Novocure (NVCR)  
JMP Securities life sciences conference  
June 21, 2017
forward-looking statements

This presentation contains certain forward-looking statements with respect to the business of Novocure and certain of its plans and objectives, including with respect to the development and commercialization of its lead product candidate, Optune, for a number of oncology indications. These forward-looking statements can be identified in this presentation by the fact that they do not relate only to historical or current facts. Forward-looking statements often use words "expect", "intend", "anticipate", "plan", "may", "should", "would", "could" or other words of similar meaning. These statements are based on assumptions and assessments made by Novocure in light of industry experience and perception of historical trends, current conditions, expected future developments and other appropriate factors. By their nature, forward-looking statements involve risk and uncertainty, and Novocure’s performance and financial results could differ materially from those expressed or implied in these forward-looking statements due to general financial, economic, regulatory and political conditions as well as more specific risks and uncertainties facing Novocure such as those set forth in its Annual Report on Form 10-K filed on February 23, 2017, or in subsequent quarterly filings with the U.S. Securities and Exchange Commission. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in this presentation. Novocure assumes no obligation to update or correct the information contained in this presentation, whether as a result of new information, future events or otherwise, except to the extent legally required.

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As of the date of this presentation, Optune is only FDA-approved for glioblastoma, or GBM, and its approval for other indications is not certain. Novocure can provide no assurances regarding market acceptance of Optune or its successful commercialization, and can provide no assurances regarding the company’s results of operations or financial condition in the future. This presentation is for informational purposes only and may not be relied upon in connection with the purchase or sale of any security.
PATIENT-FORWARD MISSION

about novocure

global organization

- Headquartered in Jersey
- Five currently active commercial markets (United States, Germany, Switzerland, Israel and Japan)
- Research facility in Israel
- Ownership of IP and sole distribution rights of Tumor Treating Fields
- 450+ employees globally

proven lead product

- Approved in the U.S., EMEA and Japan for the treatment of glioblastoma (GBM)
- Supported by successful EF-14 phase 3 pivotal trial

rich clinical pipeline

- Broadly applicable mechanism of action across multiple solid tumor types
- Recruiting for phase 3 pivotal trials in brain metastases and non-small cell lung cancer
- Completed or ongoing phase 2 pilot trials in:
  - Pancreatic cancer
  - Ovarian cancer
  - Mesothelioma
low-intensity alternating electric fields

**Used alone or in combination to treat solid tumors**

**Surgery**
- Most frequently employed therapy
- Reduces size of a tumor prior to initiation of additional therapies

**Radiation**
- Kills cells when delivered at high doses
- Injures healthy tissues with numerous potential toxic side effects

**Pharmacological treatments**
- Includes chemotherapy, targeted therapies and immunono-cology
- Limited by potential side effects
- Resistance can develop over time

**Tumor treating fields (TTFields)**
- Low-intensity, alternating electric fields
- Mild side effect profile
- No known resistance or cumulative toxicity
- Can be used in combination with other treatment modalities

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electric fields exert forces on electrically polarized molecules

**GRAVITATIONAL FIELDS**
exert force on masses

**MAGNETIC FIELDS**
exert force on iron & other magnets

**ELECTRIC FIELDS**
exert force on charges & polarized molecules

Earth

Magnet

Charged Plates
TTFields impact metaphase

Normal metaphase:
- Tubulin subunits align properly, forming a normal mitotic spindle.
- Tubulin subunits have a high dipole moment.

Effect of TTFields on metaphase:
- Tubulin subunits align with TTFields.
- Misaligned tubulin disrupts mitotic spindle.
- Uniform electric field.
TTFields are delivered via a non-invasive, portable medical device

- Battery or wall-powered electric field generator
- Single-use transducer arrays replaced 2–3 times/week
- Should be used at least 18 hours/day
- Mild side-effect profile, no known systemic toxicity
COMBINATION THERAPY FOR NEWLY DIAGNOSED GBM

EF-14 phase 3 pivotal trial initiated in 2009

A prospective, multicenter trial of TTFields together with temozolomide compared to standard-of-care temozolomide alone in patients with newly diagnosed GBM

- 83 centers; 695 newly diagnosed GBM patients randomized 2:1 (TTFields plus TMZ vs TMZ alone)
- Treated until second progression or 24 months
- Pre-specified interim analysis 18 months after enrollment of the 315th patient
- Endpoints:
  - Primary endpoint — progression-free survival (PFS) (intent to treat)
  - Secondary endpoint — overall survival (OS) (as treated)

EF-14 FIVE-YEAR SURVIVAL ANALYSIS: INTENT-TO-TREAT POPULATION

**EF-14 progression free survival**

![Graph showing progression free survival](image)

**OPTUNE + TMZ (n=466)\(^1,2\)**

- Median PFS from randomization, mo: 6.7
- 95% CI, mo: 6.1-8.1
- Stratified log-rank: *p*=0.00005
- HR (95% CI): 0.63 (0.52-0.76)
- Median PFS from diagnosis, mo: 11.2

**TMZ ALONE (n=229)\(^1,2\)**

- Median PFS from randomization, mo: 4.0
- 95% CI, mo: 3.8-4.4
- Median PFS from diagnosis, mo: 7.8

\(^1\)Both interim and final analyses are protocol prespecified.\(^1,2\)

TMZ, temozolomide; ITT, intent-to-treat; PFS, progression-free survival; CI, confidence interval; HR, hazard ratio.

EF-14 FIVE-YEAR SURVIVAL ANALYSIS: INTENT-TO-TREAT POPULATION

EF-14 overall survival

**OPTUNE + TMZ**
*(n=466)^1,2*

**TMZ ALONE**
*(n=229)^1,2*

<table>
<thead>
<tr>
<th></th>
<th>Median OS from randomization, mo</th>
<th>95% CI, mo</th>
<th>Stratified log-rank p</th>
<th>HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTUNE + TMZ</td>
<td>20.9</td>
<td>19.3-22.7</td>
<td>=0.0006</td>
<td>0.63 (0.53-0.76)</td>
</tr>
<tr>
<td>TMZ ALONE</td>
<td>16.0</td>
<td>14.0-18.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Both interim and final analyses are protocol prespecified.*
TMZ, temozolomide; ITT, intent-to-treat; PFS, progression-free survival; CI, confidence interval; HR, hazard ratio.

EF-14 FIVE-YEAR SURVIVAL ANALYSIS

EF-14 annual survival rates

Overall Survival rate (%)\(^1,2\)

<table>
<thead>
<tr>
<th>Year from randomization</th>
<th>Optune + TMZ (n=466)</th>
<th>TMZ alone (n=229)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>73%</td>
<td>65%</td>
</tr>
<tr>
<td>2</td>
<td>43%</td>
<td>31%</td>
</tr>
<tr>
<td>3</td>
<td>26%</td>
<td>16%</td>
</tr>
<tr>
<td>4</td>
<td>20%</td>
<td>8%</td>
</tr>
<tr>
<td>5</td>
<td>13%</td>
<td>5%</td>
</tr>
</tbody>
</table>

\(^1\) TMZ, temozolomide; ITT, intent-to-treat.
# EF-14 FIVE-YEAR SURVIVAL ANALYSIS

## EF-14 subgroup analysis

<table>
<thead>
<tr>
<th>SUBGROUP</th>
<th>NO. OF PATIENTS (%)</th>
<th>HAZARD RATIO</th>
<th>MEDIAN SURVIVAL (MONTHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>OPTUNE + TMZ(^1)</td>
</tr>
<tr>
<td>Overall</td>
<td>695 (100)</td>
<td></td>
<td>20.9</td>
</tr>
<tr>
<td>MGMT (central)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmethylated</td>
<td>304 (44)</td>
<td></td>
<td>16.9</td>
</tr>
<tr>
<td>Methylated</td>
<td>214 (31)</td>
<td></td>
<td>31.6</td>
</tr>
<tr>
<td>Resection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biopsy</td>
<td>89 (13)</td>
<td></td>
<td>16.5</td>
</tr>
<tr>
<td>Partial</td>
<td>234 (34)</td>
<td></td>
<td>21.4</td>
</tr>
<tr>
<td>Gross total</td>
<td>372 (53)</td>
<td></td>
<td>22.6</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;65 y</td>
<td>583 (84)</td>
<td></td>
<td>21.6</td>
</tr>
<tr>
<td>65+ y</td>
<td>112 (16)</td>
<td></td>
<td>16.0</td>
</tr>
<tr>
<td>KPS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90-100</td>
<td>457 (67)</td>
<td></td>
<td>23.3</td>
</tr>
<tr>
<td>≤80</td>
<td>228 (33)</td>
<td></td>
<td>14.9</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>222 (32)</td>
<td></td>
<td>24.6</td>
</tr>
<tr>
<td>Male</td>
<td>473 (68)</td>
<td></td>
<td>19.1</td>
</tr>
</tbody>
</table>

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**TMZ,** temozolomide; **MGMT,** O6-methylguanine-DNA methyltransferase; **KPS,** Karnofsky Performance Score.

broad applicability to solid tumors

<table>
<thead>
<tr>
<th>INDICATIONS</th>
<th>IN-VITRO EVIDENCE</th>
<th>IN-VIVO EVIDENCE</th>
<th>FIRST IN HUMAN EVIDENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glioblastoma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malignant melanoma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-small cell lung cancer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pancreatic cancer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast cancer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesothelioma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ovarian carcinoma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renal adenocarcinoma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cervical cancer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorectal carcinoma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gastric adenocarcinoma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatocellular carcinoma</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small cell lung cancer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urinary transitional cell carcinoma</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Ongoing Clinical Trials

<table>
<thead>
<tr>
<th>Indications</th>
<th>Pre-Clinical</th>
<th>Phase 2 Pilot</th>
<th>Phase 3 Pivotal</th>
<th>Expected Next Milestone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brain Metastases</td>
<td></td>
<td></td>
<td></td>
<td>METIS trial last patient in 2019 with final data collection in 2020</td>
</tr>
<tr>
<td>NSCLC</td>
<td></td>
<td></td>
<td></td>
<td>LUNAR trial last patient in 2019 with final data collection in 2021</td>
</tr>
<tr>
<td>Pancreatic Cancer</td>
<td></td>
<td></td>
<td></td>
<td>phase three pivotal trial first patient in 2H 2017</td>
</tr>
<tr>
<td>Ovarian Cancer</td>
<td></td>
<td></td>
<td></td>
<td>phase three pivotal trial first patient in 2018</td>
</tr>
<tr>
<td>Mesothelioma</td>
<td></td>
<td></td>
<td></td>
<td>STELLAR trial final data collection in 2018</td>
</tr>
</tbody>
</table>
# First Line Treatment of Malignant Pleural Mesothelioma

## Phase 2 Pilot STELLAR Trial

A prospective, open label, single-arm, non-randomized, multicenter study testing safety and preliminary efficacy of TTFields at 150 kHz together with pemetrexed and cisplatin or carboplatin in patients with previously untreated malignant pleural mesothelioma versus historical controls

- 80 patients in Europe with unresectable, previously untreated malignant mesothelioma
- Actively recruiting patients since February 2015, interim data presented at IASLC in December 2016
- Primary endpoint – overall survival (OS)

### Efficacy Endpoints

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>TTFields with Pemetrexed and Cisplatin or Carboplatin</th>
<th>Pemetrexed and Cisplatin-Alone Historical Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median PFS</td>
<td>7.3 months</td>
<td>5.7 months</td>
</tr>
<tr>
<td>Median OS</td>
<td>Not yet reached</td>
<td>12.1 months</td>
</tr>
<tr>
<td>One-year survival rate</td>
<td>79.7%</td>
<td>50.3%</td>
</tr>
</tbody>
</table>


SECOND LINE TREATMENT FOR ADVANCED NON-SMALL CELL LUNG CANCER

phase 2 pilot EF-15 trial

A prospective, open label, single-arm, non-randomized, multicenter study of TTFields at 150 kHz to estimate efficacy and determine safety together with pemetrexed in pretreated patients with locally advanced non-small cell lung cancer versus historical controls

- 42 patients in Switzerland with locally advanced and/or metastatic non-small cell lung cancer
- Last patient enrolled May 2011 with six month follow-up, data published in *Lung Cancer* in 2013
- Primary endpoint – severity and frequency of adverse events

### EFFICACY ENDPOINTS

<table>
<thead>
<tr>
<th></th>
<th>TTFields WITH Pemetrexed¹</th>
<th>Pemetrexed-Alone Historical Results²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median in-field PFS</td>
<td>6.5 months</td>
<td>n/a</td>
</tr>
<tr>
<td>Median PFS</td>
<td>5 months</td>
<td>2.9 months</td>
</tr>
<tr>
<td>Median OS</td>
<td>13.8 months</td>
<td>8.3 months</td>
</tr>
<tr>
<td>One-year survival rate</td>
<td>57%</td>
<td>29.7%</td>
</tr>
</tbody>
</table>

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SECOND LINE TREATMENT FOR ADVANCED NON-SMALL CELL LUNG CANCER

LUNAR phase 3 pivotal trial initiated in 2017

A prospective, randomized controlled, multicenter trial testing efficacy and safety of TTFields at 150 kHz in combination with docetaxel or PD-1 inhibitors as second-line treatment in patients with unresectable, locally advanced or metastatic non-small cell lung cancer

• 512 patients (TTFields plus docetaxel or PD-1 inhibitors vs docetaxel or PD-1 inhibitors alone)
• Last patient enrollment expected in 2019, eighteen month follow-up after final patient enrollment
• Endpoints:
  • Primary – overall survival (OS) (superiority)
  • Secondary –
    • OS of TTFields + docetaxel vs docetaxel alone (superiority)
    • OS of TTFields + PD-1 inhibitor vs PD-1 inhibitor alone (superiority)
    • OS of TTFields + docetaxel vs PD-1 inhibitor alone (non-inferiority)

BRAIN METASTASES FROM NON-SMALL CELL LUNG CANCER

METIS phase 3 pivotal trial initiated in 2016

A prospective, randomized controlled, multicenter trial testing efficacy, safety and neurocognitive outcomes of TTFields at 150 kHz following stereotactic radiosurgery in advanced non-small cell lung cancer patients with 1-10 brain metastases

• 270 patients internationally, randomized 1:1 (TTFields vs supportive care)
• Last patient enrollment expected in 2019, twelve month follow-up after final patient enrollment
• Endpoints:
  • Primary endpoint — time to first cerebral progression
  • Secondary endpoints include neurocognitive failure, overall survival, radiological response rate

ADVANCED PANCREATIC CANCER

phase 2 pilot PANOVA trial

A prospective, open label, single-arm, non-randomized, multicenter study testing feasibility, safety and preliminary efficacy of TTFields at 150 kHz together with gemcitabine or gemcitabine plus nab-paclitaxel in patients with advanced pancreatic cancer versus historical controls

- 40 patients in Europe with locally advanced or metastatic pancreatic cancer
  - First cohort (n=20) of TTFields at 150 kHz with gemcitabine
  - Second cohort (n=20) of TTFields at 150 kHz with gemcitabine and nab-paclitaxel
- Last patient enrolled May 2016 with six month follow-up
- Endpoints:
  - Primary endpoint – severity and frequency of adverse events, as well as feasibility based on compliance with TTFields therapy
  - Secondary endpoints include progression free survival, overall survival, overall response rate

## ADVANCED PANCREATIC CANCER

### phase 2 pilot PANOVA trial

<table>
<thead>
<tr>
<th>EFFICACY ENDPOINTS</th>
<th>FIRST COHORT</th>
<th>SECOND COHORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>TTFIELDS WITH GEMCITABINE&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median PFS</td>
<td>8.3 months</td>
<td>3.7 months</td>
</tr>
<tr>
<td>Median OS</td>
<td>14.9 months</td>
<td>6.7 months</td>
</tr>
<tr>
<td>One-year survival rate</td>
<td>55%</td>
<td>22%</td>
</tr>
<tr>
<td>Partial response rate</td>
<td>30%</td>
<td>7%</td>
</tr>
<tr>
<td>Stable disease</td>
<td>30%</td>
<td>28%</td>
</tr>
</tbody>
</table>

planned phase 3 pivotal pancreatic cancer trial

- Protocol design in final stages of development
- First line, locally advanced, non-resectable, pancreatic cancer
- Patients randomized 1:1 (TTFields plus nab-paclitaxel + gemcitabine vs nab-paclitaxel + gemcitabine alone)
- Endpoints include
  - Progression-free survival (PFS)
  - Overall survival (OS)
  - Incidence of down-staging to resectability
RECURRENT OVARIAN CANCER

phase 2 pilot INNOVATE trial

A prospective, open label, single-arm, non-randomized, multicenter study testing feasibility, safety, toxicity and preliminary efficacy of TTFields at 200 kHz together with weekly paclitaxel in patients with recurrent ovarian cancer versus historical controls

- 30 patients in Europe with recurrent ovarian cancer
- Last patient enrolled May 2016 with six month follow-up
- Primary endpoint – severity and frequency of adverse events

### EFFICACY ENDPOINTS

<table>
<thead>
<tr>
<th></th>
<th>TTFields with Paclitaxel</th>
<th>Paclitaxel Alone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median PFS</td>
<td>8.9 months</td>
<td>3.9 months*</td>
</tr>
<tr>
<td>Median OS</td>
<td>Not yet reached</td>
<td>13.2 months</td>
</tr>
<tr>
<td>One-year survival rate</td>
<td>61%</td>
<td></td>
</tr>
</tbody>
</table>


three strategic objectives

- Drive commercial adoption of Optune
- Advance the clinical pipeline
- Focus on improving operating leverage