

# Development Pipeline Progress Status

**May 13, 2020**

# Plan for Submissions in Japan

OPDIVO

Non-OPDIVO  
Oncology

Non-  
Oncology

OPDIVO  
M=Mono  
C=Combo

2019 (results)	2020年 (1H)	2020 (2H)	2021
<p>〔2L-Esophageal cancer〕 ATTRACTION-3 May 2019 (M)</p>			
<p>Onoact 〔Tachyarrhythmia upon sepsis〕 Aug 2019</p>			
<p>ONO-4059 〔PCNSL〕 Aug 2019</p>		<p>〔Adjuvant-Esophageal cancer〕 Checkmate-577 (M)</p>	
<p>ONO-4059 〔WM/LPL〕 Nov 2019</p>		<p>〔Adjuvant-Urothelial cancer〕 Checkmate-274 (M)</p>	<p>ONO-4059 〔Pemphigus〕</p>
<p>〔MSI-High CRC〕 with YERVOY CheckMate-142 Nov 2019 (C)</p>		<p>〔1L-Malignant pleural mesothelioma〕 with YERVOY Checkmate-743 (C)</p>	<p>ONOACT&lt;Pediatric&gt; 〔Tachyarrhythmia in low cardiac function〕</p>
<p>〔1L-NSCLC〕 with YERVOY CheckMate-227 Dec 2019 / Feb 2020 (C)</p>		<p>〔Neoadjuvant-NSCLC〕 with chemo Checkmate-816 (C)</p>	<p>〔1L-Esophageal cancer〕 with YERVOY and with Chemo CheckMate-648 (C)</p>
<p>ONO-5704 〔Osteoarthritis〕 Jan 2020</p>	<p>〔1L-NSCLC〕 with Chemo and AVASTIN ONO-4538-52 (C)</p>	<p>〔Adjuvant-Gastric cancer〕 with chemo CheckMate-844 (C)</p>	<p>〔1L-Head and neck cancer〕 with YERVOY Checkmate-651 (C)</p>
<p>Kyprolis 〔Multiple myeloma〕 with DARZALE* Mar 2020</p>	<p>〔1L-Gastric cancer〕 with Chemo ATTRACTION-4 (C)</p>	<p>〔1L-Gastric cancer〕 with YERVOY and with Chemo CheckMate-649 (C)</p>	<p>〔Adjuvant-Renal cell carcinoma〕 with YERVOY CheckMate-914 (C)</p>
<p>BRAFTOVI/MEKTOVI 〔BRAF mutated CRC〕 Mar 2020</p>	<p>〔1L-RCC〕 with Cabozantinib CheckMate-9ER (C)</p>	<p>〔1L-Urothelial cancer〕 with YERVOY and with Chemo Checkmate-901 (C)</p>	<p>〔Adjuvant-Hepatocellular carcinoma〕 Checkmate-9DX (M)</p>
<p>〔1L-NSCLC〕 with YERVOY and Chemo CheckMate-9LA Mar 2020 (C)</p>			

May 12, 2020

★Revision of package insert

# Development status of OPDIVO (1)

As of May 12, 2020

Target disease	JAPAN	US/EU	KR/TW
Melanoma (1 <sup>st</sup> )	Approved	Approved	Approved
Melanoma (Adjuvant Therapy)	Approved	Approved	Approved(KR) Approved(TW)
Non-small cell lung cancer (2 <sup>nd</sup> ~)	Approved	Approved	Approved
Non-small cell lung cancer (1 <sup>st</sup> )	Filing	Filing(US) Filing(EU)	III
Renal cell carcinoma (2 <sup>nd</sup> ~)	Approved	Approved	Approved
Renal cell carcinoma (1 <sup>st</sup> )	Approved	Approved	Approved
Hodgkin's lymphoma	Approved	Approved	Approved
Head and neck cancer	Approved	Approved	Approved
Gastric cancer	Approved	III	Approved
Malignant pleural mesothelioma	Approved	III	-
Colorectal cancer (MSI-H)	Approved	Approved (US) II / III (EU)	Approved(TW)
Esophageal cancer	Approved	III	Approved(KR) III(TW)
Gastro-esophageal junction cancer and esophageal cancer	III	III	III
Small cell lung cancer	III	Approved (US) III (EU)	III
Hepatocellular carcinoma	III	Approved (US) III (EU)	III(KR) Approved (TW)

Red: Update after May 2019

# Development status of OPDIVO (2)

As of May 12, 2020

Target disease	JAPAN	US/EU	KR/TW
Glioblastoma	III	III	-
Urothelial cancer	III	Approved	Approved
Ovarian cancer	III	III	III
Bladder cancer	III	III	III
Cervix carcinoma, Uterine body cancer, Soft tissue sarcoma	II	-	-
Central nervous system lymphoma, Primary Testicular Lymphoma	II	II	-
Pancreatic cancer	II	II	II
Virus positive/negative solid carcinoma	I / II	I / II	I / II
Biliary tract cancer	II	-	-
Multiple myeloma	-	III	-
Diffuse large B cell lymphoma (Non-Hodgkin's lymphoma)	-	II	-
Follicular lymphoma (Non-Hodgkin's lymphoma)	-	II	-
Prostate cancer	-	II	-
Pancreatic cancer, Triple negative breast cancer	-	I / II	-
Blood cancer (T-cell lymphoma, Multiple myeloma, Chronic leukemia, etc. )	-	I	-
Chronic myeloid leukemia	-	I	-

Red: Update after May 2019

# Clinical trials in combination therapy

## OPDIVO & other Immuno-Oncology compounds (1)

As of May 12, 2020

Product name (Generic name) Pharmacological action	Cancer type	Japan	US/EU	KR/TW
Yervoy Injection (Ipilimumab) Anti-CTLA-4 antibody	Melanoma	Approved	Approved	Approved
	Renal cell carcinoma	Approved	Approved	Approved
	Non-small cell lung cancer	Filing	Filing(US) Filing(EU)	III
	Small cell lung cancer	III	III	III
	Head and neck cancer	III	III	III
	Gastric cancer	III	III	III
	Malignant pleural mesothelioma	III	III	-
	Esophageal cancer	III	III	III
	Urothelial cancer	III	III	III
	Hepatocellular carcinoma	III	Approved(US) III(EU)	III
	Colorectal cancer (MSI-H)	Filing	Approved(US) II(EU)	Approved(TW)
	Ovarian cancer	-	I / II	-
	Virus positive/negative solid carcinoma	I / II	I / II	I / II

Red: Update after May 2019

# Clinical trials in combination therapy

## OPDIVO & other Immuno-Oncology compounds (2)

As of May 12, 2020

Development code (Generic name) Pharmacological action	Cancer type	Japan	US/EU	KR/TW
ONO-7701 (Linrodostat) IDO1 inhibitor	Bladder cancer	III	III	III
ONO-4687 (Cabiralizumab) Anti-CSF-1R antibody	Pancreatic cancer	II	II	II
ONO-4686 Anti-TIGIT antibody	Solid tumor	I / II	I / II	-
ONO-7807 Anti-TIM-3 antibody	Solid tumor	I / II	I / II	-
ONO-4482 (Relatlimab) Anti-LAG-3 antibody	Melanoma	I / II	II / III	-
ONO-4483 (Lirilumab) Anti-KIR antibody	Solid tumor	I	I / II	-
ONO-4578 PG receptor (EP4) antagonist	Solid tumor	I	I / II	-
ONO-7475 Axl/Mer inhibitor	Solid tumor	I	-	-
ONO-7911 (Bempegaldesleukin) PEGylated IL-2	Solid tumor	I	I / II	-
	Melanoma	-	III	-
	Renal cell carcinoma	-	III	-

Red: Update after May 2019

# Development pipeline in Japan (Oncology, other than OPDIVO)

As of May 12, 2020

Product name/ Development code (Generic name)	Target indication	Pharmacological action
<b>【Approved/Launch】</b>		
<b>KYPROLIS(Carfilzomib)</b> <Change in Dosage and Administration>	Multiple Myeloma	Proteasome inhibitor
<b>ONO-4059 (Tirabrutinib)</b>	Central nervous system lymphoma	BTK inhibitor
<b>【Filing】</b>		
<b>ONO-7643 (Anamorelin)</b>	Cancer cachexia (in all types of cancer)	Ghrelin mimetic
<b>ONO-4059 (Tirabrutinib)</b>	Primary macroglobulinemia Lymphoplasmacytic lymphoma	BTK inhibitor
<b>BRAFTOVI (Encorafenib)</b>	BRAF-mutant colorectal cancer	BRAF inhibitor
<b>MEKTOVI (Binimetinib)</b>	BRAF-mutant colorectal cancer	MEK inhibitor
<b>【Phase I】</b>		
<b>ONO-4578*</b>	Solid tumor	PG receptor (EP4) antagonist
<b>ONO-7475*</b>	Solid tumor	Axl / Mer inhibitor
<b>ONO-7913</b>	Solid tumor	Anti-CD47 mAb

\*Combination with Opdivo.

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# Development pipeline in Japan (Non-oncology) (1)

As of May 12, 2020

Product name/ Development code (Generic name)	Target indication	Pharmacological action
<b>【Approved/Launch】</b>		
<b>CORALAN / ONO-1162 (Ivabradine)</b>	<b>Chronic heart failure</b>	<b>HCN channel blocker</b>
<b>ORENCIA SC,ORENCIA IV (Abatacept)</b>	<b>Prevention of the structural damage of the joints in rheumatoid arthritis</b>	<b>T-cell activation inhibitor</b>
<b>【Filing】</b>		
<b>ONO-2370 (Opicapone)</b>	<b>Parkinson's disease</b>	<b>Long acting COMT inhibitor</b>
<b>ONOACT (Landiolol hydrochloride)</b>	<b>Tachyarrhythmia upon sepsis</b>	<b>Short-active selective <math>\beta_1</math> blocker</b>
<b>ONO-5704 · SI-613</b>	<b>Osteoarthritis</b>	<b>Hyaluronic acid-NSAID</b>
<b>【Phase III】</b>		
<b>ORENCIA SC (Abatacept)</b>	<b>Polymyositis/Dermatomyositis</b>	<b>T-cell activation inhibitor</b>

Red: Update after May 2019



# Development pipeline in Japan (Non-oncology) (2)

As of May 12, 2020

Product name/ Development code (Generic name)	Target indication	Pharmacological action
<b>【Phase II/III】</b>		
ONOACT (Landiolol hydrochloride)	Tachyarrhythmia in low cardiac function <Pediatric>	Short-active selective $\beta$ 1 blocker
<b>【Phase II】</b>		
ONO-5704 · SI-613	Enthesopathy	Hyaluronic acid-NSAID
ONO-4059 (Tirabrutinib)	Pemphigus	BTK inhibitor
<b>【Phase I】</b>		
ONO-7269	Cerebral infarction	FXIa inhibitor
ONO-4685	Autoimmune disease	PD-1 $\times$ CD3 Bispecific antibody

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# Global development projects (Other than OPDIVO)

As of May 12, 2020

Development code (Generic name)	Target indication	Pharmacological action	Area
<b>【Phase III】</b>			
ONO-7702 (Encorafenib)	BRAF-mutant colorectal cancer	BRAF inhibitor	KR
	BRAF-mutant melanoma		KR
ONO-7703 (Binimetinib)	BRAF-mutant colorectal cancer	MEK inhibitor	KR
	BRAF-mutant melanoma		KR
ONO-7912·CPI-613 (Devimistat)	Pancreatic cancer	Cancer metabolism inhibitor	KR
	Acute Myeloid Leukemia		KR
<b>【Phase II】</b>			
ONO-4059 (Tirabrutinib)	B cell lymphoma	BTK inhibitor	EU
	Sjögrens syndrome		US/EU
<b>【Phase I / II】</b>			
ONO-4578*	Solid tumor	PG receptor (EP4) antagonist	US/EU
<b>【Phase I】</b>			
ONO-4059 (Tirabrutinib)	B cell lymphoma	BTK inhibitor	US
ONO-7475	Acute leukemia	Axl / Mer inhibitor	US
ONO-7684	Thrombosis	FXIa inhibitor	EU
ONO-2808	Neurodegenerative disease	S1P5 receptor agonist	EU

\*Combination with Opdivo.

Red: Update after May 2019



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