



Empowering MedTech innovation with Dialog

Dialog Case Study for MedTech audience

Dialog case study

Scenario:

A CER writer is tasked to create reports about Excimer Lasers and about Nebulizers for children. What available literature can be used?

Goal:

To build the search strategies and find the best available evidence needed for:

- Finding any possible mentions of the adverse device effects.
- Clinical background, current knowledge, state of the art.
- Demonstration of comparison of the device with an existing device.
- Continuous update and evidence of searches.



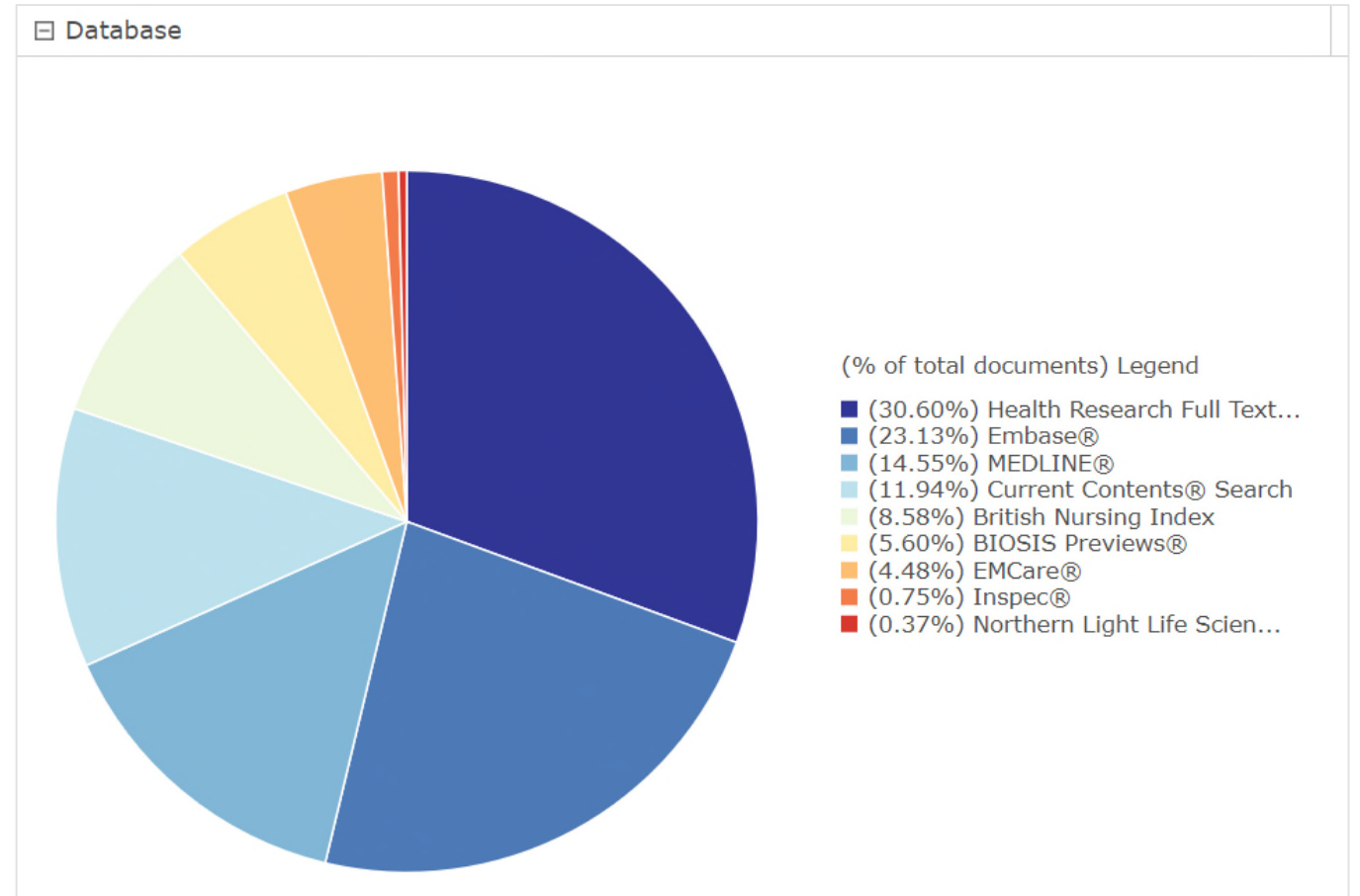
1. Search example adverse effects of excimer lasers

- Accurate synonyms expand the results available.
- S1 and S2 are searches in Embase and MEDLINE using the thesauri.
- To capture relevant articles outside of Medline and Embase, S3 applies a set of synonyms.
- The medical device synonyms are added automatically by the Dialog Medical Synonyms feature, a curated list selected from a variety of specialist sources and taxonomies.
- The search looks for adverse events and relevant synonyms within five words' proximity to the device terms. Free-text terms related to devices such as degradation and corrosion are also added.
- Duplicate references are removed leaving a comprehensive set of unique references.

Set#	Searched for	Results
S1	(EMB.EXACT.EXPLODE("excimer laser – adverse device effect"))	35*
S2	(MESH.EXACT("Lasers, Excimer – adverse effects"))	166*
S3	("excimer laser" or "ArF laser" or "argon fluoride excimer laser" or "argon fluoride laser" or "argon fluoride lasers" or "EC-5000 Quest" or "excimer laser device" or "excimer lasers" or "KrCl laser" or "KrF laser" or "krypton chloride excimer laser" or "krypton chloride laser" or "krypton fluoride excimer laser" or "krypton fluoride laser" or "XeCl laser" or "XeF excimer laser" or "XeF laser" or "xenon chloride excimer laser" or "xenon chloride laser" or "xenon fluoride laser") n/5 (adverse or complicati* or untoward or unexpected or injur* or death or fatal or fatality or degrade or degrading or degradation or corrosiv* or corrodes)	1038*
S4	S1 or S2 or S3	1185*
S5	S4 and py(>2018)	82*

2. Search example clinical background (using PICO)

- Patient = children (18 and under) with asthma
- Intervention = nebulizer
- Control = vibrating mesh vs jet
- Outcome = Improved aerosol medication delivery



2. Search example clinical background (using PICO)

<input type="checkbox"/>	Set ▲	Search	Databases	Results	Actions
<input type="checkbox"/>	S1	((("mesh" or jet) n/5 (nebulizer or "Aero Comfort" or "Aero Mist" or "atomizer" or "eRapid" or "nebuliser" or "nebulisers" or "nebulizers and vapourisers" or "nebulization equipment" or "nebulizator" or "nebulizers" or "nebulizers and vaporizers" or "nembulizer")) AND asthma AND (child or infant or adolescent or juvenile or youth or toddler)) Databases: 11 databases searched View list ▼	11 databases	482°	Actions ▼
<input type="checkbox"/>	S2	(S1 and ti,ab,su(compar*)) Databases: 11 databases searched View list ▼	11 databases	192°	Actions ▼

° Duplicates are removed from the search and from the result count.

1

[Metered-dose inhalers versus nebulization for the delivery of albuterol for acute exacerbations of wheezing or asthma in children : A systematic review with meta-analysis](#)

Payares-Salamanca, Laura; Contreras-Arrieta, Sandra; Florez-García, Victor; Barrios-Sanjuanelo, Alexander; Stand-Niño, Ivan; et al. **Pediatric Pulmonology** 55.12: 3268-3278. John Wiley and Sons Inc. (Dec 2020)

... albuterol administration for treating pediatric asthma exacerbations. The aim of this ... MDI+S in pediatric patients with asthma exacerbations. Methods: We conducted an ...

Found in: Embase®; 1947 to date (1947 - current)

Brief citation
 Citation/Abstract
 Get article from REPRINTS DESK

[Show KWIC](#) ▼ Preview

2

[In vitro and in vivo performance modelling and optimisation of different dry powder inhalers: A complementary study of neural networks, genetic algorithms and decision trees](#)

Ali, Ahmed M A; Zawbaa, Hossam M; Sayed, Ossama M; Harb, Hadeer S; Saeed, Haitham; et al. **International journal of clinical practice**: e13764. (Oct 17, 2020)

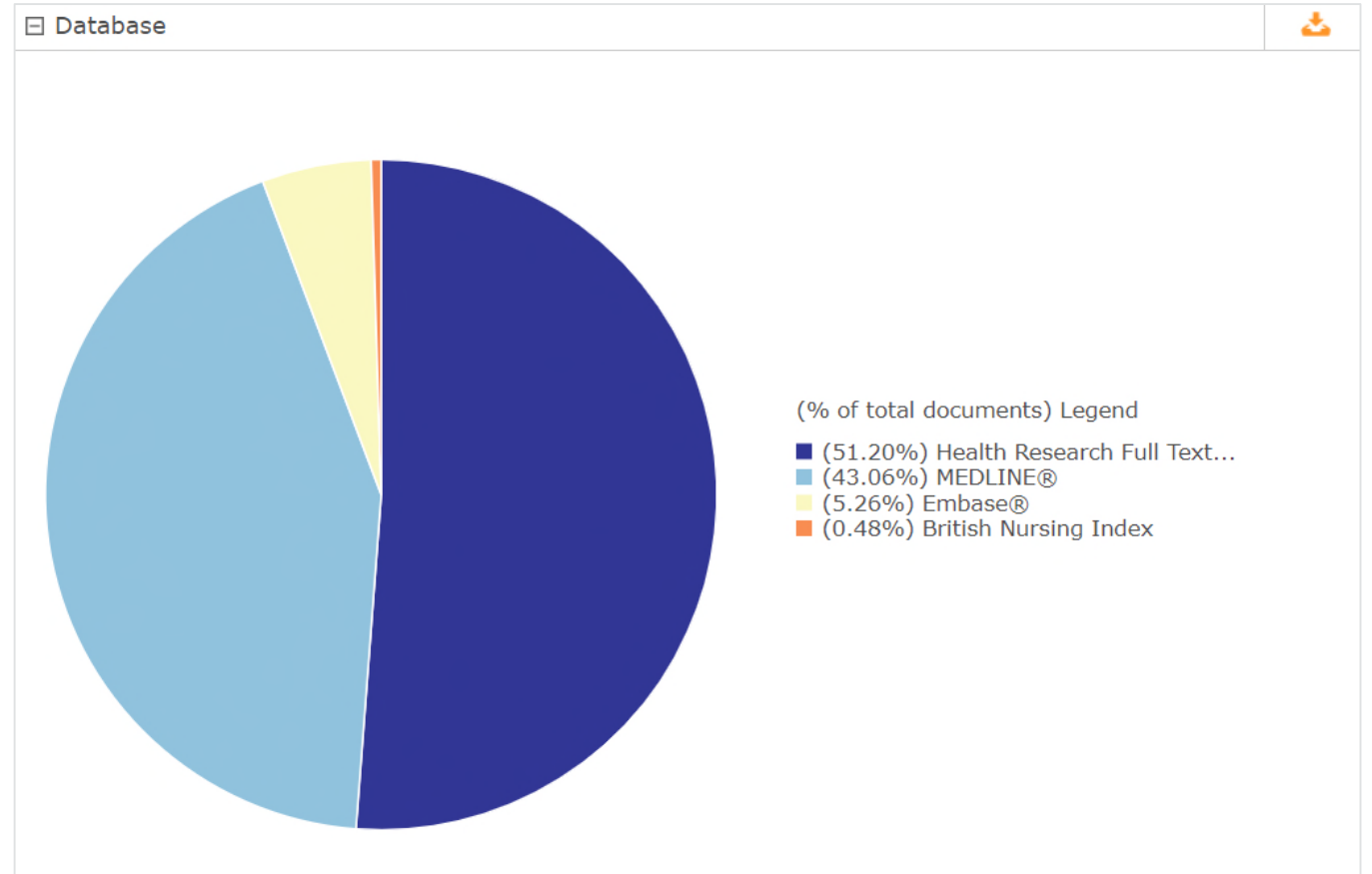
Found in: MEDLINE®; 1946 to date (1946 - current)

Brief citation
 Citation/Abstract
 Get article from REPRINTS DESK



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3. Search example comparison of the device

Set	Search	Databases	Results	Actions
S1	(((("excimer laser" or "ArF laser" or "argon fluoride excimer laser" or "argon fluoride laser" or "argon fluoride lasers" or "EC-5000 Quest" or "excimer laser device" or "excimer lasers" or "KrCl laser" or "KrF laser" or "krypton chloride excimer laser" or "krypton chloride laser" or "krypton fluoride excimer laser" or "krypton fluoride laser" or "XeCl laser" or "XeF excimer laser" or "XeF laser" or "xenon chloride excimer laser" or "xenon chloride laser" or "xenon fluoride laser") n/5 (compar* or similar* or copy)))	11 databases	1477*	Actions
S2	(EMB.EXACT("excimer laser -- device comparison"))	11 databases	11*	Actions
S3	(MESH.EXACT("Lasers, Excimer"))	11 databases	5630*	Actions
S4	(s1 and (s2 or s3))	11 databases	192*	Actions








3. Search example comparison of the device

 [Comparison of Excimer Laser Versus Femtosecond Laser Assisted Trephination in Penetrating Keratoplasty: A Retrospective Study](#) Show KWIC ▾  Preview

Tóth, Gábor; Szentmáry, Nóra; Langenbucher, Achim; Akhmedova, Elina; El-Husseiny, Moatasem; et al. **Advances in therapy** 36.12: 3471-3482. (Dec 2019)

Found in: MEDLINE®; 1946 to date (1946 - current)




 Brief citation  Citation/Abstract 



 [A multicentre, randomized, split face and/or neck comparison of 308-nm excimer laser and 0.1% tacrolimus ointment for stable vitiligo plus intramuscular slow-releasing betamethasone for active vitiligo](#) Show KWIC ▾  Preview

Wu, Y; Sun, Y; Qiu, L; Wang, H; Zhang, Y; et al. **The British journal of dermatology** 181.1: 210-211. (Jul 2019)

Found in: MEDLINE®; 1946 to date (1946 - current)

Cited by (1) [References \(6\)](#)

 Brief citation  Citation 

 [Endothelial cell density and corneal graft thickness following excimer laser vs. femtosecond laser-assisted penetrating keratoplasty-a prospective randomized study](#) Show KWIC ▾  Preview




Tóth, Gábor; Butskhrikidze, Teona; Seitz, Berthold; Langenbucher, Achim; Hager, Tobias; et al. **Graefe's archive for clinical and experimental ophthalmology = Albrecht von Graefes Archiv fur klinische und experimentelle Ophthalmologie** 257.5: 975-981. (May 2019)

... PURPOSE

The study aims to compare the impact of non-mechanical excimer laser-assisted (EXCIMER) and femtosecond laser-assisted ...

Found in: MEDLINE®; 1946 to date (1946 - current)

[References \(28\)](#)

 Brief citation  Citation/Abstract 

4. Continuous update and evidence of searches

Use saved searches and alerts

- Proper management of complex search strategies with sort, filter, edit and sharing tools makes it easy to maintain literature review searches.
- Literature reviews across many devices result in multiple search strategies for each device.
- The ability to simultaneously update these searches (which may be similar) in bulk saves time.
- Automated notifications using Alerts delivers new clinical data on devices regularly - Important now that devices must be monitored over their entire life cycles.

Maintain a record of alert strategies

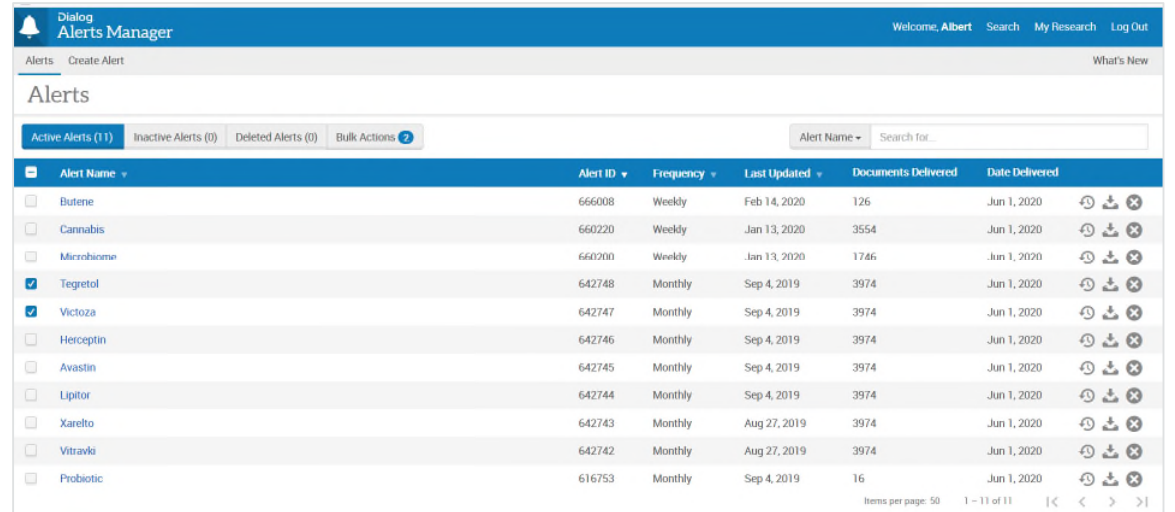
- Keeping a record of clearly documented alerts provides an essential audit trail for MDR 2017/745 compliance.
- In Dialog, the audit trail is for the lifetime of the alert plus four years.
- The audit trail can include all changes and the full history of alert deliveries - keeps your organization inspection-ready and compliant.

4. Continuous update and evidence of searches

Dialog alerts manger

- Module to create, manage and deliver literature search alerts
- Allows users to bulk edit multiple PV alerts at once
- Captures audit trails for both alert deliveries and strategies

Dialog alerts manager - Delivery evidence



The screenshot shows the 'Dialog Alerts Manager' interface. At the top, there is a navigation bar with 'Welcome, Albert', 'Search', 'My Research', and 'Log Out'. Below this, there are tabs for 'Alerts' and 'Create Alert'. The main content area is titled 'Alerts' and includes a search bar and filters for 'Active Alerts (11)', 'Inactive Alerts (0)', and 'Deleted Alerts (0)'. A table lists the active alerts with the following columns: Alert Name, Alert ID, Frequency, Last Updated, Documents Delivered, and Date Delivered. Each row also includes a checkbox and three action icons (refresh, download, delete).

Alert Name	Alert ID	Frequency	Last Updated	Documents Delivered	Date Delivered
<input type="checkbox"/> Butene	666008	Weekly	Feb 14, 2020	126	Jun 1, 2020
<input type="checkbox"/> Cannabis	660220	Weekly	Jan 13, 2020	3554	Jun 1, 2020
<input type="checkbox"/> Microbiome	660200	Weekly	Jan 13, 2020	1746	Jun 1, 2020
<input checked="" type="checkbox"/> Tegretol	642748	Monthly	Sep 4, 2019	3974	Jun 1, 2020
<input checked="" type="checkbox"/> Victoza	642747	Monthly	Sep 4, 2019	3974	Jun 1, 2020
<input type="checkbox"/> Herceptin	642746	Monthly	Sep 4, 2019	3974	Jun 1, 2020
<input type="checkbox"/> Avastin	642745	Monthly	Sep 4, 2019	3974	Jun 1, 2020
<input type="checkbox"/> Lipitor	642744	Monthly	Sep 4, 2019	3974	Jun 1, 2020
<input type="checkbox"/> Xarelto	642743	Monthly	Aug 27, 2019	3974	Jun 1, 2020
<input type="checkbox"/> Vitrova	642742	Monthly	Aug 27, 2019	3974	Jun 1, 2020
<input type="checkbox"/> Probiotic	616753	Monthly	Sep 4, 2019	16	Jun 1, 2020

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Thank you

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