

Improving Molecular-Based Clinical Trial Search

www.molecularmatch.com

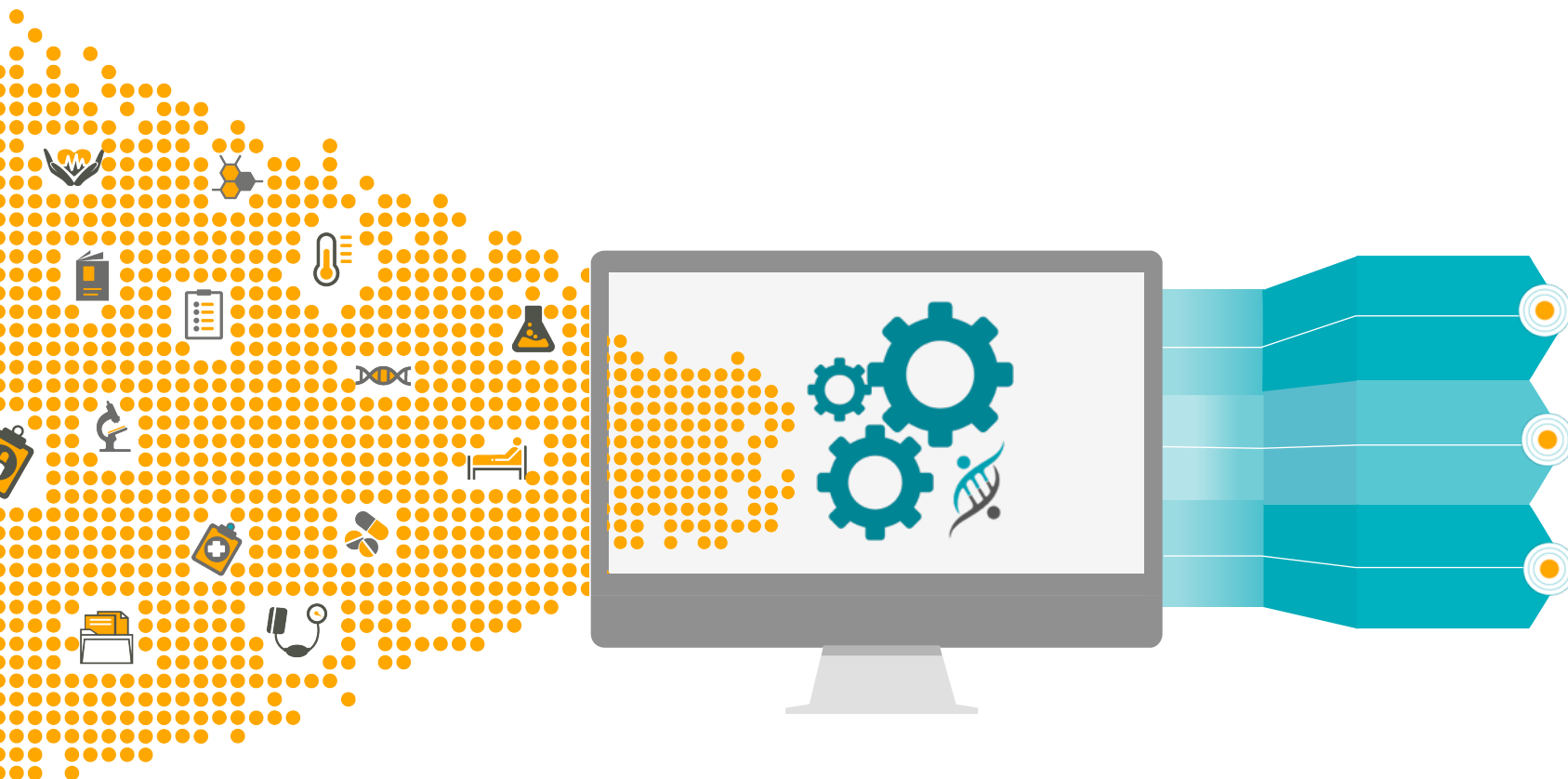
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VP, Sales and Marketing
dcorley@molecularmatch.com

MolecularMatch Products



Targeted Therapeutic and
Immunotherapy Guidance



Geolocated Clinical Trial
Matching



Publication/Literature
Search

Trial Matching Pain Points

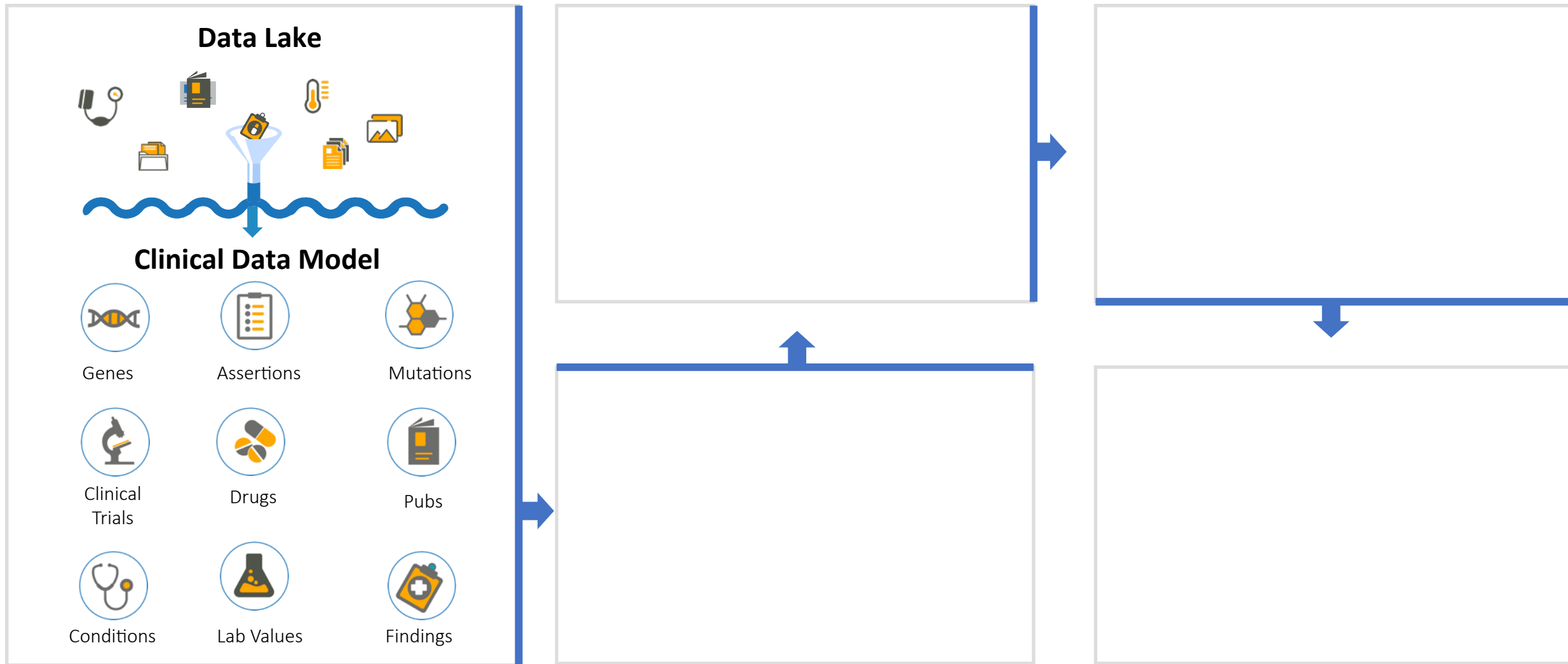
Problem #1 – Users' search terms can match anywhere in the trial record, leading to lists of trials where search terms are found in the exclusion criteria.

How do we efficiently prioritize relevant trials and eliminate long lists of irrelevant trials?

Problem #2 – Many trials do not specify molecular biomarkers as inclusion criteria, even when targeted drugs are part of the trial intervention.

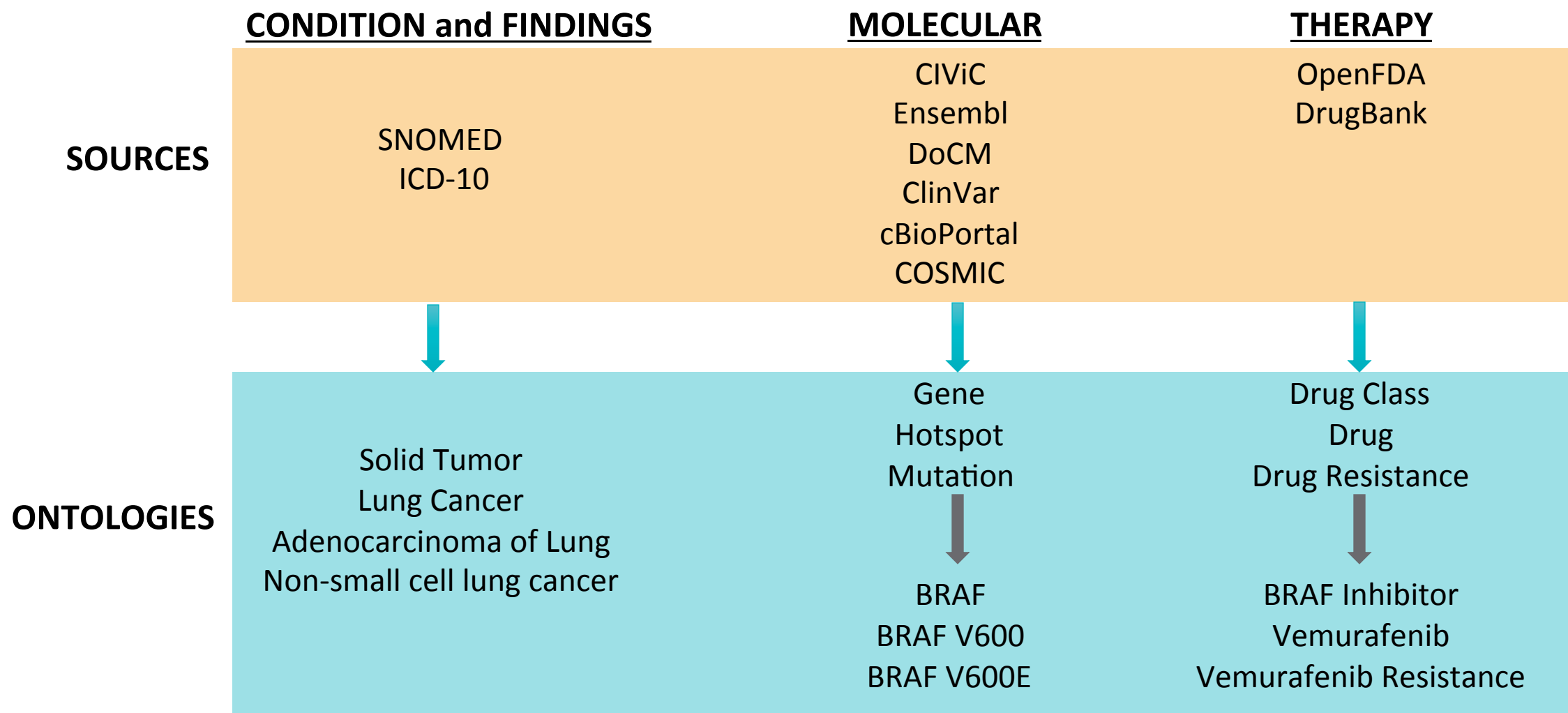
How do we improve matching of molecular patient profiles to these non-molecular trials?

MolecularMatch Platform

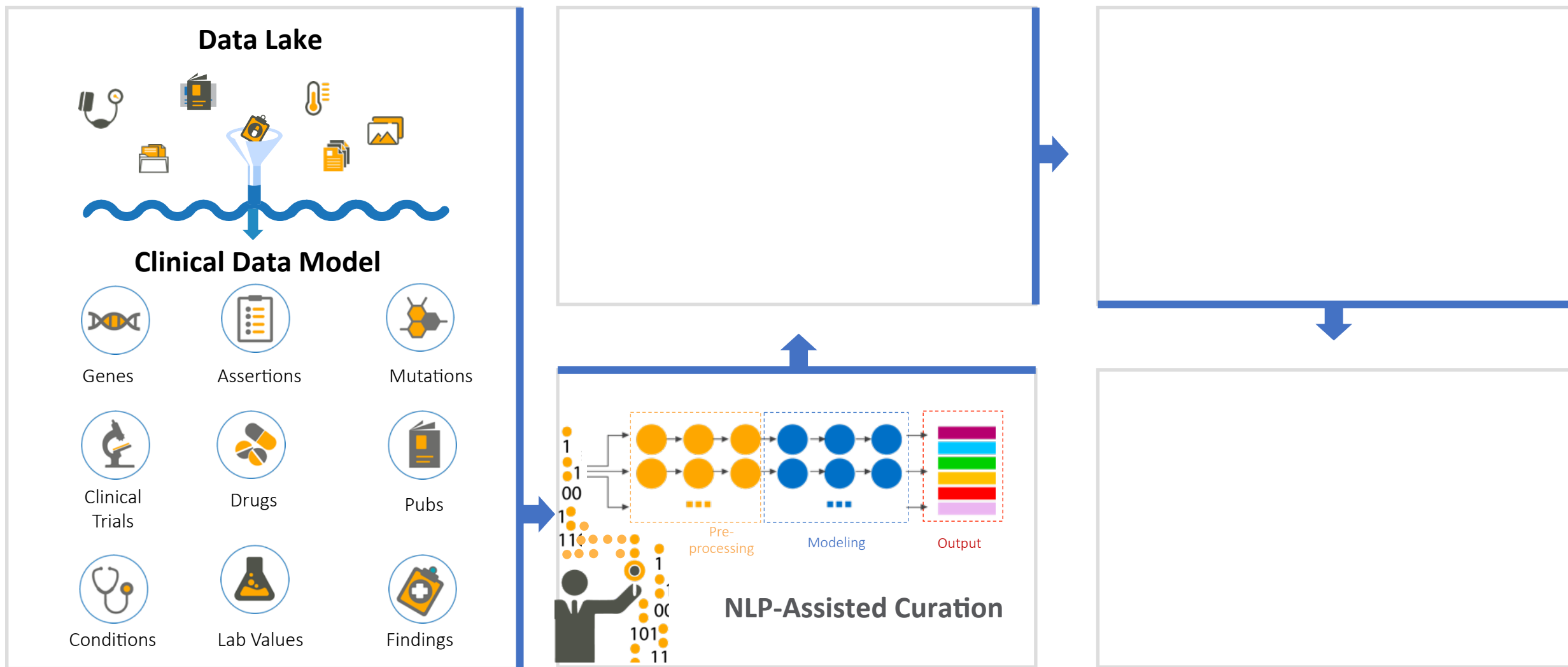


Data Sources and Ontologies

Data relationships




MolecularMatch Platform



Distinguishing Eligibility Criteria

Search: NSCLC EGFR T790M

 U.S. National Library of Medicine
ClinicalTrials.gov

Find Studies ▾ About Studies ▾ Submit Studies ▾ Resources ▾ About Site ▾

Home > Search Results > Study Record Detail ☐ Save this study

Ningetinib (CT053PTSA) Plus Gefitinib in Stage IIIB or IV NSCLC Patients With EGFR Mutation and T790M Negative

The safety and scientific validity of this study is the responsibility of the study sponsor and investigators. Listing a study does not mean it has been evaluated by the U.S. Federal Government. [Know the risks and potential benefits](#) of clinical studies and talk to your health care provider before participating. Read our [disclaimer](#) for details.

ClinicalTrials.gov Identifier: NCT03758287

[Recruitment Status](#) ⓘ : Recruiting
[First Posted](#) ⓘ : November 29, 2018
[Last Update Posted](#) ⓘ : December 3, 2018
See [Contacts and Locations](#)

Sponsor:
Sunshine Lake Pharma Co., Ltd.

Information provided by (Responsible Party):
Sunshine Lake Pharma Co., Ltd.

Distinguishing Eligibility Criteria

Criteria

Inclusion Criteria:

- Histologically or cytologically confirmed Stage IIIB or IV NSCLC
- Acquired resistance to EGFR TKI (1st, 2nd or 3rd generation) →
- Histological or cytological evidence of EGFR mutation and T790M negative after progression on last EGFR TKI therapy
- Measurable disease according to Response Evaluation Criteria in Solid Tumors version 1.1 (RECIST 1.1)
- Toxicity recovered to NCI CTCAE v.4.03 Grade ≤1 from previous treatments (except alopecia)
- ECOG performance status (PS) 0 or 1
- Life expectancy of ≥ 12 weeks
- Adequate organ function

Include:

Erlotinib resistance
Afatinib resistance
Gefitinib resistance
Etc.

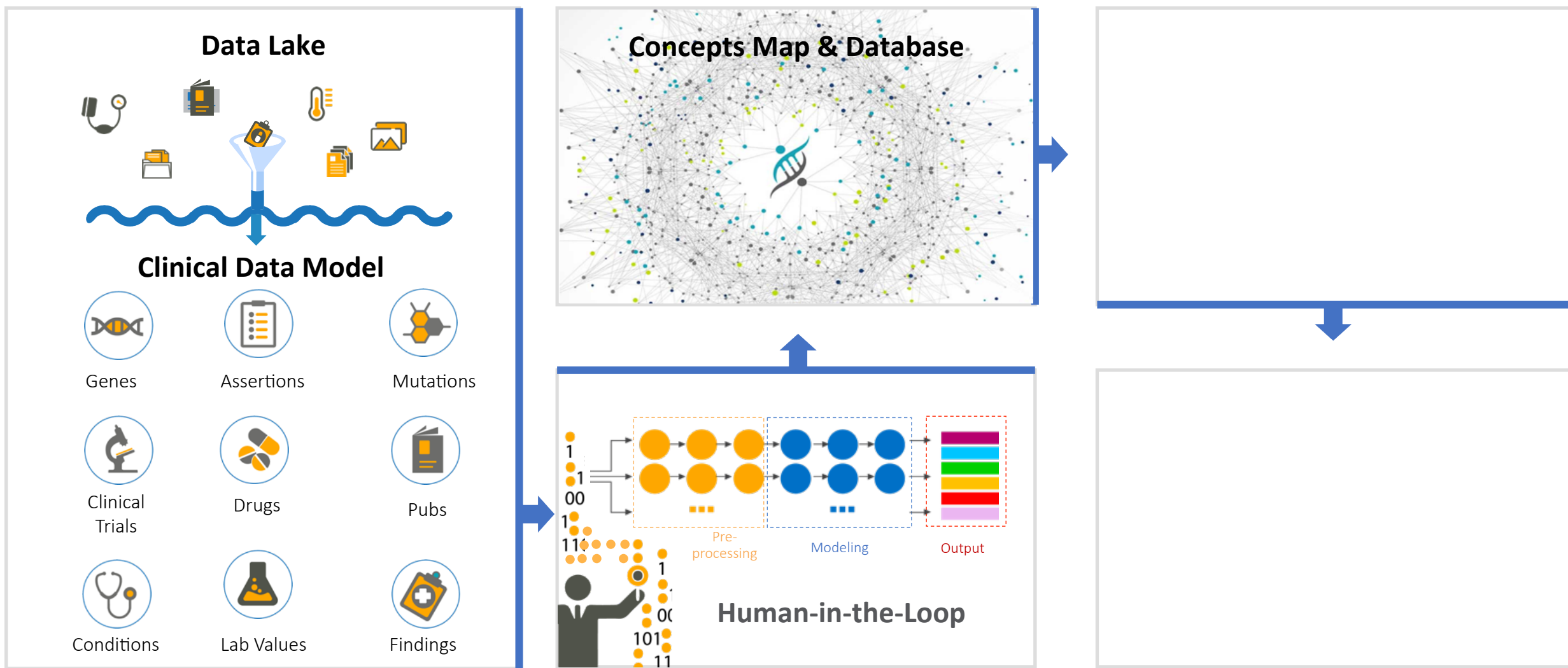
Exclusion Criteria:

- Prior treatments
 - Chemotherapy, targeted therapy (except EGFR TKI), immunotherapy, radiotherapy, or major surgery within 4 weeks prior to study treatment
 - Nitrosourea and mitomycin chemotherapy within 6 weeks prior to study treatment
 - EGFR TKI treatment within 2 weeks prior to study treatment
 - Had received live vaccine within 4 weeks prior to study treatment
 - Had received any investigational agent from other clinical study within 4 weeks prior to study treatment or are currently participating in other clinical trials
 - Previous treatment with any other c-MET inhibitor or Axl inhibitor (eg, crizotinib, cabozantinib, volitinib, INC280) →
- Symptomatic, untreated or unstable central nervous system metastases

Exclude:

Crizotinib resistance
Cabozantinib resistance
Volitinib resistance
Etc.

MolecularMatch Platform



Concept Association and Inference

Connecting the data

CONDITION and FINDINGS

MOLECULAR

THERAPY

Solid Tumor
Lung Cancer
Adenocarcinoma of Lung
Non-small cell lung cancer

Include for
this search

BRAF
BRAF V600
BRAF V600E

Include for
this search

BRAF Inhibitor
Vemurafenib
Vemurafenib Resistance

Exclude for
this search

PTEN Loss

Dabrafenib + Trametinib

Include for
this search

Diagnostic
Biomarker

Concept Association and Inference

Molecular association with drug sensitivity

Include variants that confer sensitivity to drug

Import

Tag

Promote

Import By Id(s)

NCT02465060

Search...

Hide Parents:

☒ Facet:

Include/Exclude:

<div><input checked="" type="checkbox"/> Study Id</div>	Title	Term	Custom	Suppress	Facet	Generated	GeneratedBy ↑	Type	Prio
<div><input checked="" type="checkbox"/> NCT02465060</div>	Molecular Analysis for Therapy Choice (MATCH)	EGFR E746_T751delELREAT	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	include	0
		EGFR ELR746del	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	include	0
		EGFR ELREA746del	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	include	0
		EGFR G719A	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	include	0
		EGFR G719C	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	include	0
		EGFR G719D	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	include	0
		EGFR G719S	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	include	0
		EGFR H773_V774dup	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	exclude	0
		EGFR H773_V774insAH	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	exclude	0
		EGFR H773_V774insGH	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	exclude	0
		EGFR H773_V774insH	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	exclude	0
		EGFR H773_V774insNH	<input type="checkbox"/>	<input type="checkbox"/>	MUTATION	DRUG	Afatinib	exclude	0

Exclude variants that confer resistance to drug

Concept Association and Inference

Expansion of relevant pathway mutations to therapy

Palbociclib infers genes and variants within CDK4/6 pathway

Import

Tag

Promote

Import By Id(s)

NCT02465060

Search...

Study Id

Title

NCT02465060

Molecular Analysis for Therapy Choice (MATCH)

Tags

Hide Parents:

Facet:

Include/Exclude:

Term

Custom

Suppress

Facet

Generate...↑

GeneratedBy

Type

Priority

CDK4/6 inhibitor

DRUGCLASS

DRUG

Pd-0332991

include

0

CDK inhibitor

DRUGCLASS

DRUG

Pd-0332991

include

0

Wild-Type RB1

GENE

DRUG

Pd-0332991

include

1

CDKN2B

GENE

DRUG

Pd-0332991

include

1

CDKN2A

GENE

DRUG

Pd-0332991

include

1

CDKN2A Copy Number Loss

MUTATION

DRUG

Pd-0332991

include

1

CDKN2C Loss

MUTATION

DRUG

Pd-0332991

include

1

CDKN2B Loss

MUTATION

DRUG

Pd-0332991

include

1

CCND3 Amplification

MUTATION

DRUG

Pd-0332991

include

1

CCND2 Amplification

MUTATION

DRUG

Pd-0332991

include

1

CCND1 Amplification

MUTATION

DRUG

Pd-0332991

include

1

CDKN2A Loss

MUTATION

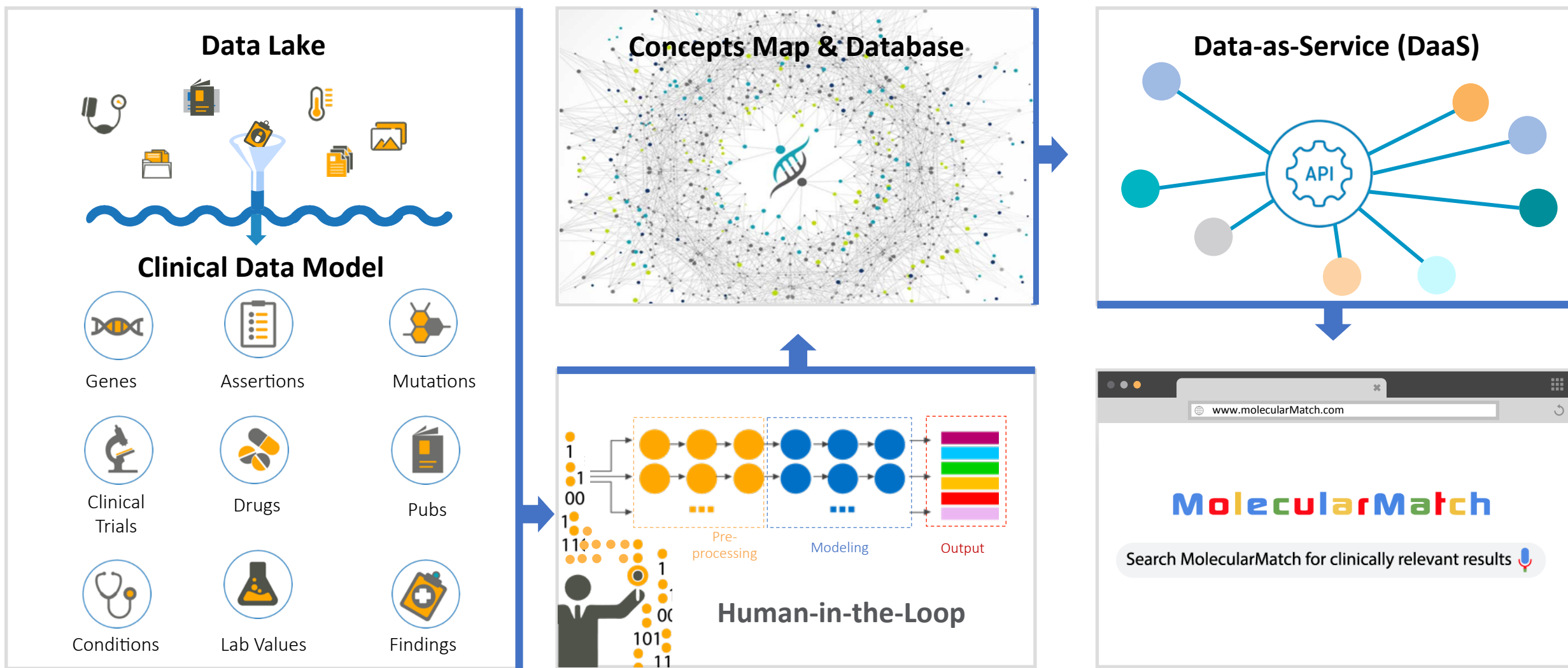
DRUG

Pd-0332991

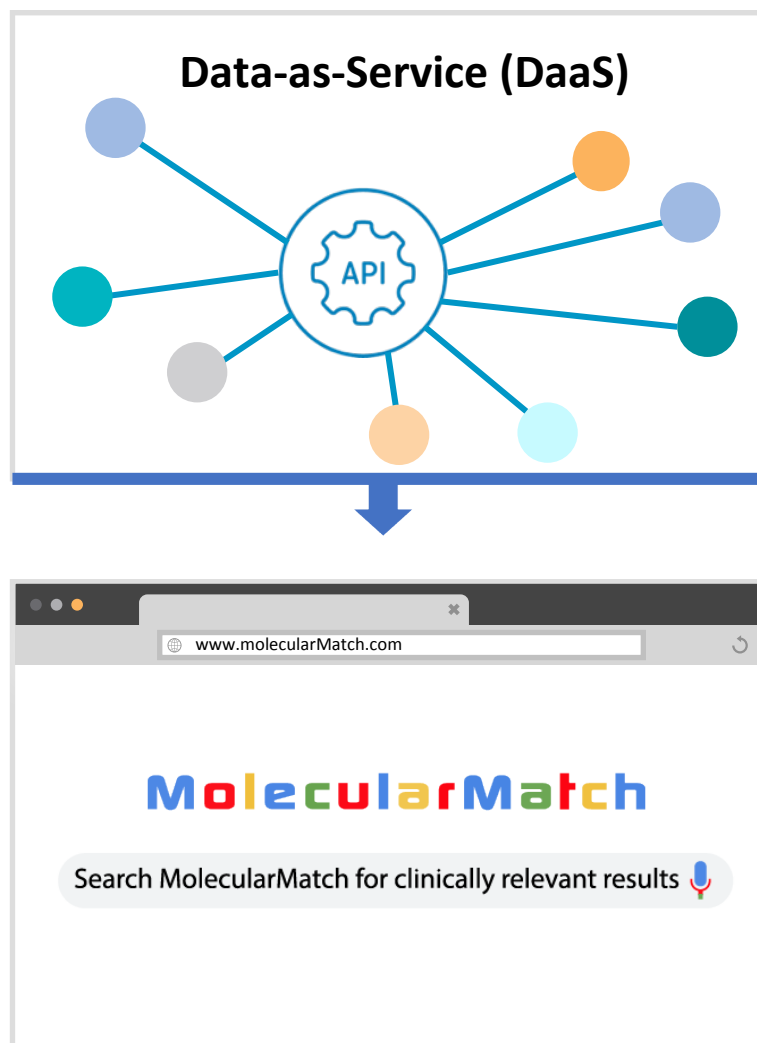
include

1

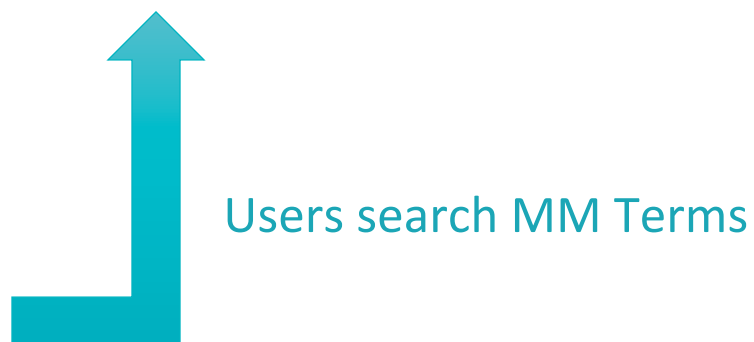
MolecularMatch Platform



MolecularMatch is a Concept-based Search Engine



Term	Custom	Suppress	Facet ↑	Generated	GeneratedBy	Type	Priority
Malignant neoplastic disease	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION			include	0
Disease	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Secondary mal...	include	0
Neoplastic disease	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Secondary mal...	include	0
Neoplasm and/or hamartoma	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Secondary mal...	include	0
Malignant tumor of lung	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION			include	1
Neoplasm by body site	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Disorder of respiratory system	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Disorder of body system	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Disorder of thoracic segment of trunk	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Disorder by body site	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Neoplasm of lung	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Disorder of trunk	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Malignant neoplasm of lower respi...	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Malignant neoplasm of respiratory ...	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Disorder of thorax	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0
Neoplasm of respiratory tract	<input type="checkbox"/>	<input type="checkbox"/>	CONDITION	CONDITION	Non-small cell ...	include	0



MolecularMatch Trials Data

Global Depth of Coverage

> 150

Countries covered

> 72,000

Oncology-specific clinical
trials

> 52,000,000

Medical terms in cancer
ontology



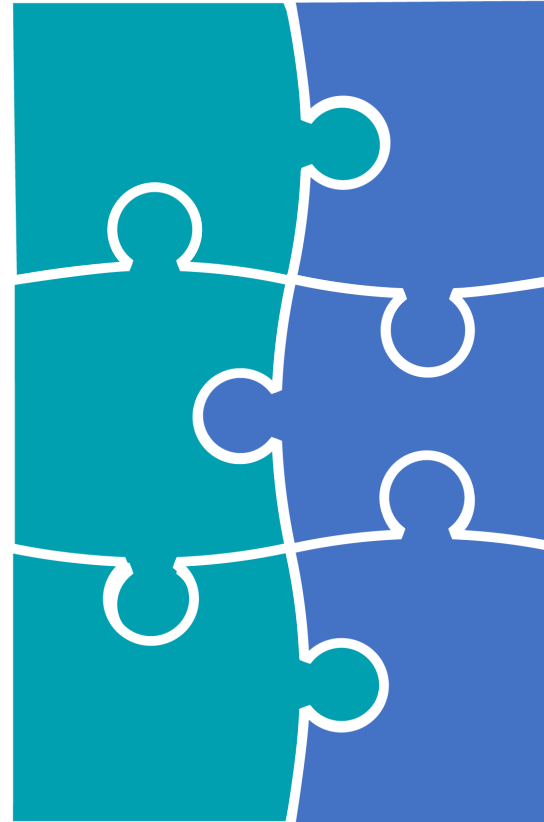
All Searchable by MolecularMatch
API or Web Portal



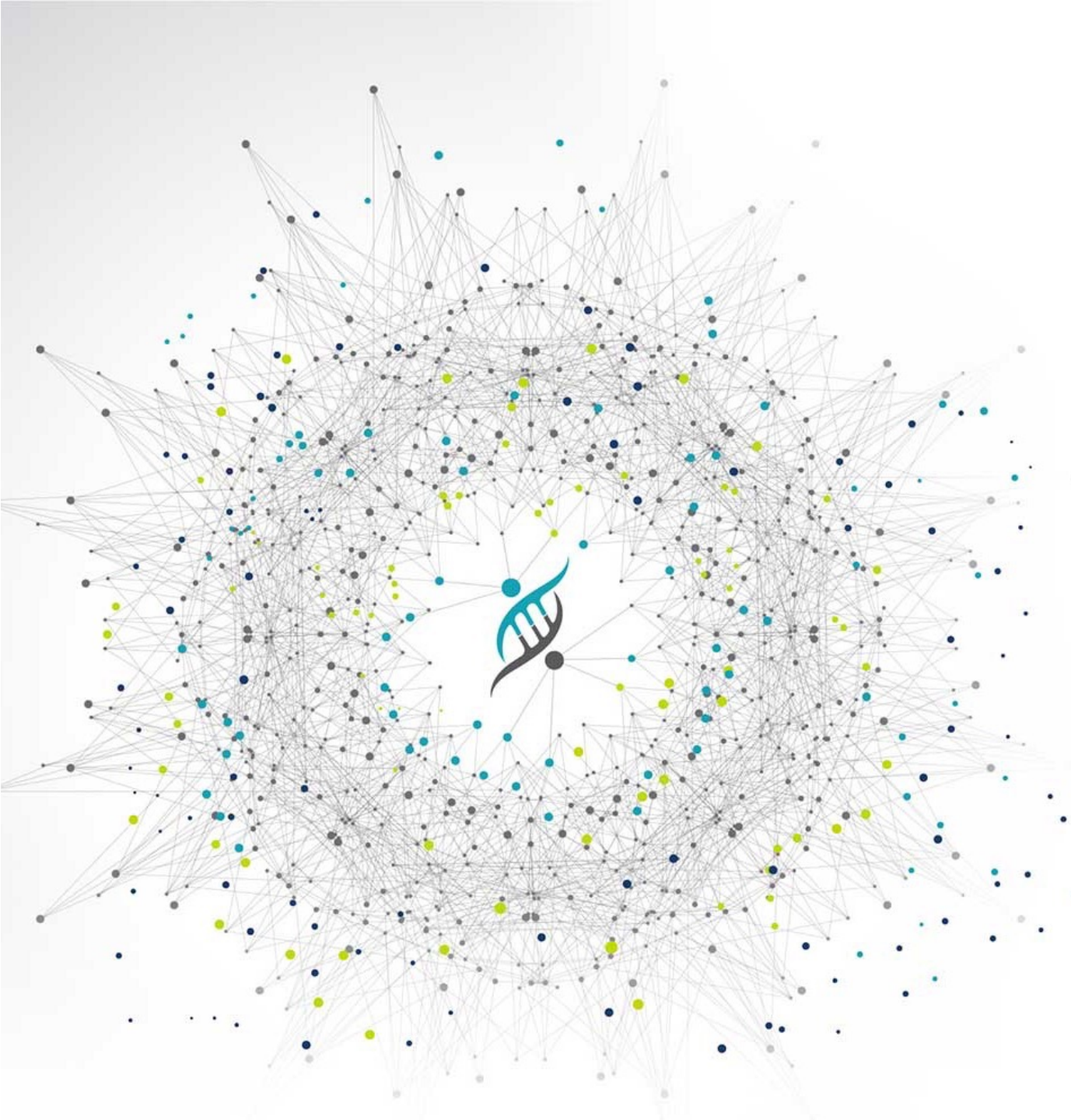
The Solution for Precision Medicine

Aggregated Clinically Relevant Metadata

- Age
- Gender
- Condition
- Stage
- Biomarker
- Alterations
- Tumor Location



- Path Lab Reports
- Metastasis
- Other Drugs
- Drug Resistance
- Contraindications
- Comorbidities
- TMB



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The background features a stylized, semi-transparent illustration. On the right, a DNA double helix is shown in shades of orange and yellow. On the left, a cell membrane is depicted with various receptors and proteins in red and purple. The overall color palette is warm and scientific.

Queensland Molecular Tumour Board Meeting

13th Nov 2019

Room 2004, TRI, Princess Alexandra Hospital,
Woolloongabba, QLD

CASE PRESENTATION

Dr POH SEE CHOO

Medical Oncologist

Greenslopes Private Hospital

Mater Cancer Care Centre

Sunnybank Private Hospital

OVARIAN CARCINOMA

FIRST PRESENTATION

35 year old female

R oophorectomy in Fiji 2009

Borderline tumour

CA125 continue to be elevated post-surgery

6 cycles of Cisplatin chemotherapy

CA125 remained elevated post-chemotherapy

RECURRENT OVARIAN CANCER

Completion hysterectomy and L oophorectomy,
resection of R adnexal mass in 2011 in New Zealand

- Review of original histology- confirm clear cell ca

Regular follow up- no recurrence with normal CA125

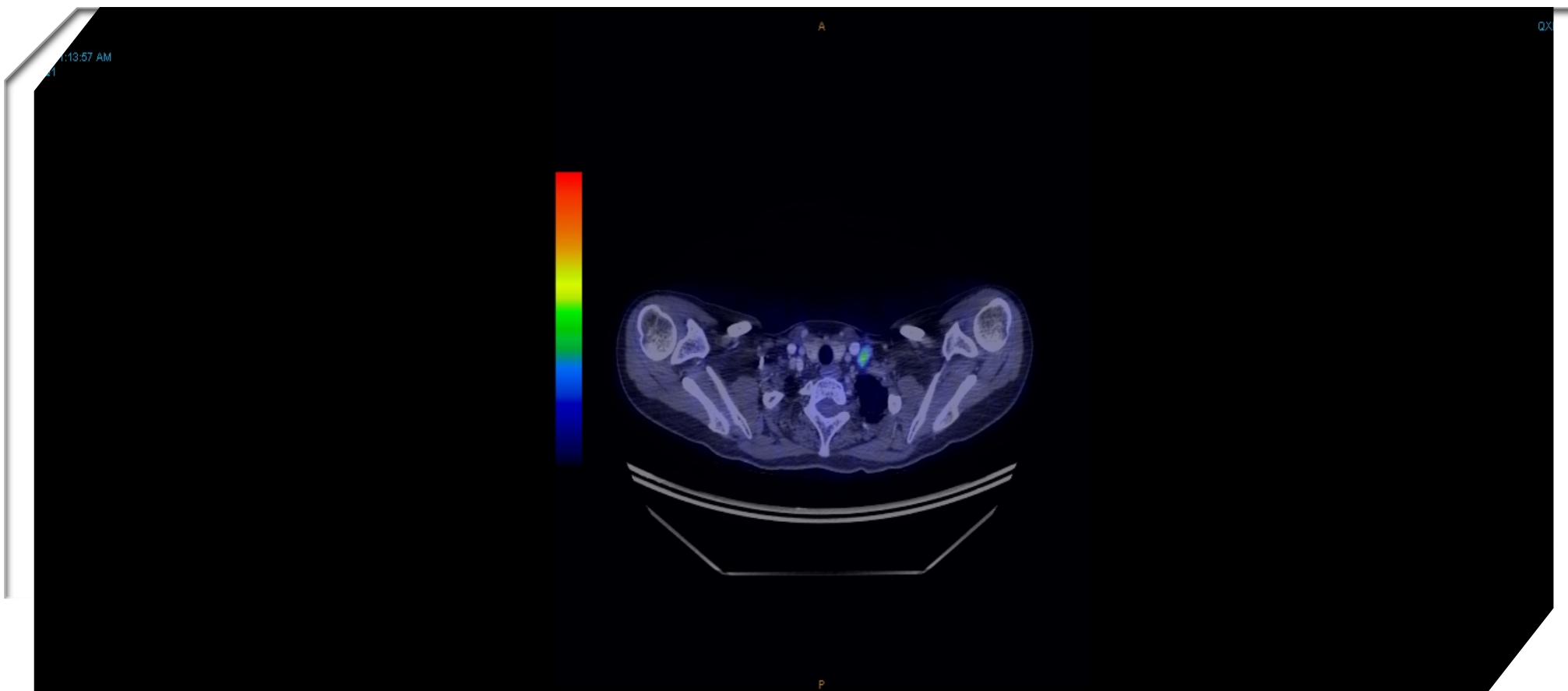
SECOND RECURRENCE

December 2016

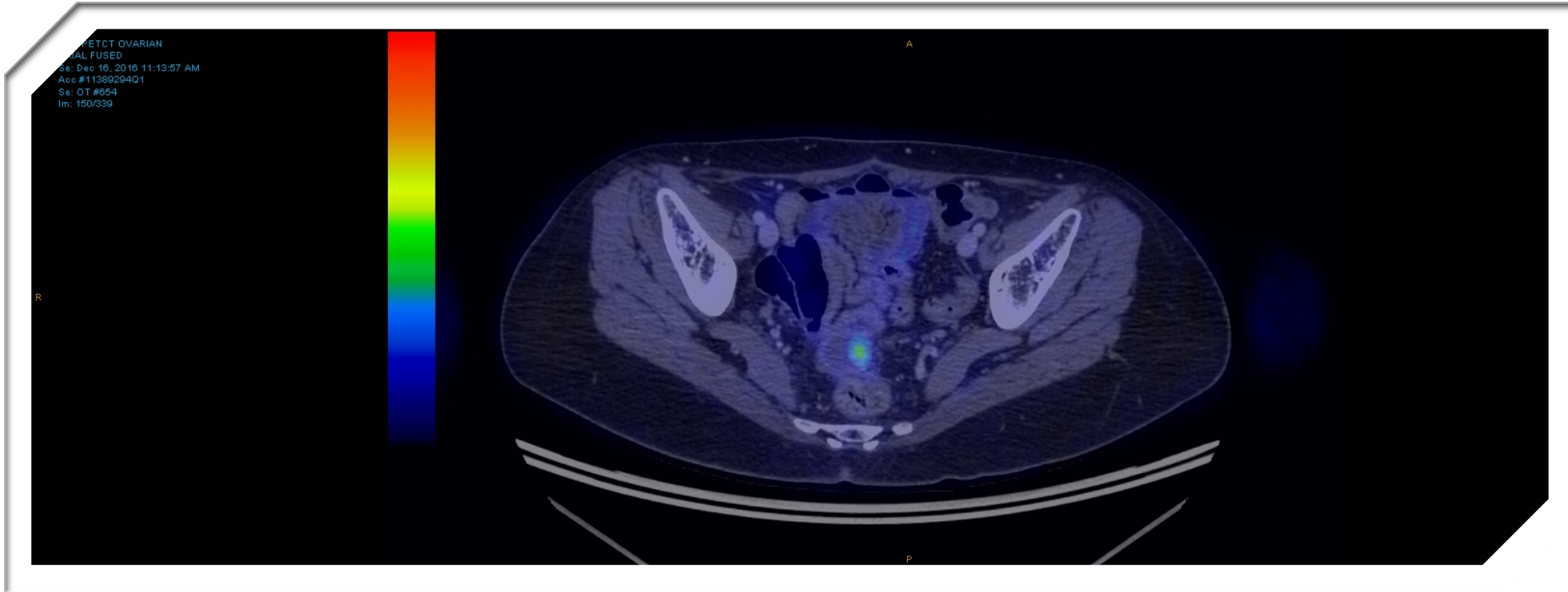
Elevated CA125 and L supraclavicular LN and pelvic recurrence on PET/CT

FNA confirmed recurrent disease in supraclavicular LN

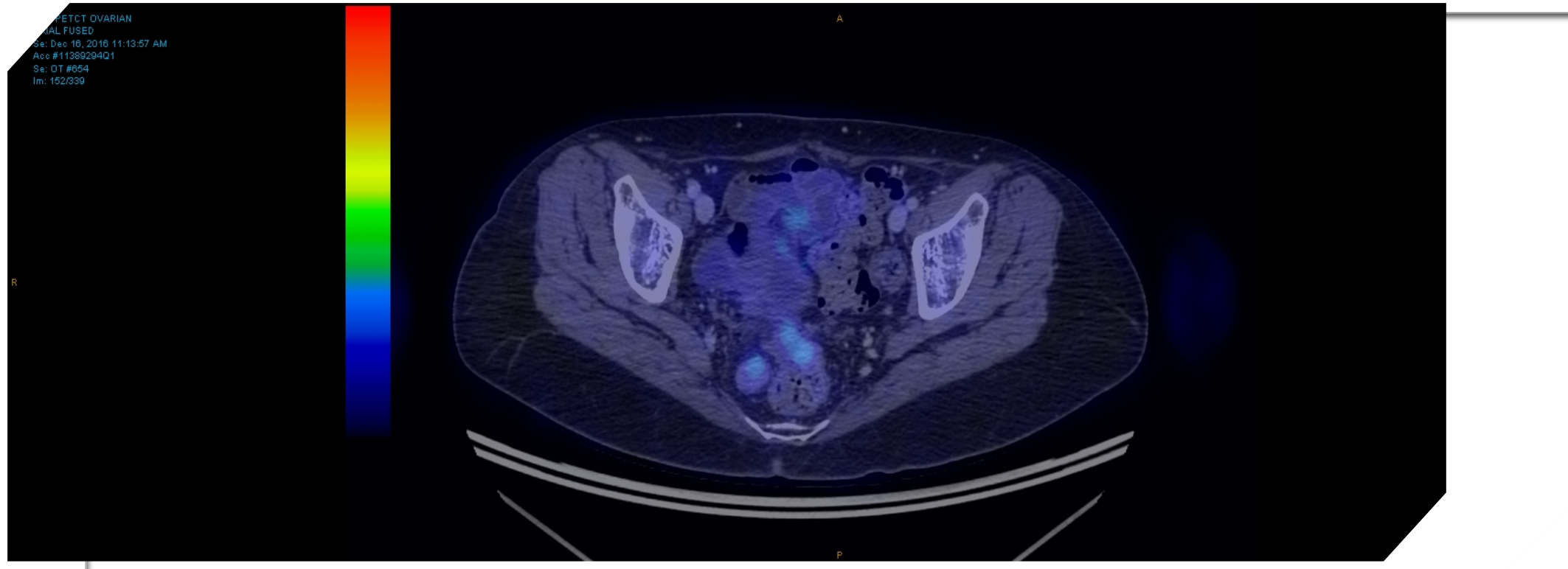
Received 3 cycles of weekly Carboplatin/Paclitaxel



DEC 2016



PELVIC RECURRENCE



PELVIC RECURRENCE

DEBULKING SURGERY

March 2017

laparoscopic resection of the pelvic mass and peritoneal metastasis with residual disease fixed to the sacrum and rectosigmoid mesentery

Colonoscopy- necrotic tumour invading into rectum

JULY 2017

Ultralow anterior resection and loop ileostomy

POST OPERATIVE CHEMOTHERAPY

April 2017 to June 2017

weekly carboplatin/paclitaxel

September 2017

Carboplatin/Paclitaxel with Avastin

Continue with 12 month Avastin

THIRD RECURRENCE

November 2018

Recurrence in the L supraclavicular and mediastinal LN

Commence on Caelyx in Jan 2019

Progression with cerebellar metastasis

Treated with stereotactic XRT

Changed to Avatisn/weekly Paclitaxel

So far responded to treatment. CA125- normal; 17