

Magicell®-NK |

Harnessing NK Power, Targeting Solid Tumors with Precision

Magicell®-NK is Medigen's proprietary platform for producing highly pure ($\geq 95\%$), potent ($\geq 70\%$ cytotoxicity), and large-scale NK cells for cancer therapy. In Taiwan, it is approved for clinical use in solid tumors, and two TFDA-approved clinical trials (Phase I and Phase I/II) are currently underway. Medigen is advancing Magicell®-NK as a precision therapy to bring new hope to cancer patients.

Magicell®-NK |

Product Specification and Development Strategy

Product Specification



High Cell Number
5~50 x 10⁸/infusion



High Purity
≥ 90%



High Cytotoxicity
≥ 70% at E/T = 1

E/T = 1 means that there is one NK cell (effector cell) for every one target cell (e.g., cancer or infected cell) in the assay or experimental setup.

Development Strategy and Status

Non-Viral Based Non-Feeder-Cell Based Unmatched donors Automation

Med Tech

Auto-NK to Allo-NK Therapy

**Auto-NK
TW Approval
(Med Tech)**

**Auto-NK P1
in TW (TFDA)
(NCT05394714)**

**Allo-NK P1/2
in TW (TFDA)
(NCT06730009)**

*Real Word Data
Collection*

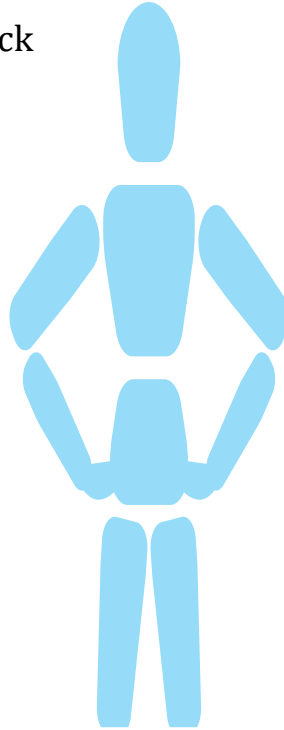
*Cohort 3
Recruiting*

Active (TW)

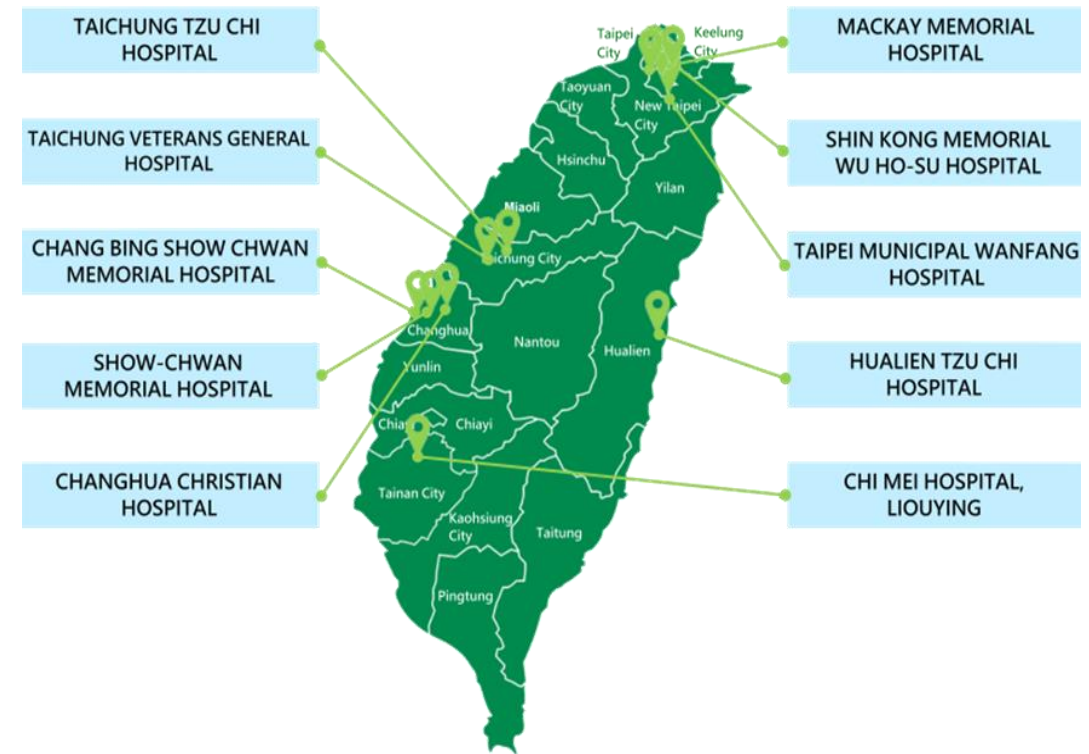
- Using NK cells isolated from whole blood or PBMCs as the starting material
- Using state-of-the-art cell processing with innovative culture medium recipe for cell expansion without adding any non-GMP approved material or any feeder cells

Treating Diverse Solid Tumors in Multiple Hospitals

- Head and Neck Cancer
- Breast Cancer
- Liver Cancer
- Colorectal Cancer
- Prostate Cancer



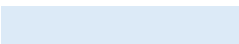







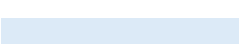


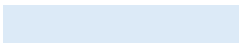

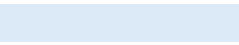

- Brain Cancer
- Lung Cancer
- Esophageal Cancer
- Gastric Cancer
- Kidney Cancer
- Ovarian Cancer



- Magicell®-NK obtained approvals for treating cancer patients under the *Regulations Governing the Application of Specific Medical Examination Techniques and Medical Devices*.
- Between 2020 and 2024, Magicell®-NK cells was approved for use in 10 hospitals across Taiwan to treat cancer patients.

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Clinical Trial for Autologous/Allogeneic NK Cell Therapy

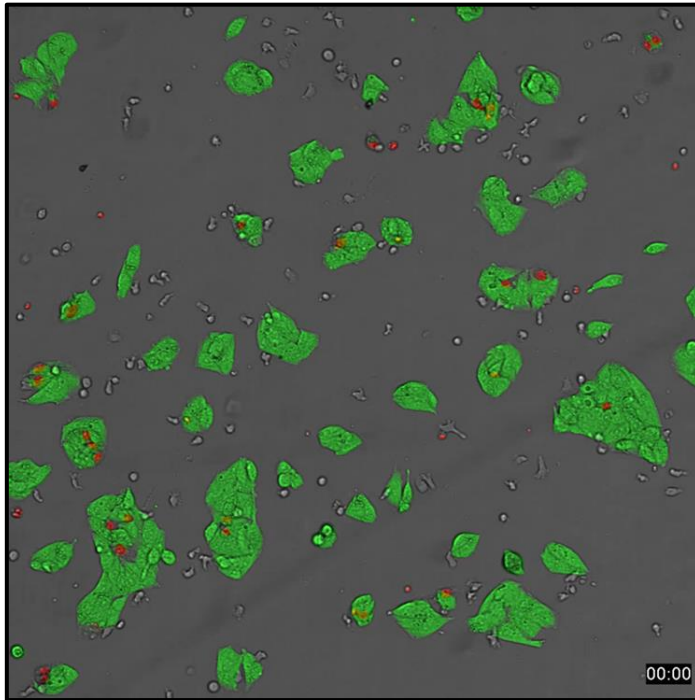
Product	Indication	Area	Non clinical	Phase I	Phase II	Phase III
OBP-301	HCC	KR/TW				
	Esophageal Cancer	US/ JP				
	Gastric Cancer	US				
	Head and Neck Cancer	US				
Autologous Magicell®-NK*	Colon Cancer	TW				
Allogeneic Magicell®-NK**	PDA or CCA	TW				

*Phase I trial in progress : Autologous NK cell therapy for the prevention of recurrence of colorectal cancer after surgery.

**Phase I/II trial IND in progress: Allogeneic NK cell therapy for the treatment of pancreatic cancer and cholangiocarcinoma with chemotherapy.

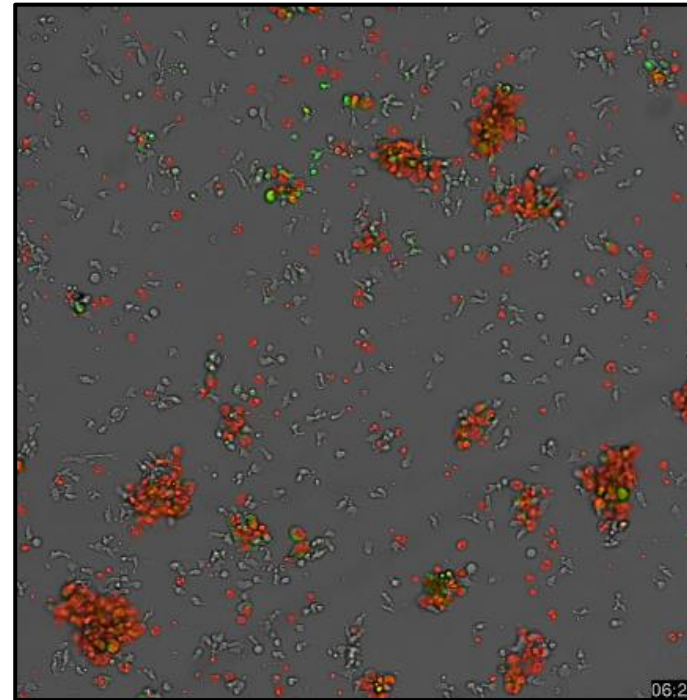
Magicell®-NK |

Activated NK Cells with High Cytotoxicity



Time: 00hr 00min

Before
cytotoxic activity



Time: 06hr 25min

After
cytotoxic activity

Effector cell: Magicell®-NK cell

Target cell: HepG2

E/T=1

Time-lapse: 6 hours



Live cancer cells



Dead cancer cells

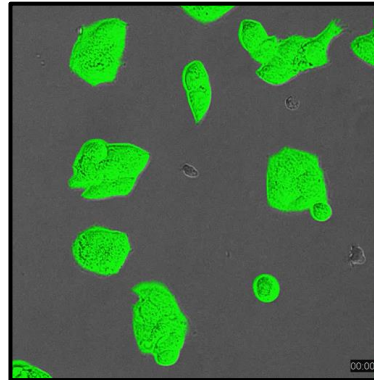


Magicell®-NK

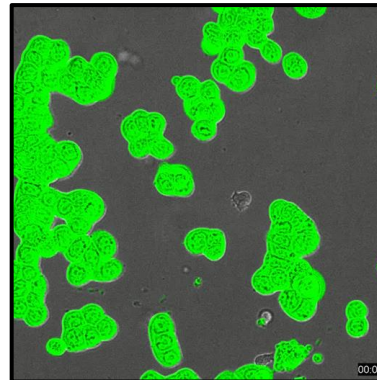
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Effective Against Various Cancer Cell Lines

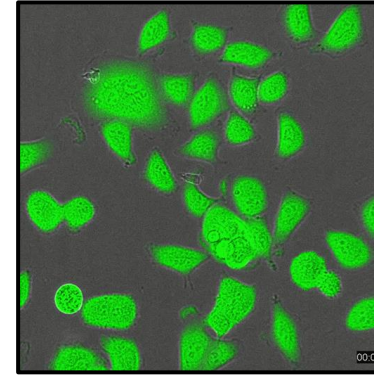
HepG2
Liver Cancer Cells



HT-29
Colon Cancer Cells



A549
Lung Cancer Cells

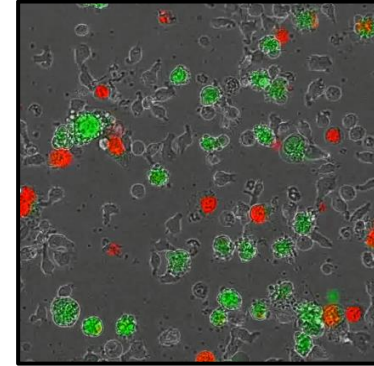
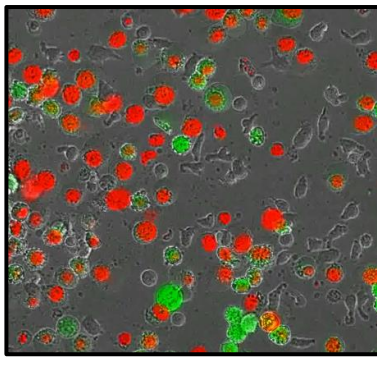
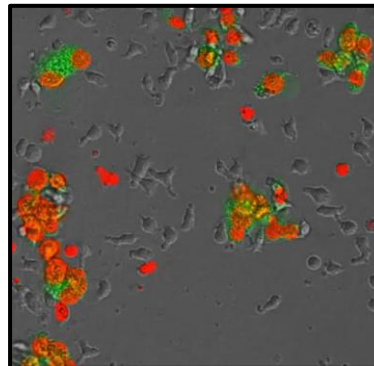





Time: 00hr 00min
Before
cytotoxic activity

E/T=1

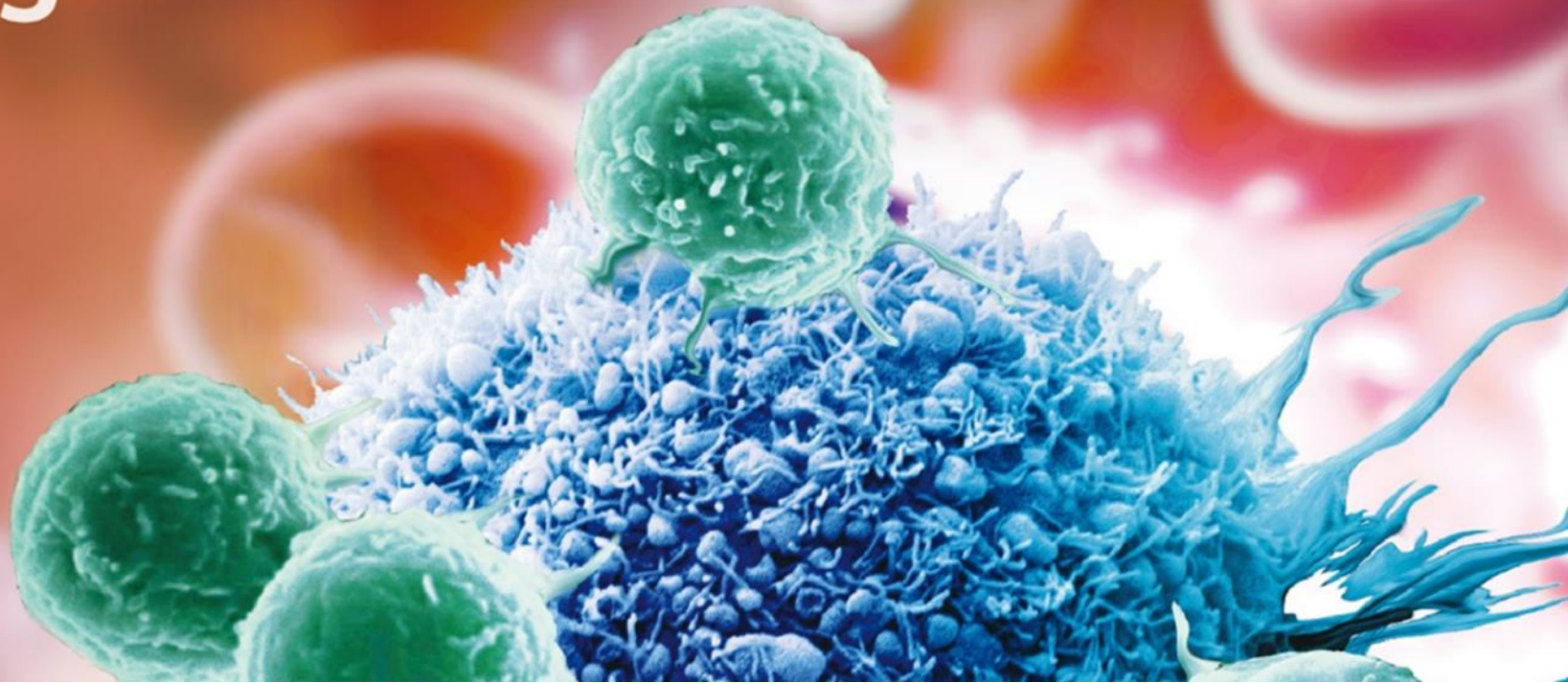
Time-lapse: 6 hours

Time: 06hr 00min
After
cytotoxic activity



 Live cancer cells
 Dead cancer cells
 Magicell®-NK

Innovations for a Better Life



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