA Web-Based Browser (WBB)

<https://tools.meddra.org/wbb/>

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Mobile MedDRA Browser

<https://mmb.meddra.org>

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MSSO's MedDRA Browsers (cont)

- Features
 - Each require MedDRA ID and password
 - View/search MedDRA and SMQs
 - Support for all MedDRA languages
 - Language specific interface
 - Ability to export search results and Research Bin to local file system (MDB and WBB only)



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MDB and WBB Special Features

- Preview upcoming (supplemental) changes in next release*
- View primary **and** secondary link information
- Upload terms to run against SMQs
- Advanced search options (e.g., NOT, OR)

*Supplemental view not available on MDB

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How to “Run” SMQs

- IT perspective of SMQs = stored queries
- Most organizations code and store data as LLTs
- SMQ ASCII files include PTs and LLTs
- Load SMQs into a query tool; run query against coded MedDRA terms in database for “Hits”
- Use SMQ options, if applicable
 - Narrow/broad search
 - Algorithms
 - Hierarchy

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A Practical Question

- In my dataset, which cases are “hits” for SMQs (potential cases of interest)?

| Row ID | Term | Code | Case ID |
|--------|---------------------------------------|----------|---------|
| 1 | Amylase abnormal | 10072327 | 1 |
| 2 | Abdominal distension | 10000060 | 1 |
| 3 | Acute kidney injury | 10069339 | 2 |
| 4 | Blood creatinine increased | 10005483 | 2 |
| 5 | Status asthmaticus | 10041961 | 3 |
| 6 | Gout | 10018627 | 4 |
| 7 | Joint effusion | 10023215 | 4 |
| 8 | Major depression | 10057840 | 5 |
| 9 | Suicidal ideation | 10042458 | 5 |
| 10 | Cataract operation | 10063797 | 6 |
| 11 | Abdominal pain | 10000081 | 7 |
| 12 | Diarrhoea | 10012735 | 7 |
| 13 | Palpitations | 10033557 | 8 |
| 14 | Atrial flutter | 10003662 | 8 |
| 15 | Pancreatitis acute | 10033647 | 9 |
| 16 | Dementia Alzheimer's type | 10012271 | 10 |
| 17 | Hypertension | 10020772 | 10 |
| 18 | Anaphylactic shock | 10002199 | 11 |
| 19 | Bronchospasm | 10006482 | 12 |
| 20 | Swelling face | 10042682 | 12 |
| 21 | Rash | 10037844 | 12 |
| 22 | Hypotension | 10021097 | 12 |
| 23 | SLE arthritis | 10040968 | 13 |
| 24 | Haemolysis | 10018910 | 14 |
| 25 | Autoimmune nephritis | 10077087 | 14 |
| 26 | Double stranded DNA antibody positive | 10069907 | 14 |
| 27 | Photodermatosis | 10051246 | 15 |
| 28 | Pleural effusion | 10035598 | 15 |
| 29 | Epilepsy | 10015037 | 15 |
| 30 | Disease progression | 10061818 | 16 |
| 31 | Exercise tolerance decreased | 10051301 | 16 |
| 32 | COVID-19 pneumonia | 10084380 | 17 |
| 33 | Acute respiratory distress syndrome | 10001052 | 17 |

Input

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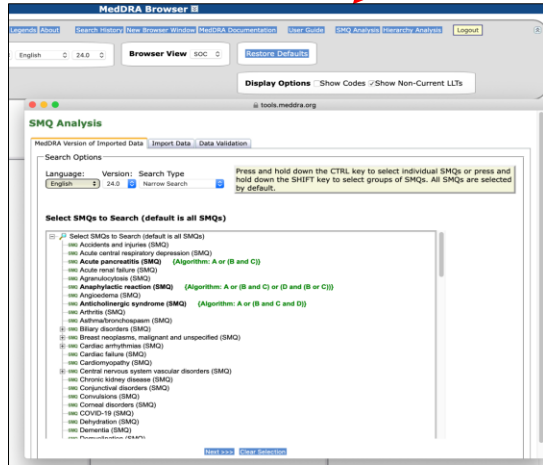
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Standardised MedDRA Query (SMQ) Analysis Tool

SMQ Analysis Tool

- SMQ Analysis feature
- Apply SMQs to user's MedDRA-coded data
 - Narrow/broad
 - Hierarchical
 - Algorithmic (separate search option to apply algorithm)



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SMQ Analysis Tool (cont)

- Run broad search of all SMQs

| Row ID | Term | Code | Case ID |
|--------|---------------------------------------|----------|---------|
| 1 | Amylase abnormal | 10072327 | 1 |
| 2 | Abdominal distension | 10000060 | 1 |
| 3 | Acute kidney injury | 10069339 | 2 |
| 4 | Blood creatinine increased | 10005483 | 2 |
| 5 | Status asthmaticus | 10041961 | 3 |
| 6 | Gout | 10018627 | 4 |
| 7 | Joint effusion | 10023215 | 4 |
| 8 | Major depression | 10057840 | 5 |
| 9 | Suicidal ideation | 10042458 | 5 |
| 10 | Cataract operation | 10063797 | 6 |
| 11 | Abdominal pain | 10000081 | 7 |
| 12 | Diarrhoea | 10012735 | 7 |
| 13 | Palpitations | 10033557 | 8 |
| 14 | Atrial flutter | 10003662 | 8 |
| 15 | Pancreatitis acute | 10033647 | 9 |
| 16 | Dementia Alzheimer's type | 10012271 | 10 |
| 17 | Hypertension | 10020772 | 10 |
| 18 | Anaphylactic shock | 10002199 | 11 |
| 19 | Bronchospasm | 10006482 | 12 |
| 20 | Swelling face | 10042682 | 12 |
| 21 | Rash | 10037844 | 12 |
| 22 | Hypotension | 10021097 | 12 |
| 23 | SLE arthritis | 10040968 | 13 |
| 24 | Haemolysis | 10018910 | 14 |
| 25 | Autoimmune nephritis | 10077087 | 14 |
| 26 | Double stranded DNA antibody positive | 10069907 | 14 |
| 27 | Photodermatitis | 10051246 | 15 |
| 28 | Pleural effusion | 10035598 | 15 |
| 29 | Epilepsy | 10015037 | 15 |
| 30 | Disease progression | 10061818 | 16 |
| 31 | Exercise tolerance decreased | 10051301 | 16 |
| 32 | COVID-19 pneumonia | 10084380 | 17 |
| 33 | Acute respiratory distress syndrome | 10001052 | 17 |

Input

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SMQ Analysis Tool (cont)

- Results of broad search on all SMQs
 - Includes narrow search
 - Includes hierarchical SMQs
 - Algorithmic SMQ analysis not shown

| Row ID | LL1/PT Term | LL1/PT Code | PT | SMQ Matched | Scope | Category | Weight | Status | Case ID | SMQ Level 1 |
|--------|----------------------------|-------------|----------------------------|---|--------|----------|--------|--------|---------|--|
| 5 | Amylase abnormal | 10072327 | Amylase abnormal | Acute pancreatitis (SMQ) | Broad | B | 0 | Active | 5 | Acute pancreatitis (SMQ) |
| 6 | Abdominal distension | 10000060 | Abdominal distension | Acute pancreatitis (SMQ) | Broad | C | 0 | Active | 5 | Acute pancreatitis (SMQ) |
| 7 | Abdominal distension | 10000060 | Abdominal distension | Gastrointestinal nonspecific symptoms and therapeutic procedures (SMQ) | Narrow | A | 0 | Active | 5 | Gastrointestinal nonspecific inflammation and dysfunction (SMQ) |
| 8 | Acute kidney injury | 10088339 | Acute kidney injury | Acute kidney injury | Broad | A | 0 | Active | 5 | Acute kidney injury (SMQ) |
| 9 | Acute kidney injury | 10088339 | Acute kidney injury | Acute renal failure (SMQ) | Narrow | A | 0 | Active | 5 | Acute renal failure (SMQ) |
| 10 | Acute kidney injury | 10088339 | Acute kidney injury | Shock associated circulatory or cardiac conditions (see torcade de pointes) (SMQ) | Broad | A | 0 | Active | 5 | Shock (SMQ) |
| 11 | Acute kidney injury | 10088339 | Acute kidney injury | Torsade de pointes, shock-associated conditions (SMQ) | Broad | A | 0 | Active | 5 | Shock (SMQ) |
| 12 | Acute kidney injury | 10088339 | Acute kidney injury | Hypovolemic shock conditions (SMQ) | Broad | A | 0 | Active | 5 | Shock (SMQ) |
| 13 | Acute kidney injury | 10088339 | Acute kidney injury | Toxic-septic shock conditions (SMQ) | Broad | A | 0 | Active | 5 | Shock (SMQ) |
| 14 | Acute kidney injury | 10088339 | Acute kidney injury | Anaphylactic/anaphylactoid shock conditions (SMQ) | Broad | A | 0 | Active | 5 | Shock (SMQ) |
| 15 | Acute kidney injury | 10088339 | Acute kidney injury | Hypoglycaemic and neurogenic shock conditions | Broad | A | 0 | Active | 5 | Shock (SMQ) |
| 16 | Acute kidney injury | 10088339 | Acute kidney injury | Tumour lysis syndrome (SMQ) | Broad | C | 0 | Active | 5 | Tumour lysis syndrome (SMQ) |
| 17 | Acute kidney injury | 10088339 | Acute kidney injury | Drug reaction with eosinophilia and systemic symptoms syndrome (SMQ) | Broad | B | 0 | Active | 5 | Drug reaction with eosinophilia and systemic symptoms syndrome (SMQ) |
| 18 | Acute kidney injury | 10088339 | Acute kidney injury | Dehydration (SMQ) | Broad | A | 0 | Active | 5 | Dehydration (SMQ) |
| 19 | Blood creatinine increased | 10005483 | Blood creatinine increased | Rhabdomyolysis/hepatopathy (SMQ) | Broad | A | 0 | Active | 5 | Rhabdomyolysis/hepatopathy (SMQ) |
| 20 | Blood creatinine increased | 10005483 | Blood creatinine increased | Acute renal failure (SMQ) | Broad | A | 0 | Active | 5 | Acute renal failure (SMQ) |
| 21 | Blood creatinine increased | 10005483 | Blood creatinine increased | Renoprotective therapy (SMQ) | Broad | A | 0 | Active | 5 | Renoprotective therapy (SMQ) |

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SMQ Analysis Tool (cont)

- Results of algorithmic SMQ analysis

| Row ID | LL1/PT Term | LL1/PT Code | PT | SMQ Matched | Scope | Category | Weight | Status | Case ID | SMQ Level 1 |
|--------|---------------------------------------|-------------|---------------------------------------|--|--------|----------|--------|--------|---------|--|
| 5 | Amylase abnormal | 10072327 | Amylase abnormal | Acute pancreatitis (SMQ) | Broad | B | 0 | Active | 5 | Acute pancreatitis (SMQ) |
| 6 | Abdominal distension | 10000060 | Abdominal distension | Acute pancreatitis (SMQ) | Broad | C | 0 | Active | 5 | Acute pancreatitis (SMQ) |
| 7 | Anaphylactic shock | 10002199 | Anaphylactic shock | Anaphylactic reaction (SMQ) | Narrow | A | 0 | Active | 11 | Anaphylactic reaction (SMQ) |
| 8 | Bronchospasm | 10006482 | Bronchospasm | Anaphylactic reaction (SMQ) | Broad | B | 0 | Active | 12 | Anaphylactic reaction (SMQ) |
| 9 | Swelling face | 10043582 | Swelling face | Anaphylactic reaction (SMQ) | Broad | C | 0 | Active | 12 | Anaphylactic reaction (SMQ) |
| 10 | Rash | 10037844 | Rash | Anaphylactic reaction (SMQ) | Broad | C | 0 | Active | 12 | Anaphylactic reaction (SMQ) |
| 11 | Hypotension | 10021097 | Hypotension | Anaphylactic reaction (SMQ) | Broad | D | 0 | Active | 12 | Anaphylactic reaction (SMQ) |
| 12 | SLE arthritis | 10040968 | SLE arthritis | Systemic lupus erythematosus (SMQ) | Narrow | A | 0 | Active | 13 | Systemic lupus erythematosus (SMQ) |
| 13 | Haemolysis | 10018910 | Haemolysis | Systemic lupus erythematosus (SMQ) | Broad | H | 3 | Active | 14 | Systemic lupus erythematosus (SMQ) |
| 14 | Autoimmune nephritis | 10077087 | Autoimmune nephritis | Systemic lupus erythematosus (SMQ) | Broad | F | 1 | Active | 14 | Systemic lupus erythematosus (SMQ) |
| 15 | Double stranded DNA antibody positive | 10069907 | Double stranded DNA antibody positive | Systemic lupus erythematosus (SMQ) | Broad | I | 3 | Active | 14 | Systemic lupus erythematosus (SMQ) |
| 16 | Epilepsy | 10015037 | Epilepsy | Generalised convulsive seizures following immunisation (SMQ) | Narrow | A | 0 | Active | 15 | Generalised convulsive seizures following immunisation (SMQ) |
| 17 | Pancreatitis acute | 10033647 | Pancreatitis acute | Acute pancreatitis (SMQ) | Narrow | A | 0 | Active | 9 | Acute pancreatitis (SMQ) |

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SMQ Applications

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SMQ Applications

- Clinical trials
 - Where safety profile is not fully established, use multiple SMQs on routine basis as screening tool
 - Selected SMQs to evaluate previously identified issue (pre-clinical data or class effect)
- Post-marketing
 - Selected SMQs to retrieve cases for suspected or known safety issue
 - Signal detection (multiple SMQs employed)
 - Single case alerts
 - Periodic reporting (aggregate cases for safety and other issues, e.g., lack of efficacy)

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EMA: Signal Detection Analysis

- ICSR coding at LLT level, analysis at PT level (medical concept):
 - ✓ It may be important to conduct analysis at **higher level** of hierarchy: SOC, HLG, HLT
 - When doing so, impact of axial and non multi-axial SOCs needs to be taken into account: relevant PTs in more than 1 SOC
 - ✓ It may be important to conduct analysis at **SMQ** level to maximise likelihood that all terms related to a specific medical condition of interest are identified
- **Challenge: strike the correct balance**
 - ✓ Too narrowly focused search (specificity): exclude events of potential relevance
 - ✓ Too broad search (sensitivity): difficult to identify a trend or signal that may require further analysis (incl. case review)



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Acknowledgement: Dr. Aniello Santoro, EMA

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Use of SMQs at FDA – Reviewing Prescribing Information

- Proposed Prescribing Information:
- Warnings & Precautions:
 - Dizziness/Somnolence
 - Withdrawal of Antiepileptic Drugs
 - Suicidal Behavior and Ideation (class labeling)
- Final Prescribing Information
- **Boxed Warning:**
 - **Serious Psychiatric and Behavioral Reactions**
- Warnings & Precautions:
 - Falls
 - Dizziness & somnolence
 - Withdrawal of Antiepileptic Drugs
 - Suicidal Behavior and Ideation (class labeling)

| SMQ (Narrow Search) | RR |
|--|------------|
| (1) Hostility/aggression | 4.4 |
| (2) Vestibular disorders | 4.258 |
| (1) Hearing and vestibular disorders | 4.088 |
| (1) Hyponatraemia/SIADH | 3.832 |
| (2) Hearing impairment | 3.832 |
| (1) Dyslipidaemia * | 2.555 |
| (1) Biliary disorders | 2.135 |
| (2) Functional, inflammatory and gallstone related biliary disorders | 2.135 |

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Two SMQ Data Analysis Scenarios



Scenario #1

- Your company started development of a new drug for onychomycosis projected to take eight years and cost \$1.2 billion dollars



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Onychomycosis



Toe Nail Fungus

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Scenario #1 (cont)

- As part of safety surveillance, you decide to periodically run SMQs for serious AEs against your data
- You identify five possible cases of hemolytic anemia in your 1,000 patient exposures
- Based on this unfavorable risk/benefit ratio (remember, your drug is for nail fungus), you suggest stopping the development project

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Scenario #1 (cont)

- Your management reviews and follows your recommendation saving time, money and potential patient risk

Job well done !!!!!!!

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Scenario #2

- You are developing the fourth drug in a therapeutic class
- Other products in class are associated with development of high blood pressure and angioedema but, given the seriousness of the target disease, this is an acceptable risk

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Scenario #2 (cont)

- During development and early post-marketing on your product, you routinely run *Hypertension (SMQ)* and *Angioedema (SMQ)* against your expanding safety data
- Over time, it becomes clear that your drug is not associated with either of these risks for the other drugs in your therapeutic class
- Your diligence has given patients a safer alternative for the treatment of their disease

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Congratulations



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Customized Searches

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Customized Searches – Modified SMQs

- Do not modify SMQ unless there is a compelling reason – makes it non-standard
- **“Modified MedDRA query based on an SMQ”**
 - To be used to refer to an SMQ that has been modified
 - All modifications must be documented
 - Version updates and maintenance are responsibility of organization that created it
 - SMQ *Lack of efficacy/effect* often modified based on particular product

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Customized Searches – *Ad Hoc* Queries

- Need medical knowledge
- Need knowledge of structure and characteristics of MedDRA and of your data
- Refer to the *MedDRA Data Retrieval and Presentation: Points to Consider* document for query construction tips
- Save query for future use; maintenance needed for MedDRA version changes
- Consider submitting *ad hoc* query to MSSO via change request for possible development as an SMQ

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Summary

In this course, we:

- ✓ Reviewed the MedDRA Data Retrieval and Presentation: Points to Consider document
- ✓ Reviewed use of MedDRA for developing queries
- ✓ Discussed the characteristics, uses, applications and benefits of Standardised MedDRA Queries (SMQs) including their customization

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MSSO Contacts

- Website
 - www.meddra.org
- Email
 - mssohelp@meddra.org
- Frequently Asked Questions
 - www.meddra.org/faq
- MedDRA Browsers
 - <https://www.meddra.org/meddra-desktop-browsers> (Desktop Browser)
 - <https://tools.meddra.org/wbb/> (Web-Based Browser)
 - <https://mmb.meddra.org> (Mobile Browser)

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MSSO Contacts (cont)

- Training Schedule
 - <https://www.meddra.org/training/schedule>
- MedDRA Support Documentation
 - <https://www.meddra.org/how-to-use/support-documentation>

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Question and Answer Session

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