novocure™

Novocure (NVCR) overview

35th Annual J.P. Morgan Healthcare Conference

patientforward

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 March 1, 2016, 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.

The statements contained in this presentation are made as at the date of this presentation, unless some other time is specified in relation to them, and service of this presentation shall not give rise to any implication that there has been no change in the facts set out in this presentation since such date. Nothing contained in this presentation shall be deemed to be a forecast, projection or estimate of the future financial performance of Novocure, except where expressly stated.

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.

about novocure

Global Organization

- Headquartered in Jersey
- Four currently active commercial markets (United States, Germany, Switzerland 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

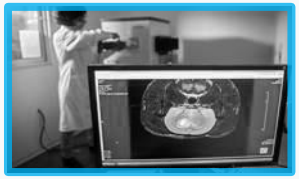
OPTUNE®

Rich Clinical Pipeline

- Broadly applicable mechanism of action across multiple solid tumor types
- Recruiting for phase 3 pivotal trial in brain metastases
- Completed or ongoing phase 2 pilot trials in:
  - Non-small cell lung cancer
  - Pancreatic cancer
  - Ovarian cancer
  - Mesothelioma

three strategic objectives

Drive commercial adoption of Optune



Advance the clinical pipeline

Manage expenses and resources to drive operating leverage

2016: a year of significant achievement

DRIVE COMMERCIAL ADOPTION OF OPTUNE

- ✓ Consistently delivered active patient and revenue growth
- ✓ Substantial improvements in coverage and contracting for U.S. lives
- ✓ Presented long-term analysis of EF-14 data
- ✓ Received regulatory approval for newly diagnosed GBM in Japan
- ✓ Completed global launch of the second generation Optune System

ADVANCE THE CLINICAL PIPELINE

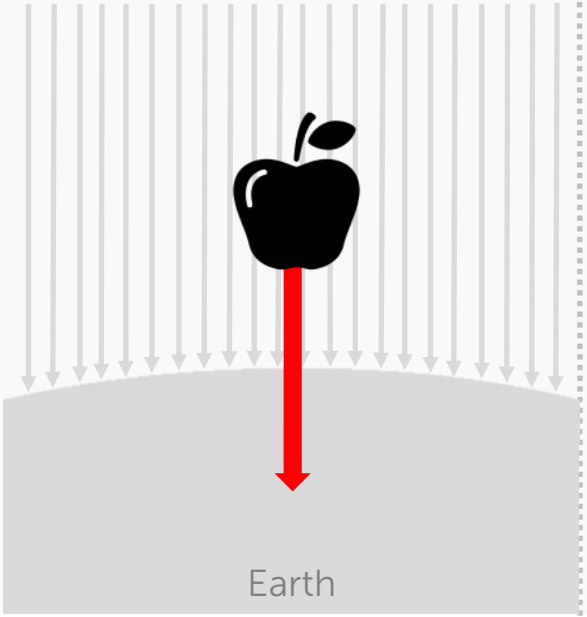
- ✓ First patient enrolled in phase 3 pivotal trial in brain metastases
- ✓ Completed phase 2 pilot trials in pancreatic and ovarian cancer
- ✓ Presented interim results from phase 2 pilot trial in mesothelioma

electric fields exert forces on electrically polarized molecules

novocure™

GRAVITATIONAL FIELDS

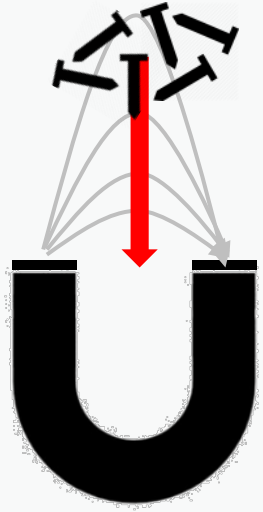
exert force on masses



Earth

MAGNETIC FIELDS

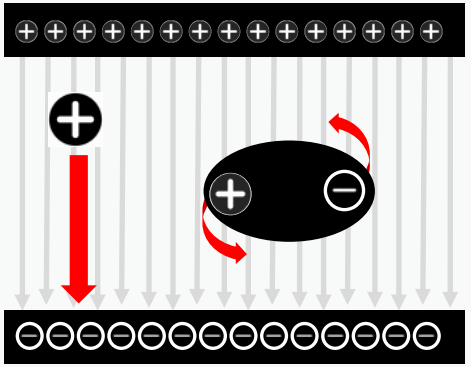
exert force on iron & other magnets



Magnet

ELECTRICAL FIELDS

exert force on charges & polarized molecules



uniform field

Charged Plates

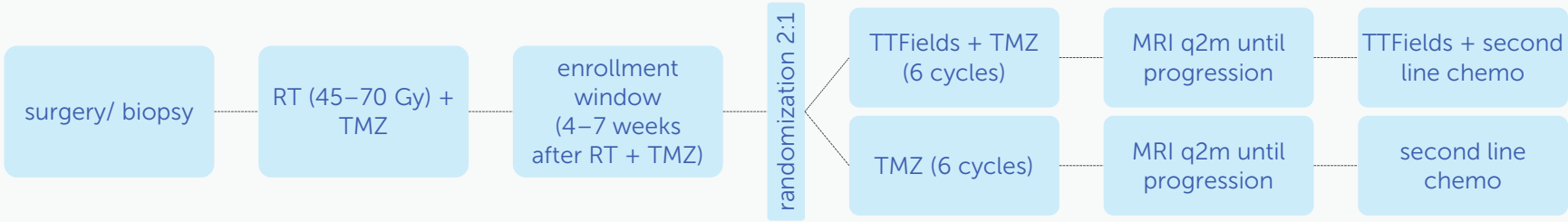
TTFields are delivered via a non-invasive, portable medical device

- 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

EF-14 phase 3 pivotal trial initiated in 2009

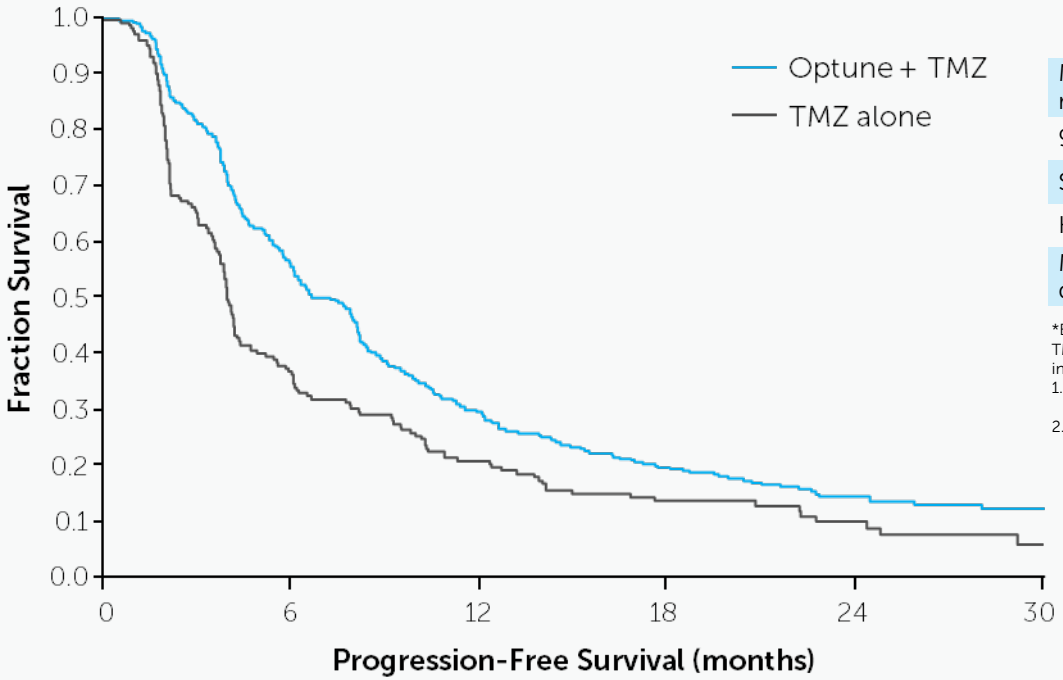
A prospective, multicenter trial of TTFields together with temozolomide compared to standard-of-care temozolomide alone in patients with newly diagnosed GBM

- 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)



Novocure, Ltd. Effect of NovoTTF-100A Together With Temozolomide in Newly Diagnosed Glioblastoma Multiforme (GBM) In: ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (US). 2000-[cited 2016 Dec]. Available from: https://clinicaltrials.gov/ct2/show/NCT00916409. NLM Identifier: NCT00916409

EF-14 progression free survival

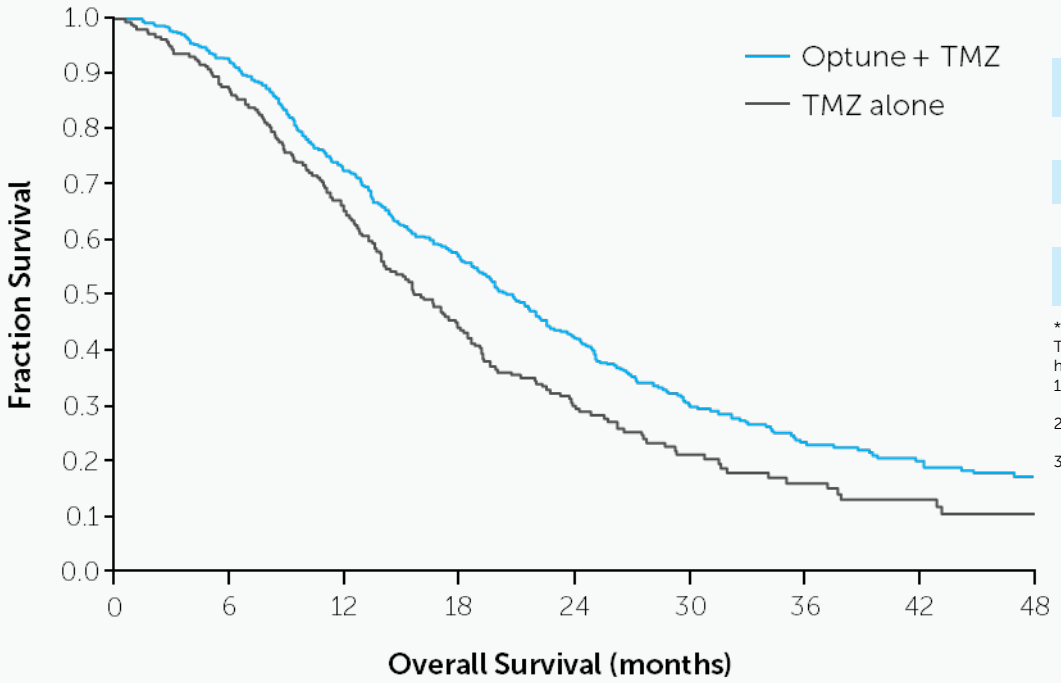


	OPTUNE + TMZ (n=466)[1,2]	TMZ ALONE (n=229)[1,2]
Median PFS from randomization, mo	6.7	4.0
95% CI, mo	6.1-8.1	3.8-4.3
Stratified log-rank	p<0.0001	
HR[2] (95% CI)	0.63 (0.52-0.76)	
Median PFS from diagnosis, mo	11.2	7.8

*Both interim and long-term analyses are protocol prespecified.[1,2]
TMZ, temozolomide; ITT, intent-to-treat; PFS, progression-free survival; CI confidence interval; HR, hazard ratio.

1. Stupp R, et al; on behalf of EF-14 trial investigators. Slides presented at: SNO 21st Annual Meeting; November 17-20, 2016; Scottsdale, AZ.
2. Stupp R, et al; on behalf of EF-14 trial investigators. SNO Abstract LTBK-01. *Neuro-Oncology*. 2016. In press.

EF-14 overall survival



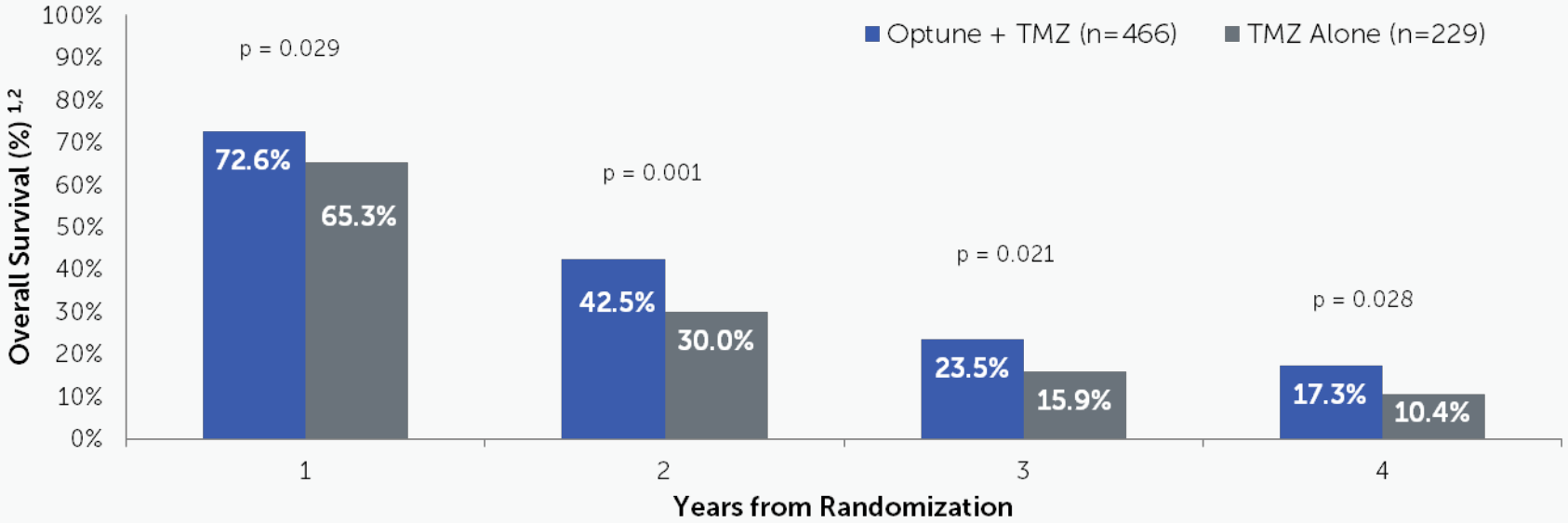
	OPTUNE + TMZ (n=466)[1,2]	TMZ ALONE (n=229)[1,2]
Median OS from randomization, mo	20.8	16.0
95% CI, mo	19.0-22.6	13.9-18.2
Stratified log-rank	p<0.0006	
HR (95% CI)	0.65 (0.54-0.79)	
Median OS from diagnosis, mo	24.5	19.8

*Both interim and long-term analyses are protocol prespecified.[1,2]
TMZ, temozolomide; ITT, intent-to-treat; OS, overall survival; CI, confidence interval; HR, hazard ratio.

1. Stupp R, et al; on behalf of EF-14 trial investigators. Slides presented at: SNO 21st Annual Meeting; November 17-20, 2016; Scottsdale, AZ.
2. Stupp R, et al; on behalf of EF-14 trial investigators. SNO Abstract LTBK-01. *Neuro-Oncology*. 2016. In press.
3. Novocure Data on File OPT-118.

EF-14 long-term survival rates

70% IMPROVEMENT IN SURVIVAL WITH TTFIELDS + TMZ (17%) VERSUS TMZ ALONE (10%) AT 4 YEARS (*P*=0.028)[1,2]



TMZ, temozolomide; ITT, intent-to-treat.

1. Stupp R, et al; on behalf of EF-14 trial investigators. [SNO Abstract LTBK-01]. *Neuro-Oncology*. 2016. In press.
2. Stupp R, et al; on behalf of EF-14 trial investigators. Slides presented at: SNO 21st Annual Meeting; November 17-20, 2016; Scottsdale, AZ.

direct to patient distribution model

Physician sends prescription order to Novocure

Physician or Novocure uses NovoTAL System to create array placement map

Novocure delivers Optune and trains patient/family

Novocure provides 24/7 tech support and supplies transducer arrays

Novocure bills third-party payer and patient[1] for each month of therapy

Physician sees patient for regular compliance monitoring and follow-up appointments

[1] Subject to patient assistance programs

PHYSICIAN ECONOMICS

- Physician can bill for incremental services
- Physician does not have to buy and hold inventory
- Physician does not take on reimbursement risk for Optune therapy

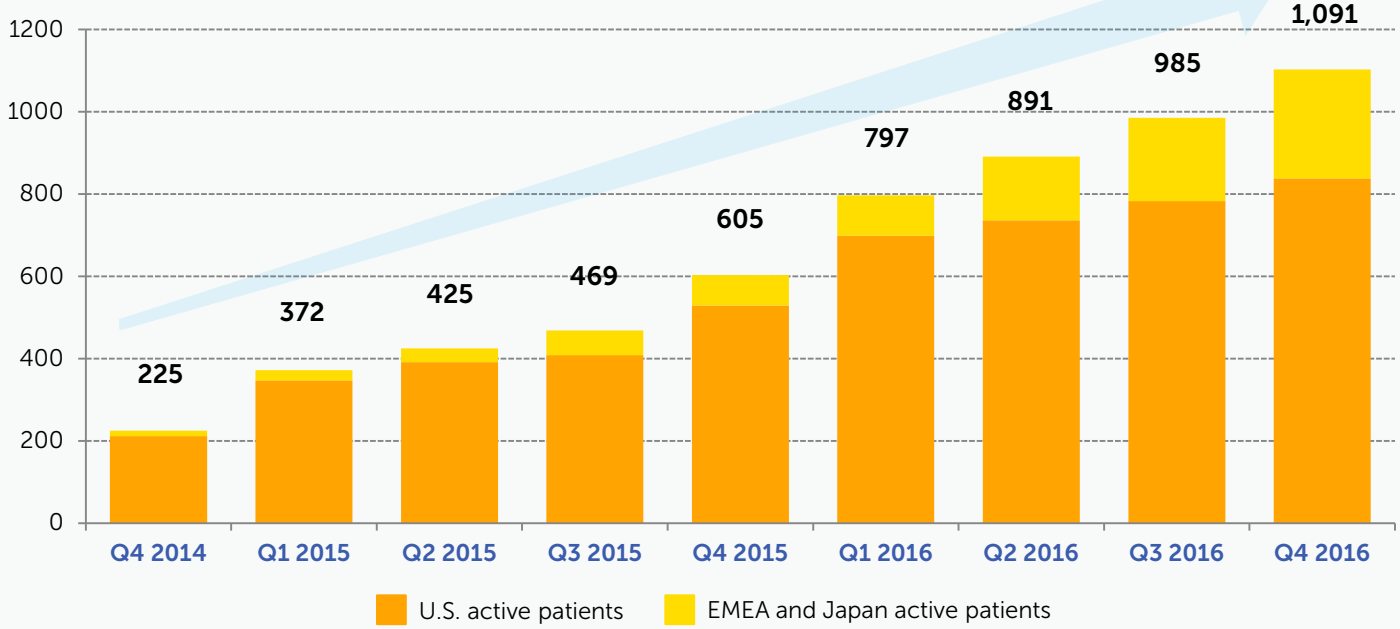
q4 2016 global operating statistics

	Q4 2016	Q4 2015	% GROWTH	FY 2016	FY 2015	% GROWTH
Prescriptions	**706**	**557**	**27%**	**2,808**	**1,777**	**58%**
United States	544	499	9%	2,344	1,607	46%
Germany, Switzerland and other EMEA Markets	162	56	189%	463	167	177%
Japan	-	2	-	1	3	N/A
Active patients at period end	**1,091**	**605**	**80%**			
United States	835	529	58%			
Germany, Switzerland and other EMEA Markets	256	74	246%			
Japan	-	2	N/A			

- Growth driven primarily by commercial activities in the U.S. after the October 2015 FDA approval of Optune for the treatment of newly diagnosed GBM, increased commercial activities in Germany, and enhanced awareness of Optune following the December 2015 publication of EF-14 phase 3 pivotal trial results in *JAMA*
- Year-over-year increase in active patients was driven both by prescription growth and by an increase in the percentage of newly diagnosed GBM patients who started Optune in prior periods

global active patient growth

global active patients at period end



8

CONSECUTIVE QUARTERS OF ACTIVE PATIENT GROWTH SINCE PRESENTATION OF EF-14 DATA

expanding market access

- As of September 30, 2016, positive coverage policies in place for more than 130 million U.S. lives
- Positive coverage policies subsequently issued for another 45 million U.S. lives, resulting in positive coverage for more than 177 million U.S. lives as of January 1, 2017
- As of November 2, 2016, contracts negotiated to establish Optune as an in-network benefit for more than 120 million U.S. lives, which became effective during Q4
- Appealing Medicare fee-for-service denials, impacting 20-25% of U.S. active patients
- Improvement in case-by-case reimbursement in Germany; pursuing defined reimbursement
- Pursuing broad reimbursement in Switzerland and Japan

>177

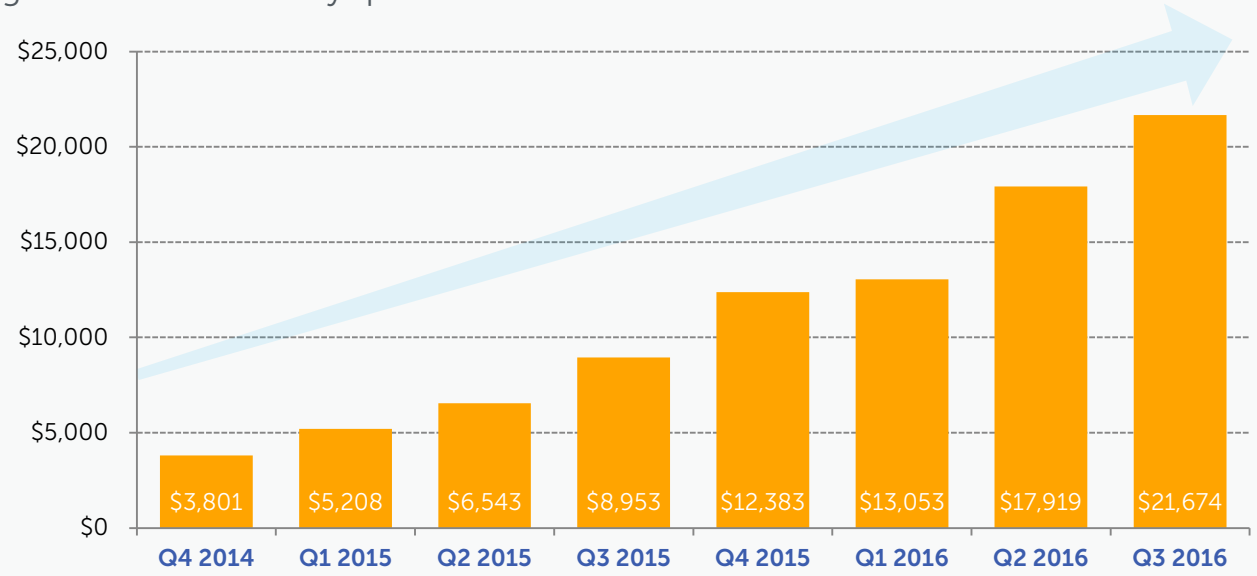
MILLION COVERED LIVES IN THE U.S.

>120

MILLION CONTRACTED LIVES IN THE U.S.

global revenue growth

global net revenue by quarter

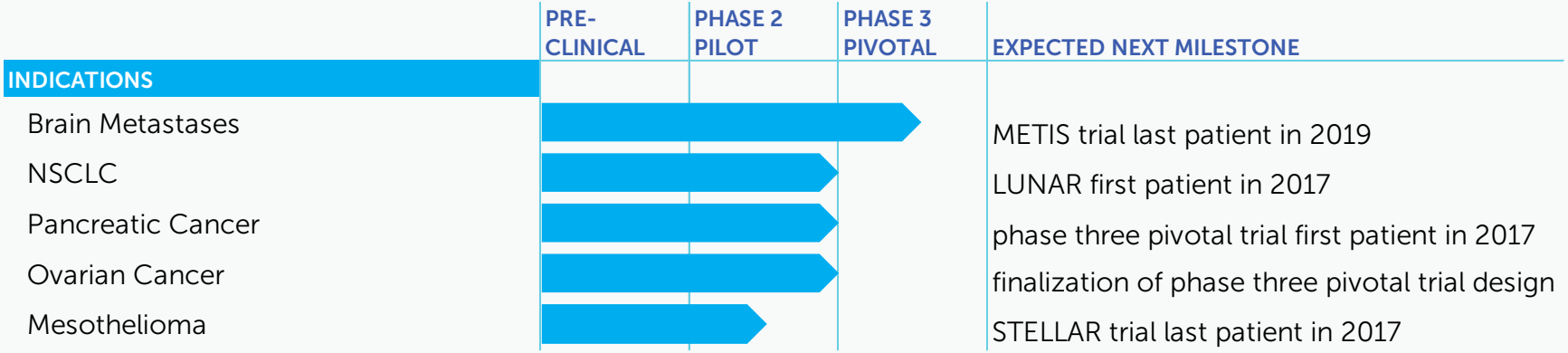


154%

REVENUE GROWTH Q3 YEAR-TO-DATE 2016 VERSUS 2015

Net revenue on a cash basis. Significant increase in contracted lives will facilitate transition to accrual-based revenue recognition under U.S. GAAP for payers with whom we have contracts or with whom we have built sufficient payment history. Q4 and FY 2016 revenue to be released on February 23, 2017.

ongoing clinical trials



INDICATIONS	PRE-CLINICAL	PHASE 2 PILOT	PHASE 3 PIVOTAL	EXPECTED NEXT MILESTONE
Brain Metastases				METIS trial last patient in 2019
NSCLC				LUNAR first patient in 2017
Pancreatic Cancer				phase three pivotal trial first patient in 2017
Ovarian Cancer				finalization of phase three pivotal trial design
Mesothelioma				STELLAR trial last patient in 2017

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

Novocure, Ltd. Safety Feasibility and Effect of TTFields (150 kHz) Concomitant With Gemcitabine or Concomitant With Gemcitabine Plus Nab-paclitaxel for Front-line Therapy of Advanced Pancreatic Adenocarcinoma (PANOVA) In: ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (US). 2000-[cited 2017 Jan]. Available from: https://clinicaltrials.gov/ct2/show/NCT01971281. NLM Identifier: NCT01971281

phase 2 pilot PANOVA trial, first cohort

	FIRST COHORT[1]	
EFFICACY ENDPOINTS	TTFIELDS WITH GEMCITABINE	GEMCITABINE-ALONE HISTORICAL RESULTS[2]
Median PFS	8.3 months	3.7 months
Median OS	14.9 months	6.7 months
One-year survival rate	55%	22%
Partial response rate	30%	7%
Stable disease	30%	33%

1. First cohort analysis presented at ASCO GI in January 2016, with first cohort subgroup analysis presented at ASCO in June 2016.
2. Von Hoff D., et al. *N Engl J Med* 2013; 369:1691-1703 October 31, 2013. doi: 10.1056/NEJMoa1304369

phase 2 pilot PANOVA trial, second cohort

	SECOND COHORT	
EFFICACY ENDPOINTS	TTFIELDS WITH NAB-PACLITAXEL PLUS GEMCITABINE	NAB-PACLITAXEL PLUS GEMCITABINE HISTORICAL RESULTS[1]
Median PFS	12.7 months	5.5 months
Median OS	Not yet reached	8.5 months
One-year survival rate	72%	35%
Partial response rate	40%	
Stable disease	47%	

1. Von Hoff D., et al. *N Engl J Med* 2013; 369:1691-1703 October 31, 2013. doi: 10.1056/NEJMoa1304369

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	TTFIELDS WITH PACLITAXEL	PACLITAXEL-ALONE HISTORICAL RESULTS[1]
Median PFS	8.9 months	3.9 months*
Median OS	Not yet reached	13.2 months
One-year survival rate	61%	

Novocure, Ltd. Safety, Feasibility and Effect of TTFields (200 kHz) Concomitant With Weekly Paclitaxel in Recurrent Ovarian Carcinoma (INNOVATE) In: ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (US). 2000- [cited 2017 Jan]. Available from: https://clinicaltrials.gov/ct2/show/NCT02244502. NLM Identifier: NCT02244502

1. Pujade-Laurain E., et al. *J of Clin Onc.* 2015; 33(32): 3836-3838. doi: 10.1200/jco.2015.63.1408

* Median PFS reflects the weekly paclitaxel subgroup; Median PFS for all chemotherapies was 3.4 months

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	TTFIELDS WITH PEMETREXED AND CISPLATIN OR CARBOPLATIN[1]	PEMETREXED AND CISPLATIN-ALONE HISTORICAL RESULTS[2]
Median PFS	7.3 months	5.7 months
Median OS	Not yet reached	12.1 months
One-year survival rate	79.7%	50.3%

Novocure, Ltd. Safety and Efficacy of TTFields (150 kHz) Concomitant With Pemetrexed and Cisplatin or Carboplatin in Malignant Pleural Mesothelioma (STELLAR) In: ClinicalTrials.gov [Internet]. Bethesda (MD): National Library of Medicine (US). 2000-[cited 2017Jan]. Available from: https://clinicaltrials.gov/ct2/show/NCT02397928. NLM Identifier: NCT02397928

1. Cerasoli, G.L. International Association for the Study of Lung Cancer. OA22.01 – STELLAR – Interim Results of a Phase 2 Trial of TTFields with Chemotherapy for First Line Treatment of Malignant Mesothelioma. Oral Session: Novel Trials and Biomarkers in Malignant Pleural Mesothelioma. Wednesday, Dec. 7, 2016, 2:20 p.m. CET

1 Vogelzang NJ, Rusthoven JJ, Symanowski J, et al. *J Clin Oncol*. 2003;21:2636–2644. doi: 10.1200/JCO.2003.11.136

2017 anticipated milestones

DRIVE COMMERCIAL ADOPTION OF OPTUNE

- Continue to deliver active patient and revenue growth
- Switzerland reimbursement
- Japan reimbursement

ADVANCE THE CLINICAL PIPELINE

- Presentation and publication of phase 2 pilot trial results for pancreatic and ovarian cancer
- First patient enrollment in LUNAR phase 3 pivotal trial in NSCLC
- Final patient enrollment in STELLAR phase 2 pilot trial in mesothelioma
- First patient enrollment in phase 3 pivotal trial in pancreatic cancer