



Sleuth

Biopharma **insights** others miss

Western pharma is licensing in, not building, drugs in the PD-(L)1 x VEGF class

Five deals worth over \$30 billion connect Chinese originators to global partners

PD-(L)1 x VEGF Clinical Pipeline

Drug	Originator	Licensee	Target	Modality	Phase	Lead Indications	Lead Combo
ivonescimab	Akeso	Summit Tx	PD1 + VEGF-A	BsAb	Approved	NSCLC, SCLC, TNBC	NSCLC monotherapy; NSCLC chemo combo
pumitamig	Biotheus (BioNTech)	BMS	PDL1 + VEGF-A	BsAb	Phase III	SCLC, TNBC, NSCLC	NSCLC monotherapy; SCLC chemo combo
RC148	RemeGen	AbbVie	PD1 + VEGF	BsAb	Phase III	NSCLC, CRC, gastric cancer	NSCLC chemo combo
SCTB14	Sinocelltech	-	PD1 + VEGF	BsAb	Phase III	NSCLC, NPC, CRC	NSCLC monotherapy
sotiburafusp alfa	Huabo	-	PDL1 + VEGF	Ab Fusion	Phase III	NSCLC, TNBC, endometrial cancer	NSCLC chemo combo
SSGJ-707	3SBio	Pfizer	PD1 + VEGF	BsAb	Phase III	NSCLC, CRC	NSCLC monotherapy
AI-081	OncoC4	-	PD1 + VEGF	BsAb	Phase II	NSCLC, SCLC, CRC	NSCLC monotherapy
AP505	AP Bio	Tasly	PDL1 + VEGF	Ab Fusion	Phase II	SCLC, HCC, TNBC	SCLC monotherapy
CS2009	CStone	-	CTLA4 + PD1 + VEGF-A	TsAb	Phase II	NSCLC, SCLC, HCC	NSCLC monotherapy
FH-2001	Fosun	-	FGFR + PDL1 + VEGFR	SM	Phase II	HCC, gastric cancer	HCC IO combo
HC010	Hongcheng	-	CTLA4 + PD1 + VEGF	TsAb	Phase II	NSCLC, HCC, gastric cancer	NSCLC monotherapy
JS207	Junshi	-	PD1 + VEGF-A	BsAb	Phase II	NSCLC, HCC, TNBC	NSCLC chemo combo; HCC IO combo
MHB039A	Minghui	-	PD1 + VEGF	BsAb	Phase II	NSCLC	NSCLC ADC combo
palverafusp alfa	ImmuneOnco	-	PDL1 + VEGF	BsAb	Phase II	NSCLC, TNBC, STS	NSCLC chemo combo
CR-001	Paragon/Crescent	Kelun-Biotech	PD1 + VEGF	BsAb	Phase I/II	NSCLC, HCC, gastric cancer, cervical cancer	monotherapy
CVL006	Convalife	-	PDL1 + VEGF-A	BsAb	Phase I/II	Solid tumors	NSCLC chemo combo; TNBC ADC combo
DR30206†	Doer	-	PDL1 + TGF-β + VEGF	TsAb	Phase I/II	CRC, NSCLC	CRC chemo combo
jankistomig	Ottimo	-	PD1 + VEGFR2	BsAb	Phase I/II	Solid tumors	monotherapy
KH003	Sailing Pharma	-	PDL1 + VEGF	BsAb	Phase I/II	Solid tumors	monotherapy
LM-299	LaNova	Merck	PD1 + VEGF	BsAb	Phase I/II	Solid tumors	monotherapy
PM8003	Biotheus (BioNTech)	-	PDL1 + TGF-β + VEGF	TsAb	Phase I/II	Solid tumors	monotherapy
SCTB41	Sinocelltech	-	PD1 + TGF-β + VEGF	TsAb	Phase I/II	Solid tumors	monotherapy
SHR-4610	Hengrui	-	PD1 + VEGF	BsAb	Phase I/II	Solid tumors	monotherapy
CTX-10726	Compass	-	PD1 + VEGF-A	BsAb	Phase I	HCC, endometrial cancer, GEJ cancer, RCC	monotherapy
GB268	Genor	Eddingpharm	CTLA4 + PD1 + VEGF	TsAb	Phase I	Solid tumors	monotherapy
HLX37	Henlius	-	PDL1 + VEGF	BsAb	Phase I	NSCLC	NSCLC monotherapy
SG1408	Sumgen	-	PDL1 + VEGF	BsAb	Phase I	Solid tumors	monotherapy
VEGFR1/PDL1 CAR-T	Sichuan Univ.	-	PDL1 + VEGFR1	CAR-T	Phase I	malignant ascites, peritoneal carcinomatosis	monotherapy
JSKN027	Alphamab	-	PDL1 + VEGFR2	ADC	IND	Solid tumors	monotherapy

Preclinical depth signals broad conviction in the PD-(L)1 x VEGF mechanism

Most programs remain single-company efforts without licensing partners

Preclinical PD-(L)1 x VEGF Programs

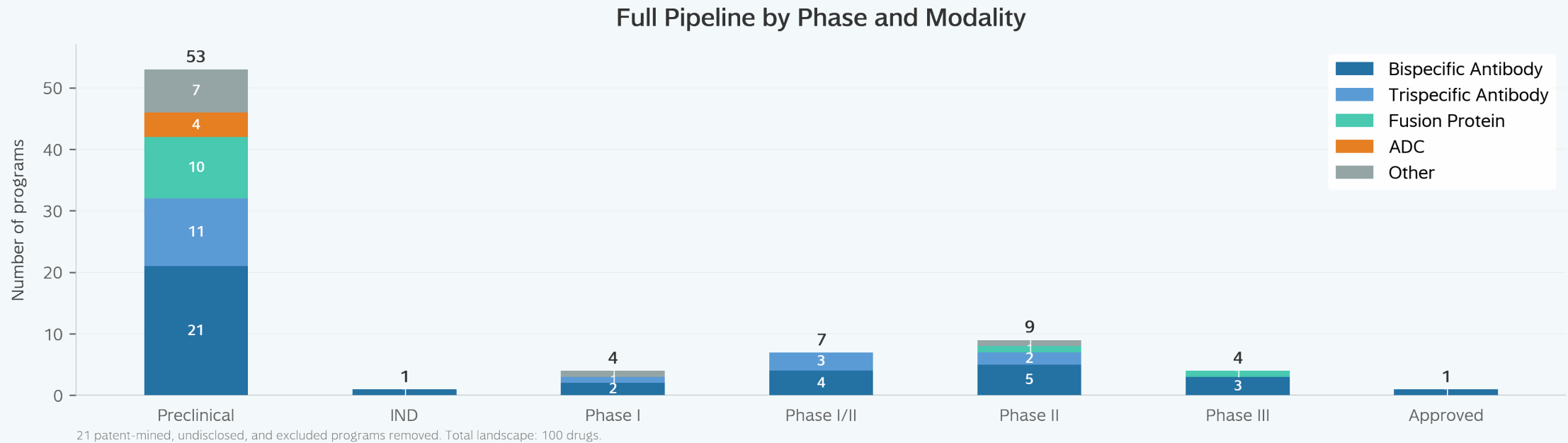
Drug	Originator	Licensee	Target	Modality	Drug	Originator	Licensee	Target	Modality
ABAO5	Abalytics	-	CTLA4 + PD1 + VEGF	TsAb	MB4090	Mustbio	-	IL-2 + PD1 + VEGF	Ab Fusion
AI-062	OncoC4	-	PD1 + VEGF	Other	MB7	Mustbio	-	PD1 + VEGF + IL-21	Ab Fusion
AI-063	OncoC4	-	CTLA4 + PD1 + VEGF	Other	NY-500	NAYA	-	PD1 + VEGF	BsAb
anti-VEGF/PD-1 BsAb	Biox-Vision	-	PD1 + VEGF	BsAb	OGB23501	Onegene	-	CTLA4 + PD1 + VEGF	Fusion
AWT041	Anwita	-	PDL1 + VEGF	ADC	OGB23502	Onegene	-	LAG3 + PD1 + VEGF	Fusion
BB-202	Bright Bio	-	PD1 + VEGF	BsAb	OGB23503	Onegene	-	PD1 + VEGF + TIGIT	Fusion
BB-203	Bright Bio	-	PDL1 + VEGF	BsAb	PB203	Panolos	-	PDL1 + VEGF-A + PIGF	Fusion
BCG036	Biocytogen	-	VEGF-A + PD1	BsAb	PBI-203	Protheragen	-	PDL1 + VEGF	BsAb
BPI-9320	Beta Pharma	-	PDL1 + VEGFR	Other	PD-(L)1/VEGF/NA TsAb	Harbour BioMed	-	PD1/PDL + VEGF	TsAb
BSI-551	Biosion	-	CTLA4 + PD1 + VEGF	TsAb	PDL1/VEGF BsAb	Cellemedy	-	PDL1 + VEGF	BsAb
BY24.3	Sumgen	Beyond Bio	PD1 + VEGF-A	BsAb	PDL1/VEGF Trap	Immunowake	-	PDL1 + VEGF	Ab Fusion
CS2007	CStone	-	PDL1 + VEGF	TsAb	Q-1806	QureBio	-	PDL1 + TGF-B + VEGF	TsAb
CT111	Shanghai CTG	-	CTLA4 + PD1 + VEGF	TsAb	SAUG 1	Portage	-	PD1 + VEGF	Other
DR30207	Doer	-	PDL1 + TGF-B + VEGF	TsAb	SCR-M015	Simcere	-	PD1 + VEGF	BsAb
DXA023-G017	DAC Biotech	-	PD1 + VEGF	ADC	SPX-308	Sparx	-	PDL1 + VEGF	BsAb
DXC023	DAC Biotech	-	PD1 + VEGF	BsAb	SPX-602	Sparx	-	PDL1 + VEGF	ADC
FAP1V2	FJIRSM	-	PDL1 + VEGFR2	BsAb	SPX-603	Sparx	-	PDL1 + VEGF	ADC
HH160	Huahui Health	-	CTLA4 + PD1 + VEGF-A	TsAb	TGI-17b	TG Immuno	-	CD25 + PD1 + VEGF	TsAb
HS1940	Tharimmune	-	PD1 + VEGF	BsAb	TGI-18	TG Immuno	-	CD25 + PD1 + VEGF	TsAb
HX016-7	Hanx	-	PDL1 + VEGF	BsAb	triple fusion (MustBio)	Mustbio	Celltrion	IL-2 + PD1 + VEGF	Ab Fusion
HX016-9	Hanx	-	PD1 + VEGF	BsAb	TST786	Transcenta	-	PD1 + VEGF + GREM1	TsAb
ILB-2201	Innolake	-	PDL1 + VEGF	BsAb	VCR-045	Vicero Bio	-	PD1 + VEGFR	BsAb
IMD-2035	Affinity	-	IL-2 + PD1 + VEGFR	Other	VSV-01	Joint Bio	-	PD1 + VEGF	BsAb
IMM2503	ImmuneOnco	-	PDL1 + VEGF	Other	YBL-008	Y Biologics	-	PDL1 + VEGF-A	BsAb
IMM2504	ImmuneOnco	-	CD47 + PDL1 + VEGF	Other	YL252	MediLink	-	PDL1 + VEGF	BsAb
IMM2518	ImmuneOnco	-	PDL1 + VEGF	Ab Fusion	YXC-001	Yizhong	-	IL-2 + PD1 + VEGF	Ab Fusion
JMB2003	Jemincare	-	PDL1 + VEGF	BsAb					

53 programs shown. 17 patent-mined, 2 undisclosed, and 2 clinical-stage entries excluded. Total landscape: 100 drugs.



Non-bispecific formats make up 32 of 53 preclinical entries

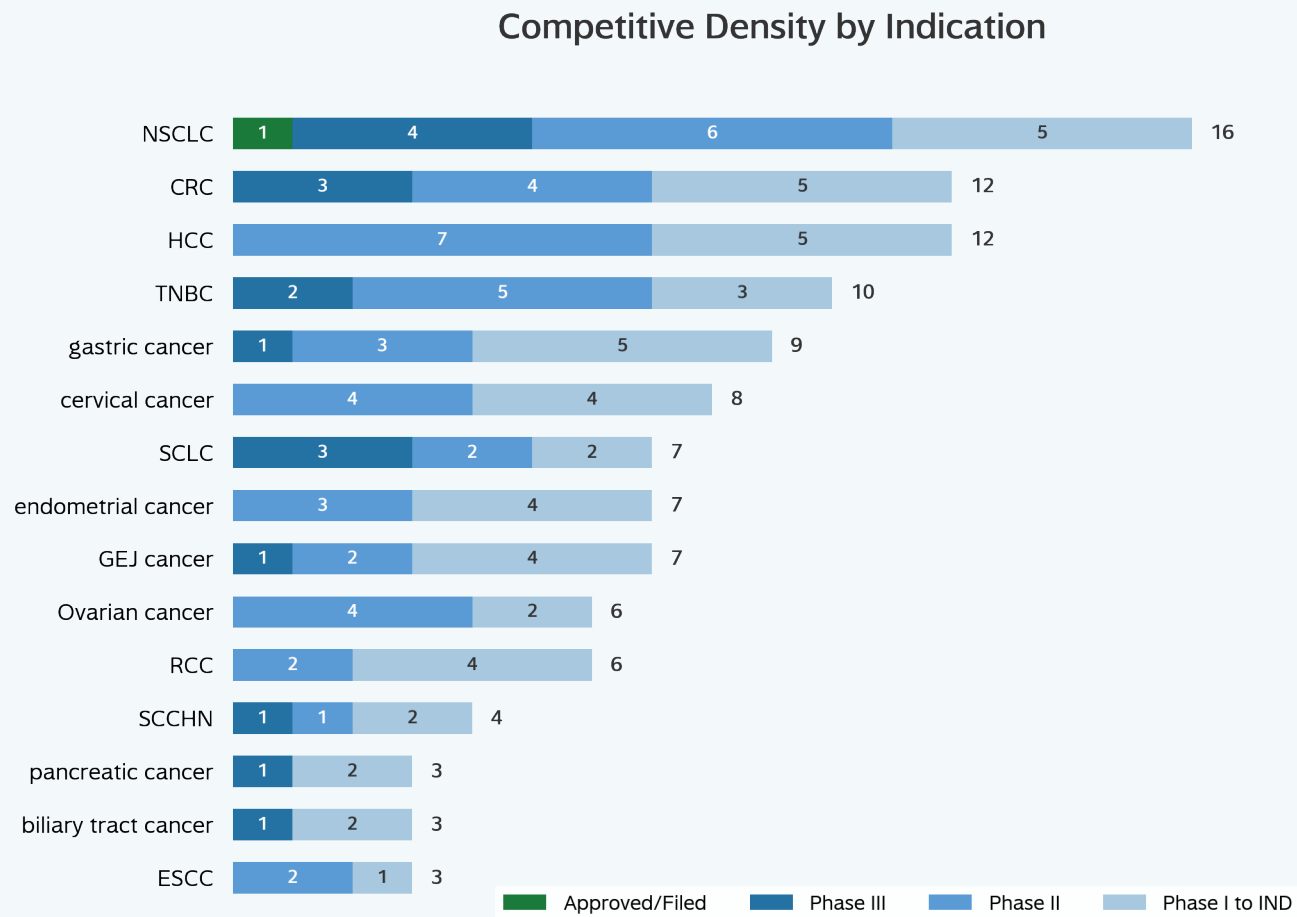
Trispecifics, fusion proteins, and ADCs are diversifying the early pipeline



- Bispecific antibodies account for all 4 Phase III programs and the single approved drug, but at the preclinical stage they represent only 21 of 53 programs.
- Trispecific antibodies are the largest non-bispecific subclass with 11 preclinical programs, most adding CTLA4, TGF-B, or IL-2 as a third target to the PD-(L)1 and VEGF backbone.
- Only 1 of 79 programs has reached approval, leaving the competitive landscape open despite heavy preclinical investment.

NSCLC is the primary battleground with 16 active competitors

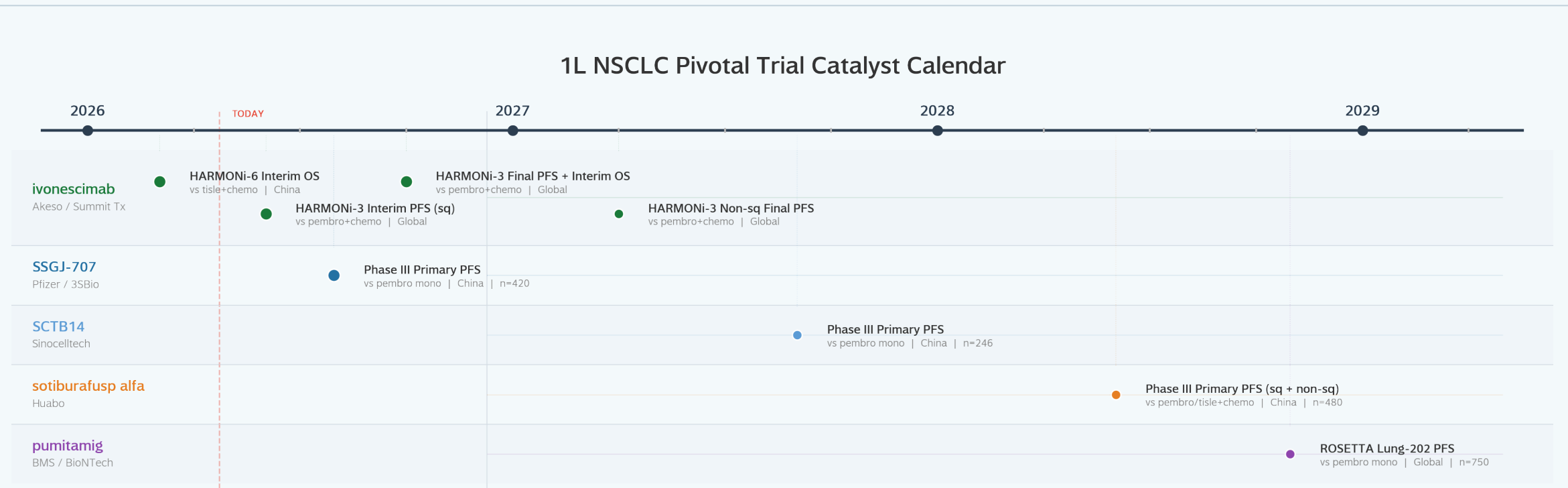
CRC, HCC, and TNBC are the next most contested indications



- Only NSCLC has an approved drug, yet 15 other indications are drawing clinical investment, signaling broad mechanistic conviction.
- HCC tied CRC at 12 programs but has zero Phase III trials, leaving a wider window for differentiation in liver cancer.
- Mid-tier indications cluster tightly at 7 to 9 competitors each, consistent with portfolio hedging rather than high-conviction bets.
- Early-phase growth is piling into already-contested indications, compressing timelines to head-to-head differentiation data.

Ivonescimab will generate 4 readouts before most competitors report any data

HARMONi-3 interim PFS in squamous NSCLC is the near-term binary catalyst for the class



- Ivonescimab beat pembrolizumab head-to-head in first-line NSCLC in China's HARMONi-2 trial, earning NMPA approval in April 2025 and making HARMONi-3 the most closely watched readout in the class.
- Ivonescimab generates 4 readouts by mid-2027, giving it ~18 months of activity before any competitor reports pivotal data.
- Pfizer's SSGJ-707 has the only other 2026 readout but is a China-only monotherapy trial, and BMS/BioNTech's pumitamig will not report global Phase III PFS until late 2028 or 2029.