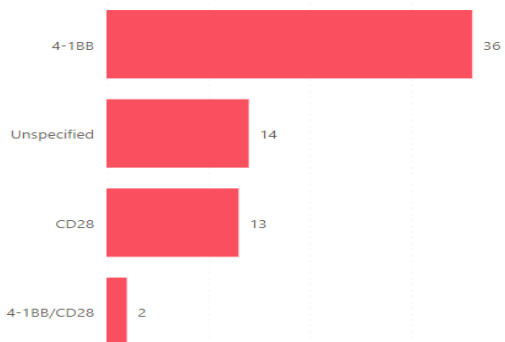


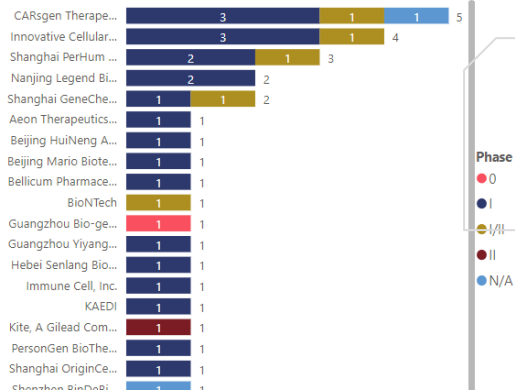
Engagement Focus	Client Company	Client Profile	Engagement Overview
Technology and Entity evaluation	A fully integrated Cell Therapy Company	Director, Cell and Gene Therapy	<ul style="list-style-type: none"> <li>A clinical stage cell therapy company now acquired by a global biopharma, wanted to diversify CGT pipeline by in licensing cell therapies with novel CAR-T constructs for solid tumors. They wanted to understand the trends in CAR-T evolution, CAR constructs and their relative clinical benefits.</li> <li>Through structured technology assessment framework and use of CGT platform, we identified emerging trends in CAR-Ts, engineered constructs and their actual or hypothesized benefits supported by scientific 'reason to believe' in solid tumors. Further BD&amp;L assessment helped the client to identify potential partners that can consolidate positioning in CGT space through enrichment of pipeline with emerging technologies.</li> </ul>

### Output for Second Generation CART Cell Therapies in Solid Tumors

#### Costimulatory domain used in 2<sup>nd</sup> Generation CAR-T



#### Entity Vs Phase of Development



#### Details of CAR-T Construction

Product	Indication	Target	Phase	Cell therapy Type	Platform type	Construct generation	Construct design	Co-stimulant	Activation	Vector type/ Delivery sys.
1RG-CART	Neuroblastoma	GD2	I	CART	Autologous	Second	A scFv was derived from T...	CD28	CD3ζ	Retroviral
4SCAR-TCO44v6	Solid Tumor	CD44v6	III	CART	Autologous	Second		CD28	CD3ζ	Lentiviral
Anti-ALPP CAR-T	Endometrial Cancer	ALPP	III	CART	Autologous	Second		Unspecified		Unspecified
Anti-ALPP CAR-T	Ovarian Cancer	ALPP	III	CART	Autologous	Second		Unspecified		Retroviral
Anti-CEA designer ...	Solid Tumor	CEA	II	CART	Autologous	Second	Ig-CD28-TCRzeta	Unspecified		Unspecified
Anti-CEA designer ...	Breast Cancer	CEA	I	CART	Autologous	Second	IgCEA-CD8hinge-CD28ED...	CD28	TCRζ	Retroviral
Anti-CEA designer ...	Colorectal Cancer	CEA	I	CART	Autologous	Second	IgCEA-CD8hinge-CD28ED...	CD28	TCRζ	Retroviral
Anti-CEA designer ...	Gastric Cancer	CEA	I	CART	Autologous	Second	IgCEA-CD8hinge-CD28ED...	CD28	TCRζ	Retroviral
Anti-GPC3 CAR T	Hepatocellular Carcin...	GPC3	I	CART	Autologous	Second	Humanized anti-GPC3 sin...	Unspecified		Lentiviral
Anti-GPC3 CART	Hepatocellular Carcin...	GPC3	III	CART	Autologous	Second	Anti-GPC3 scFv-4-1BB-CD...	4-1BB	CD3ζ	Retroviral
Anti-hCD70 CAR ...	Breast Cancer	CD70	III	CART	Autologous	Second	Extracellular binding portio...	4-1BB	CD3ζ	Retroviral
Anti-hCD70 CAR ...	Melanoma	CD70	III	CART	Autologous	Second	Extracellular binding portio...	4-1BB	CD3ζ	Retroviral
Anti-hCD70 CAR ...	Ovarian Cancer	CD70	III	CART	Autologous	Second	Extracellular binding portio...	4-1BB	CD3ζ	Retroviral
Anti-hCD70 CAR ...	Pancreatic Cancer	CD70	III	CART	Autologous	Second	Extracellular binding portio...	4-1BB	CD3ζ	Retroviral
Anti-hCD70 CAR ...	Renal Cell Carcinoma	CD70	III	CART	Autologous	Second	Extracellular binding portio...	4-1BB	CD3ζ	Retroviral
Anti-hCD70 CAR ...	Solid Tumor	CD70	III	CART	Autologous	Second	Extracellular binding portio...	4-1BB	CD3ζ	Retroviral
Anti-HER2 CAR-T	Breast Cancer	HER2	III	CART	Unspecified	Second	trCD27-CD27Im-4-1BB (or...	4-1BB	CD3ζ	
Anti-HER2 CAR-T	Colorectal Cancer	HER2	III	CART	Unspecified	Second	trCD27-CD27Im-4-1BB (or...	4-1BB	CD3ζ	
Anti-HER2 CAR-T	Gastric Cancer	HER2	III	CART	Unspecified	Second	trCD27-CD27Im-4-1BB (or...	4-1BB	CD3ζ	
Anti-HER2 CAR-T	Glioma	HER2	III	CART	Unspecified	Second	trCD27-CD27Im-4-1BB (or...	4-1BB	CD3ζ	
Anti-HER2 CAR-T	Lung Cancer	HER2	III	CART	Unspecified	Second	trCD27-CD27Im-4-1BB (or...	4-1BB	CD3ζ	
Anti-HER2 CAR-T	Ovarian Cancer	HER2	III	CART	Unspecified	Second	trCD27-CD27Im-4-1BB (or...	4-1BB	CD3ζ	
Anti-HER2 CAR-T	Pancreatic Cancer	HER2	III	CART	Unspecified	Second	trCD27-CD27Im-4-1BB (or...	4-1BB	CD3ζ	
Anti-HER2 CAR-T	Solid Tumor	HER2	III	CART	Unspecified	Second	trCD27-CD27Im-4-1BB (or...	4-1BB	CD3ζ	
Autologous Anti-P...	Castration-Resistant ...	PSCA	I	CART	Autologous	Second	PSCA-CAR-4-1BB/TCRzet...	4-1BB	TCRζ	DNA
Axicabtagene cilol...	Solid Tumor	CD19	II	CART	Autologous	Second	A murine anti-CD19 single...	CD28	CD3ζ	Retroviral
B7-H3 CART	OVIS Tumor	B7-H3	I	CART	Autologous	Second		4-1BB		Lentiviral
B7-H3 CART	Diffuse Intrinsic Ponti...	B7-H3	I	CART	Autologous	Second		4-1BB		Lentiviral

#### Efficacy Results

Trial Id	Trial Acronyms	Indication	Entity	Line of Therapy	Phase	Biomarker	Biomarker Cutoff	Subgroup Cohort Name	Patients number	ORR%
NCT0333...		Lung Cancer	Guangzhou Y...	2L+	I	PD-L1	>10%	Overall	1	100.0%
NCT0387...		Digestive S...	CARsgen The...	2L+	I	CLDN18.2	≥2+, and...	Subgroup   G...	7	86.0%
NCT0387...		Digestive S...	CARsgen The...	2L+	I	CLDN18.2	≥2+, and...	Subgroup   G...	14	71.0%
NCT0387...		Digestive S...	CARsgen The...	2L+	I	CLDN18.2	≥2+, and...	Subgroup   G...	10	70.0%
NCT0387...		Digestive S...	CARsgen The...	2L+	I	CLDN18.2	≥2+, and...	Subgroup   G...	13	69.0%
NCT0387...		Digestive S...	CARsgen The...	2L+	I	CLDN18.2	≥2+, and...	Subgroup   G...	22	64.0%
NCT0387...		Digestive S...	CARsgen The...	2L+	I	CLDN18.2	≥2+, and...	Subgroup   G...	16	63.0%
NCT0387...		Digestive S...	CARsgen The...	3L+	I	CLDN18.2	≥2+, and...	Subgroup   G...	18	61.1%

#### Clinical Development Overview Of 2<sup>nd</sup> generation CAR-T Cell Therapies

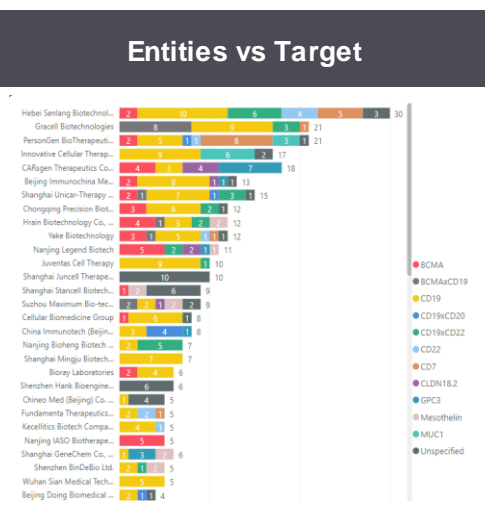
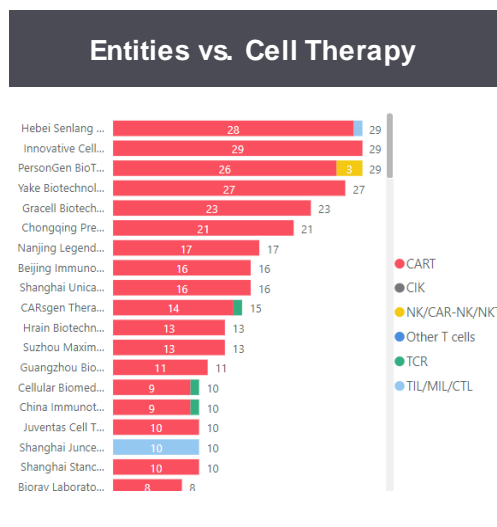




Case Study -3

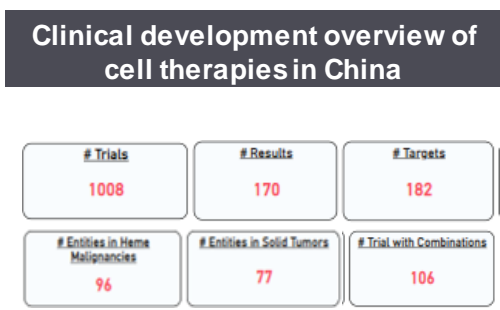
Engagement Focus	Client Company	Client Profile	Engagement Overview
Opportunity Assessment & competitive TPP	Clinical stage Biotech Company	Director, Global Strategy Marketing	<ul style="list-style-type: none"> <li>An APAC-based biotechnology company is developing cell therapy assets in oncology. In order to plan LCM strategy, client wanted to identify potential opportunities keeping in view regional nuances and competition. FutureBridge supported by defining viable opportunity sequence, business case and situational assessment of China cell therapy market. Our CGT platform provided essential data on competing China entities focused on cell therapies, their assets, corresponding efficacy/safety (as available) and value proposition.</li> <li>As part of large modular project, the assessment enabled the client to efficiently narrow down and track most prominent entities and key competitors that need to be closely monitored for their time to launch and impact on revenue potential of client's asset.</li> </ul>

Output for China Cell Therapy Landscape in Oncology

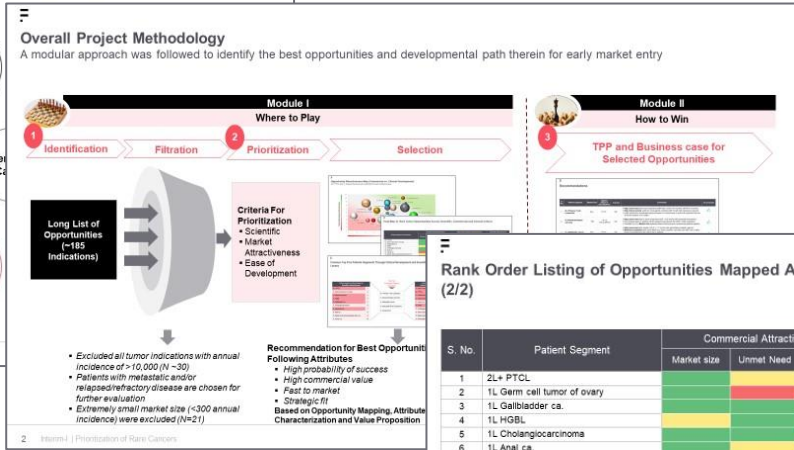
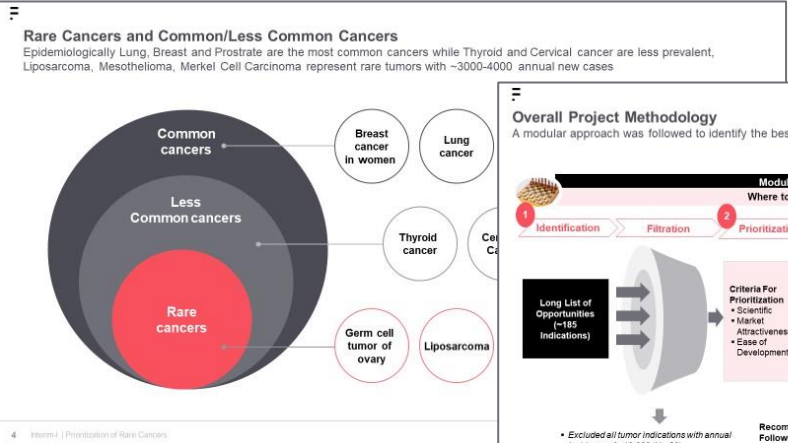


### Efficacy data

Product	Trial Id	Trial Acronyms	Indication	Entity	Line of Therapy	Phase	Biomarker	Subgroup Cohort Name	Patients number - Exp	ORR% - Exp	Sponsor	Sponsor Type	Collaborator
PD1 Gene knoc...	CHCTR18...		Follicular Ly...	Wuhan Bio-R...	2L+	II	CD19+	Subgroup   F...	2	100.0%	Cancer Hospital Affiliated...	Academic   Industry	Wuhan Bio-Raid Biotech
GB5005	CHCTR20...		B Cell Lymph...	Shanghai Jib...	3L+	0	CD19+	Subgroup   C...	4	100.0%	Shanghai Children's Hosp...	Academic   Industry	Shanghai Jibei Biotechnol
GB5005	CHCTR20...		B Cell Lymph...	Shanghai Jib...	3L+	0	CD19+	Subgroup   P...	12	100.0%	Shanghai Children's Hosp...	Academic   Industry	Shanghai Jibei Biotechnol
GC-012F	CHCTR21...		B Non-Hod...	Gracell Biote...	2L+	I	CD19+ B...	Subgroup   ...	1	100.0%	The First Affiliated Hospit...	Academic   Industry	Gracell Biotechnologies
GC-012F	CHCTR21...		B Non-Hod...	Gracell Biote...	2L+	I	CD19+ B...	Subgroup   ...	1	100.0%	The First Affiliated Hospit...	Academic   Industry	Gracell Biotechnologies
GC-012F	CHCTR21...		B Non-Hod...	Gracell Biote...	2L+	I	CD19+ B...	Subgroup   ...	1	100.0%	The First Affiliated Hospit...	Academic   Industry	Gracell Biotechnologies
GC-012F	CHCTR21...		B Non-Hod...	Gracell Biote...	2L+	I	CD19+ B...	Subgroup   ...	3	100.0%	The First Affiliated Hospit...	Academic   Industry	Gracell Biotechnologies
CD30 CART	CHCTR21...		Lymphopro...	Wuhan Bio-R...	2L+	0	CD30+ ...	Overall	6	100.0%	Tongji Hospital, Tongji Me...	Academic   Industry	Wuhan Bio-Raid Biotech
CD19-CAR T cells	NCT0254...		Acute Lymph...	Beijing Doi...	2L+	I	CD19+	Subgroup   A...	23	100.0%	Beijing Doing Biomedical ...	Academic   Industry	The First Hospital of Jilin I
CD19-targeted ...	NCT0273...	EECNTL	Leukemia	Sinobioway ...	2L+	N/A		Subgroup   R...	3	100.0%	Shanghai Genechem	Industry	The Second Hospital of H
CD19-CAR-T ce...	NCT0278...		Acute Lymph...	iCARTAB Bio...	2L+	I/II		Subgroup   C...	10	100.0%	Xuzhou Medical University	Academic   Industry	iCARTAB BioMed Inc   Hua
CD19-CAR-T ce...	NCT0278...		Acute Lymph...	iCARTAB Bio...	2L+	I/II		Subgroup   C...	7	100.0%	Xuzhou Medical University	Academic   Industry	iCARTAB BioMed Inc   Hua
PCAR-019	NCT0285...		B Cell Lymph...	PersonGen BL...	2L+	I/II	CD19+	Subgroup   L...	1	100.0%	PersonGen BioTherapeut...	Industry	Anhui Provincial Cancer H



# Case Study- Opportunity Prioritization in Rare Cancers



**Rank Order Listing of Opportunities Mapped Across Individual Parameters Within Prioritization Criteria (2/2)**

S. No.	Patient Segment	Commercial Attractiveness			Clinical Development Attractiveness			Scientific Attractiveness	
		Market Size	Unmet Need	Competitive Intensity	Trial Size	Trial Duration	Endpoints for approval	CAR-Ts trials	CAR-T data strength (vs SOC)
1	2L+ PTCL	Green	Green	Green	Green	Green	Green	Green	Green
2	1L Germ cell tumor of ovary	Green	Green	Green	Green	Green	Green	Green	Green
3	1L Gallbladder ca.	Green	Green	Green	Green	Green	Green	Green	Green
4	1L HGBL	Green	Green	Green	Green	Green	Green	Green	Green
5	1L Cholangiocarcinoma	Green	Green	Green	Green	Green	Green	Green	Green
6	1L Anal ca.	Green	Green	Green	Green	Green	Green	Green	Green
7	1L Vulvar ca.	Green	Green	Green	Green	Green	Green	Green	Green
8	1L Nasal cavity and paranasal sinus ca.	Green	Green	Green	Green	Green	Green	Green	Green
9	1L Pancreatic NET	Green	Green	Green	Green	Green	Green	Green	Green
10	1L SCC of bladder ca.	Green	Green	Green	Green	Green	Green	Green	Green
11	1L Liposarcoma	Green	Green	Green	Green	Green	Green	Green	Green
12	1L Kaposi sarcoma	Green	Green	Green	Green	Green	Green	Green	Green
13	1L Malignant Pleural Mesothelioma	Green	Green	Green	Green	Green	Green	Green	Green
14	1L MCC	Green	Green	Green	Green	Green	Green	Green	Green
15	1L Adenocarcinoma of bladder	Green	Green	Green	Green	Green	Green	Green	Green
16	1L Urethral ca.	Green	Green	Green	Green	Green	Green	Green	Green
17	1L Adenocarcinoma of uterine cervix	Green	Green	Green	Green	Green	Green	Green	Green
18	1L STS of uterus (Uterine sarcoma)	Green	Green	Green	Green	Green	Green	Green	Green
19	2L+ PMBCL	Green	Green	Green	Green	Green	Green	Green	Green
20	1L MTC	Green	Green	Green	Green	Green	Green	Green	Green
21	2L+ CTCL	Green	Green	Green	Green	Green	Green	Green	Green

**Attractive Patient Segments for Product A development**  
 2L+ PTCL, 1L Kaposi Sarcoma, and 1L Gall Bladder cancer supported by high scientific rationale and possibility of success

