

The Tempus Platform

We provide complimentary technology that allows providers safe and secure access to clinical reports and cutting-edge research apps. Powered by a rapidly growing library of clinical and genomic data, the Tempus platform is an easy and intuitive way to gain relevant insights by patient or by project.

In about two weeks physicians receive a comprehensive report for each patient that highlights key findings, including potentially actionable treatments and immunotherapy markers that can be immediately translated into cancer patient care.

Clinical Report Key Features:

- 1
Genomic Alterations
 An intuitive and concise presentation of clinically actionable somatic alterations, clinically significant germline variants, and pertinent negatives
- 2
Immunotherapy Markers
 Key decision drivers for immunotherapy including microsatellite instability (MSI), tumor mutational burden (TMB), and PD-L1 and MMR IHC when ordered.
- 3
Treatment Implications
 Therapy options matched to each patient's genomic profile and organized by level of clinical evidence from FDA approved to preclinical.

Dwayne Holder Diagnosis: Pancreatic Ductal Adenocarcinoma Report Date: 3/14/2018

Date of Birth: 6/6/1971
 Sex: Male
 Physician: Dr. David Patel
 Institution: Northwestern University
 Medical Order: NW-12345-016

TEMPUS 1/156 Genes
 Clinical Specimen: Core Needle Biopsy
 Case: ABC-12345
 Collected on: 12/28/2017
 Decoded on: 1/2/2018
 Control percentage: 40%
 Normal specimen: Blood
 Collected on: 1/23/2018
 Recreated on: 1/24/2018

GENOMIC VARIANTS
 Somatic: Clinically Actionable Variant Allele Fraction

| | | | |
|---------------|------------------|------------------|-------|
| CDKN2A | c.235G>T p.R75H | Loss of Function | 40.7% |
| BRCA1 | c.3501T p.G150V | Gain of Function | 22.0% |
| BRCA2 | Copy Number Loss | Loss of Function | |

Germline:
BRCA2 c.3852C>A p.S517* Heterozygous

TP53 c.2382C>C p.A85P Pathogenic

No reportable single nucleotide variants, indels, or copy number changes found.

[View](#) [Details](#)

IMMUNOTHERAPY MARKERS
 Tumor Mutational Burden Microsatellite Instability Status

4.7 mut/Mb 75th percentile **Stable** Epitope High

TREATMENT IMPLICATIONS

| | | |
|------------------|--|--|
| Diagnos | BRCA1 Copy Number Loss | See evidence of use: Clinical evidence breast cancer |
| Diagnos | BRCA2 Loss of Function | See evidence of use: Clinical evidence breast cancer |
| Publiscit | CDKN2A p. R75H Loss of Function | See evidence of use: Clinical evidence breast cancer |
| Publiscit | BRCA2 p. S517* Heterozygous | See evidence of use: Clinical evidence breast cancer |
| Publiscit | TP53 p. A85P Pathogenic | See evidence of use: Clinical evidence breast cancer |

Notes: The tumor shows loss of heterozygosity in BRCA2. This patient has a pathogenic germline BRCA2 mutation combined with somatic loss of heterozygosity, indicating that this is a BRCA2 carrier. Therefore, BRCA2 inhibitor therapy is suggested. Germline counseling is recommended for this patient and potentially affected family members. BRCA analysis was performed and will be reported by the Tempus oncoportal when complete.

TEMPUS Electronically Signed: Timothy Tucker, MD Clin Number: NW1234567 Date Signed: 3/14/2018 Laboratory Medical Director: NW Biotech, MD, FCAP, MGGP Tempus ID #: ABC-123456 Patient Version: 1.0

VARIANTS OF UNKNOWN SIGNIFICANCE Dwayne Holder | NW-12345-016

| Somatic variant | Mutation effect | Variant Allele Fraction |
|-----------------|-----------------|-------------------------|
| ARHGAP5 | p.E487* | 18.0% |
| ARHGAP5 | Δ5496 | 22.1% |
| CTSLA | Splice Donor | 2% ¹ |

LOW COVERAGE AMPLIFIONS

| | | | | |
|--------|-------|--------|--------|--------|
| CDKN2A | BRCA1 | NOTCH1 | PDGFRA | REC114 |
| FLT4 | MTAP | NOTCH2 | PIK3R2 | ZNF69 |

CLINICAL TRIALS

| | | |
|---|-----|--------------------|
| Genes/Protein/Target/Drug and criteria with or without selection or selection criteria in treating patients with locally advanced or metastatic pancreatic cancer (NCT01958405) | II | Chicago, IL - 4/18 |
| Genetic analysis-guided dosing of FOLFIRI/ABX in treating patients with advanced gastrointestinal cancer (NCT02331888) | III | Chicago, IL - 5/16 |
| Study of PD-1 Blockade by Pembrolizumab With Stereotactic Body Radiotherapy in Advanced Solid Tumors (NCT02628883) | I | Chicago, IL - 5/16 |

Includes most recent trials for which the patient fits inclusion or exclusion criteria, regardless of date of trial or presence of biomarker match.

SOMATIC VARIANT DETAILS - CLINICALLY ACTIONABLE

CDKN2A
 CDKN2A encodes two proteins, p16INK4A and p14ARF, which function in regulating cell growth. The p16INK4A protein regulates the cell cycle through the inhibition of CDK4 and CDK6, preventing them from stimulating cell proliferation. The p14ARF protein encodes MDM2 to keep p53 intact and prevent the p53-dependent cell cycle arrest and apoptosis. Deleterious CDKN2A mutations, copy number loss and underexpression of CDKN2A are associated with cancer progression.

c.235G>T p.R75H Frameshift Loss of Function Variant Allele Fraction: 40.7%

BRCA1
 BRCA1 encodes a DNA double-strand break repair protein that acts as an intracellular signal transducer. BRCA1 is involved in several pathways involved in cellular proliferation and survival, including the PI3K/AKT/mTOR pathway and the MAPK cascade. Activating mutations in BRCA1 are associated with cancer progression.

c.3501T p.G150V Gain of Function Variant Allele Fraction: 22.0%

BRCA2
 BRCA2 encodes a nuclear protein/endoronin which helps maintain DNA stability through homologous recombination-based DNA double-strand break repair and involvement in DNA damage checkpoint control. Deleterious mutations and copy number loss in BRCA2 are associated with cancer progression.

Copy Number Loss Loss of Function

TEMPUS Electronically Signed: Timothy Tucker, MD Clin Number: NW1234567 Date Signed: 3/14/2018 Laboratory Medical Director: NW Biotech, MD, FCAP, MGGP Tempus ID #: ABC-123456 Patient Version: 2.0

- 4
Clinical Trials
 Relevant clinical trials based on the patient's molecular profile and the provided clinical information that is pertinent to trial inclusion/exclusion criteria.
- 5
Gene Descriptions
 Additional clinical context for all reported variants.

GERMLINE VARIANT DETAILS Diagnostic Header | NR-12345-DNA

BRCA2

The patient has a pathogenic germline BRCA2 mutation. Genetic counseling and appropriate cancer screening is recommended for this patient and potentially affected family members.

chr15:5067487 : c.863C>A : p.S61*

Clinical Significance: Pathogenic

TPMT

Discovered has a homozygous variant in the TPMT gene which leads to reduced enzyme activity. People with this variant are at an increased risk for an adverse drug event when treated with azathioprine or other purine analogs.

chr6:1844955 : c.236G>C : p.A69*

Pharmacogenetic Variant: Adverse Event

CLINICAL HISTORY

2018

- Released from Northwestern ICU 10/10/2018

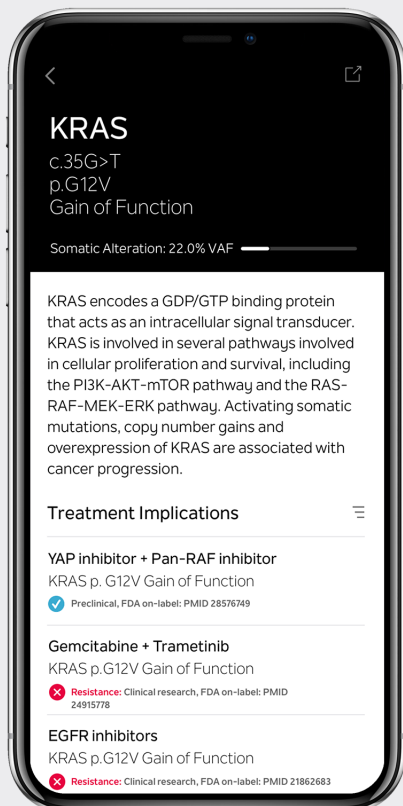
2017

- Widely Lung MRI: Abnormal 12/21/2017
- Admitted to Northwestern ICU 12/21/2017
- Started Palliative End-of-Life Care 12/21/2017
- CT Chest 10/12/2017
- Cancer diagnosis 10/12/2017
- Started Gemtazine 10/12/2017
- Diagnosis: Pancreatic ductal adenocarcinoma T2 N0 M0
- CT Chest
- Partial resection Northwestern University Medical Center Community Clinics 10/18/2017

TEMPUS Electronically Signed By: Tonying Xie, MD. Cdt Number: 1402746037. Date Signed: 05/01/2017. Laboratory Medical Director: Nina Beaman, MD, FCAP, MCFP. Tempus ID #: AEC-12345678. Patient History: 3/5.

6 Clinical History

Patient's clinical history organized into a sequential timeline with highlighted responses and adverse events.



Mobile Accessibility

We're focused on providing accessible and useful insights, so we deliver your results however you prefer — emailed PDF, interactive portal, and now, mobile app. Our app gives you an interactive and in-depth view of your patient's molecular and clinical data whenever convenient, not just when you have the PDF or printed report on hand.

- 1 Sortable and filterable therapies and trials
- 2 In-depth gene descriptions paired with matched therapies
- 3 Quick access to your patient's clinical timeline
- 4 Easy and secure access from anywhere