

Pre-clinical/
Translational

Oncology/
Immuno-Oncology

Cancer Indication
Cohorts

Breast Cancer PDX Models

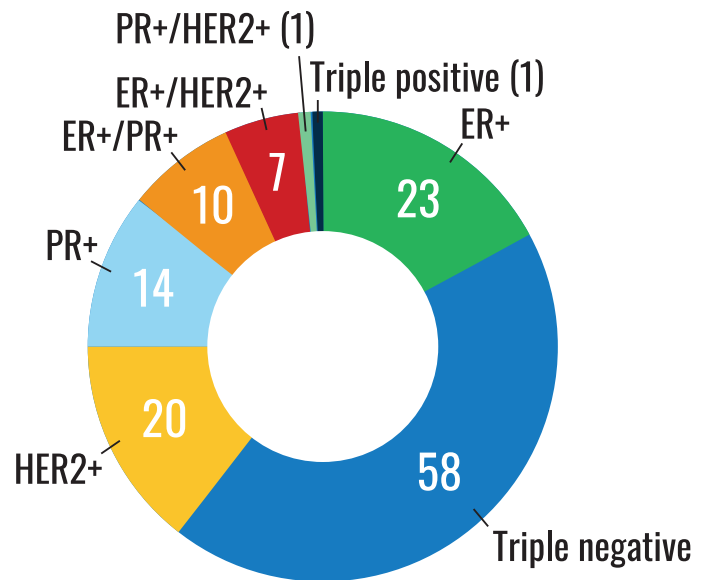
Champions Oncology has **over 100 breast cancer PDX models** for oncology drug development. These encompass **all subtypes of the disease** (HER2+, HR+ and TNBC) and are well characterized with patient clinical data, treatment history and in vivo drug responses to a wide range of therapies.

In addition, Champions has completed **next generation sequencing (WES and RNASeq) on over 75 Breast Cancer models.**

We are frequently adding new models to the PDX bank, derived from **patients that have progressed on the latest approved therapies**, such as those treated with PARP, HER2 targeted and/or CDK4/6 inhibitors.

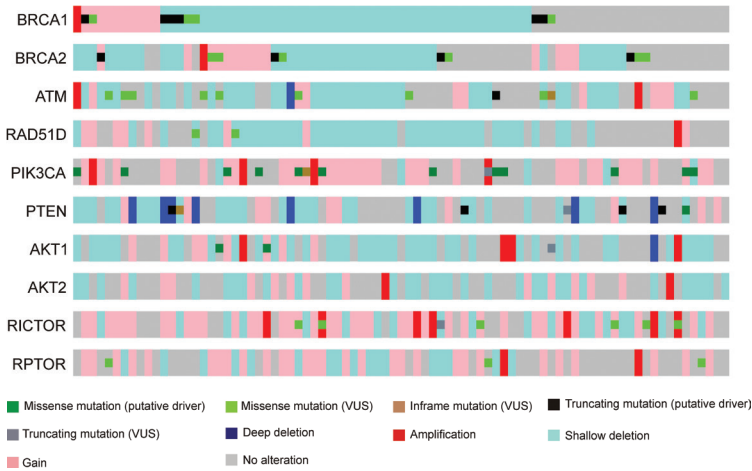
Drug Class	# of Models
Taxane	57
RTKi	43
DNA damaging agent	40
Alkylating agent	39
Anti-metabolite (e.g. 5-FU)	27
Platinum agent	26
Naïve	23
Aromatase inhibitor	16
Microtubule inhibitor	12
Angiogenesis inhibitor	10
Nucleoside analog	9
ER antagonist	7
CDK4/6i	6
Non-receptor kinase inhibitor	6
SERD	5
Anti-hormonal	3
Immunotherapy	1
Topoisomerase inhibitor	1

Breast Cancer Cohort by Subtypes



Characteristic	Percentage (%)	Number (#)
<i>Clinical Stage</i>		
I	3	2
II	24	17
III	26	18
IV	47	33
<i>Lines of Therapy Received</i>		
0	22	23
1	40	41
2	14	14
3	7	7
<3	17	18

Molecular Analysis



Gao et al. Integrative analysis of complex cancer genomics and clinical profiles using the cBioPortal. *Sci. Signal.* 6, p1 (2013)

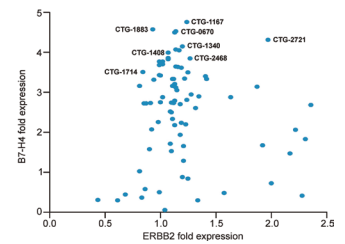
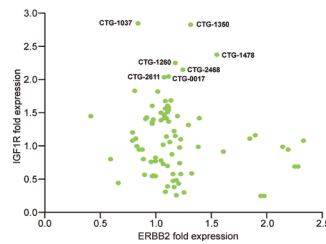
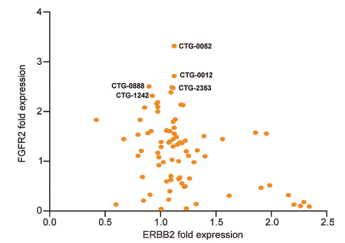
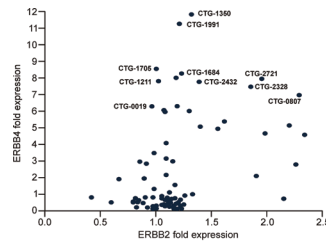
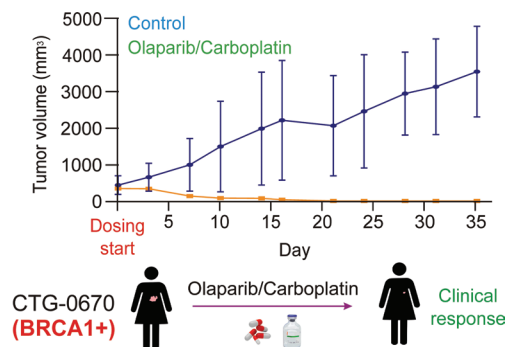
Next generation sequencing on Champions Breast Cancer PDX cohort has reveal numerous clinically relevant genomic aberrations including BRCA1/2 and Homologous Recombination Deficient (HRD) Pathway mutations, HER2 mutations and multi copy amplifications.

Genomic alteration	# of Breast Models
BRCA1 mutated	10
BRCA1 LOH	5
BRCA2 mutated	10
BRCA2 LOH	2
BRCA-like mutated	62
BRCA-like nullizygous	13
BRCA-like LOH	27
PIK3CA mutated	14
PIK3CA amplified	4
PTEN mutated	6
PTEN nullizygous	8
PTEN LOH	4

BRCA-like genes: ATM, ATR, BARD1, BLM, BRCA1, BRCA2, BRIP1, C11orf30, CDK12, CHEK1, CHEK2, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, FANCM, MRE11A, NBN, PALB2, PARP1, PARP2, PMS2, PTEN, RAD50, RAD51, RAD51B, RAD51C, RAD51D, RAD52, RAD54L, RPA1

Targeted Therapy Progressed Patient Cohorts

Champions has placed a significant focus on developing PDX models from patients that have progressed on targeted therapies. These models are extremely valuable for developing the next line of therapies that will overcome de novo or acquired resistance. An overview of those models currently available is provided below—with many more models currently in development.



Corporate Headquarters
One University Plaza, Suite 307
Hackensack, NJ 07601

Phone: 201-808-8400
Toll Free: 866-746-5457

Please visit championsoncology.com for access to the Champions TumorGraft database and updated information about Champions Oncology PDX models.

© 2019 Champions Oncology, Inc. All Rights Reserved.
Champions TumorGraft is a trademark of Champions Oncology, Inc.