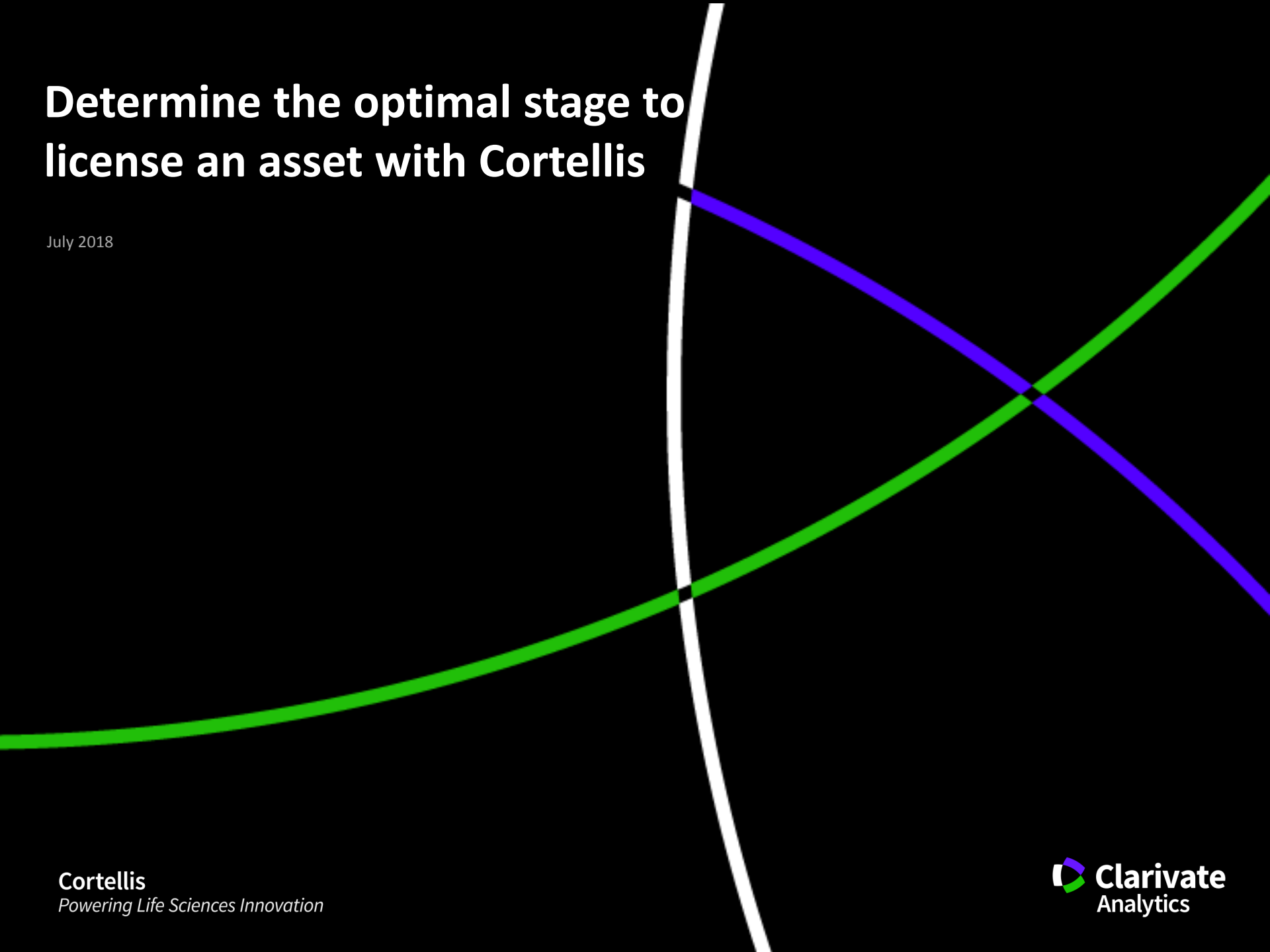


Determine the optimal stage to license an asset with Cortellis

July 2018



Agenda

- What is Cortellis?
- Determine the optimal stage to license an asset, with a focus on deal value
 - Search for lymphoma license deals with financials disclosed
 - Examine average/median deal size and upfronts by stage
 - Identify outliers and exclude them from the analysis
 - Review key fields such as territories, indications and number of products/options
- Wrap-up

What is Cortellis?

Broker Research (1817181)
Clinical Trials (316176)
Companies (166279)
Conferences (77970)
Deals (91803)
Disease Briefings (159)
Drugs (71835)
Event Transcripts (80237)
Literature (2511477)
Patents (3471051)
Press Releases (366591)
Regulatory (202751)
Venture Funding (6078)

Cortellis

Powering Life Sciences Innovation

Determine the optimal stage to license an asset

- Search for lymphoma, switch to deals content, go to Filters

Cortellis Explore ▾

All ▾ Q

Advanced search | Structure search ✓ Full text ✓ Index

2349 results found for 'lymphoma' First Previous 1 2 3 4 5 6

Report Type	Results	Per page: 50 ▾	Sort by: Most Recent Event Date ▾	Most Recent ▾	Order Columns	EFR Analyser
Show selected only Broker Research (42742) Clinical Trials (14793) Companies (2195) Conferences (4180) Deals (2349) Disease Briefings (44) Drugs (1980)	<input checked="" type="checkbox"/> Deal Title <input checked="" type="checkbox"/> Clinigen acquires Horizon's Imukin for CGD and SMO worldwide excluding the US, Canada and Japan <input checked="" type="checkbox"/> Leap Therapeutics to evaluate the combination of its TRX-518 with Merck's Avelumab and chemotherapy for phase I/II	Principal Company	Partner Company	Deal Start Date	Indications	
				Filters : [0]	Filters [0]	
		Horizon Pharma plc (Pharma)	Clinigen Group plc (Biotech)	25-Jul-2018	Chronic granulomatous disease (Primary); Osteopetrosis	
		Leap Therapeutics Inc (Pharma)	Merck KGaA (Pharma)	23-Jul-2018	Advanced solid tumor (Primary)	

Determine the optimal stage to license an asset

- Filter for indications, financials disclosed, licenses

The image displays three overlapping screenshots of the Cortellis database filter interface, illustrating the process of filtering for specific criteria:

- Top Screenshot:** Shows the 'SHOW ALL FILTERS' dialog with the 'Indications' filter selected. The search term 'lymphoma' is entered in the search bar, and the 'Look up' button is highlighted. The 'Hierarchical List' is selected, showing a tree structure of diseases. The 'Lymphoma' category is expanded, showing sub-categories like 'Non-Hodgkin lymphoma (584)', 'B-cell lymphoma (296)', and 'Diffuse large B-cell lymphoma (95)'. The 'Look up' button is highlighted.
- Middle Screenshot:** Shows the 'SHOW ALL FILTERS' dialog with the 'Finance Disclosed' filter selected. The 'Deal Transaction Type' filter is highlighted, showing a list of transaction types with counts: 'No (606)' and 'Yes (352)'. The 'Finance Disclosed' filter is highlighted.
- Bottom Screenshot:** Shows the 'SHOW ALL FILTERS' dialog with the 'Deal Transaction Type' filter selected. The 'License' category is expanded, showing sub-categories like 'Basic License (Licensee takes over) (57)', 'Co-Development/Co-Development Option (Shared responsibilities and costs)', 'Co-Marketing (Both parties book sales under different brands) (2)', 'Co-Promotion/Co-Promotion Option (One party books sales/ shared promotional)', and 'Collaboration (Shared responsibilities) (36)'. The 'License' category is highlighted.

Determine the optimal stage to license an asset

Download Financial Summary

Search Results

118 results found for 'lymphoma' with filter(s) applied: Yes; Adult T-cell lymphoma; Anaplastic large cell lymphoma; Diffuse large B-cell lymphoma; Lymphoma; Lymphoplasmacytic lymphoma; Mantle cell lymphoma; Non-Hodgkin lymphoma; Skin lymphoma; License

Results Per page: 50 Sort by: Most Recent Event Date Most Recent Order Columns EFR Analyser

View First Previous 2 3 Next Last

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Deal Title	Principal Company	Partner Company	Deal Start Date	Indications	Deal Overview
Shandong Danhong and Shanghai Yanyi to develop B-193 presumably for lymphoma	Shanghai Yanyi Biotechnology Co Ltd (Biotech)	Shandong Danhong Pharmaceutical Co Ltd (Pharma)	13-Jul-2018	Lymphoma (Primary)	
AstraZeneca and Merck establish worldwide immunology alliance to develop and commercialize Lynparza and Selumetinib in combinations with Imfinzi and Keytruda	AstraZeneca				

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1. Document Type 2. Document Format 3. Delivery Format 4. Download Files

CHOOSE THE DOCUMENT TYPE

You have 118 records selected.

Results

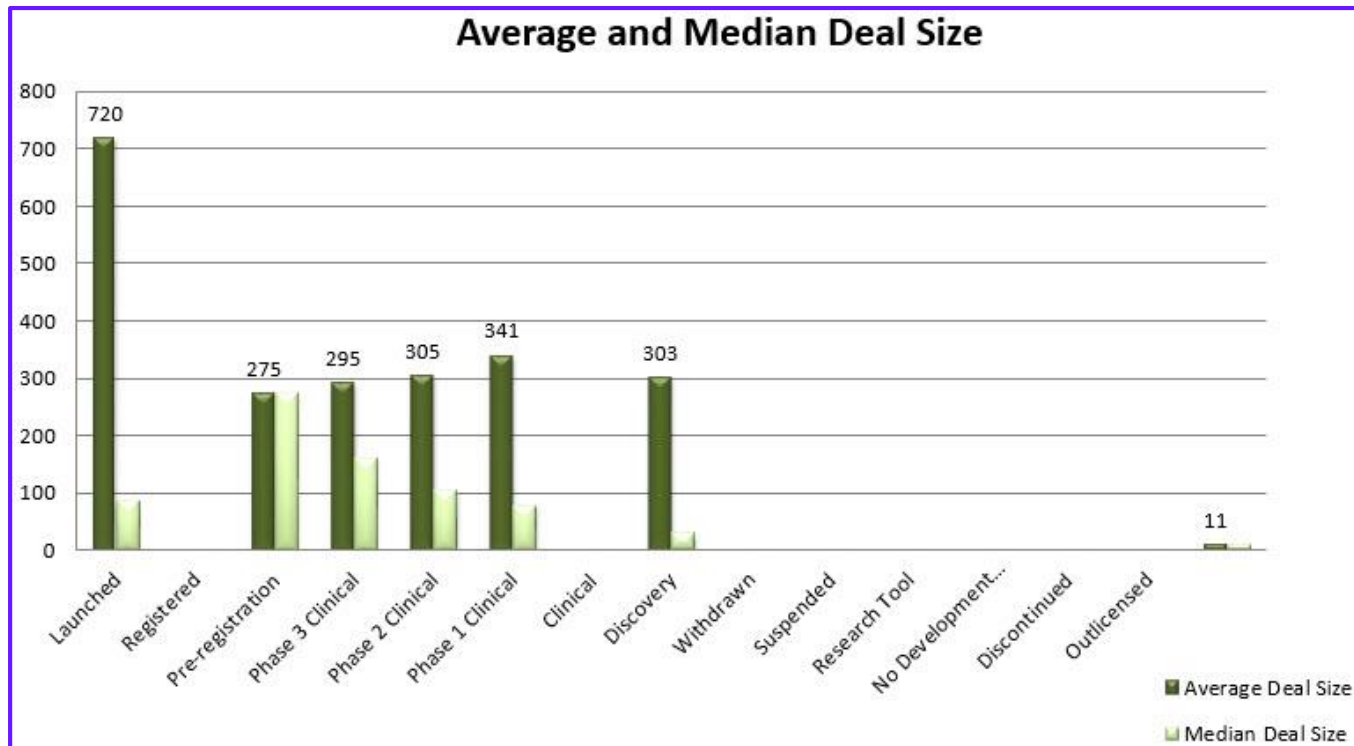
- ☐ Microsoft Excel
- ☐ Microsoft Excel (unformatted) ⓘ
- ☐ Full Raw Data ⓘ
- ☒ Financial Summary ⓘ

Reports

- ☐ PDF
- ☐ Microsoft Word

Determine the optimal stage to license an asset

- Deal size chart observations
 - Averages (dark columns) decrease from Phase 1 to Pre-registration
 - Medians (light columns) increase from Phase 1 to Pre-registration
 - Average for Launched is much higher than median



Determine the optimal stage to license an asset

- View underlying data for Launched deals
 - AstraZeneca/Merck deal (\$8.5B) is pulling average much higher
 - Link to online deal report to understand deal details

Deal Title	Drugs Highest Status (Deal Start)	Total Projected Current (USD M)	Upfront Payment (USD Million To Principal - Current)
Nektar and BMS to develop and commercialize	Launched	3630	1000
Novartis to develop and commercialize	Launched	50	
SymBio Pharmaceutical	Launched	12.5	12.5
Millennium to develop and commercialize	Launched	340	100
AstraZeneca and Merck	Launched	8500	1600
Access to Phase III Zevastatin	Launched	5	2
Eisai to develop and commercialize	Launched	280	Payment Unspecified
CTI BioPharma and Servier	Launched	229.12	31.12
NanoString to develop IV	Launched	45	5.75

Determine the optimal stage to license an asset

- Key information includes territories, indications and number of products/options

SNAPSHOT	
Deal Title	AstraZeneca and Merck establish worldwide immuno-oncology alliance to develop and commercialize Lynparza and Selumetinib in combinations with Imfinzi and Keytruda
Principal Company	AstraZeneca plc (UK) (Pharma)
Partner Company	Merck & Co Inc (US) (Pharma)
Agreement Type	Drug - Development/Commercialization License
Deal Asset Type	Drug; Product(s) only
Deal Transaction Type	Co-Development/Co-Development Option (Shared responsibilities and costs); Co-Marketing (Both parties book sales under different brands); Supply (Licensor manufactures product)
Deal Status	Active
Territories	Japan ; World
Indications	Non-small-cell lung cancer(Primary); Acute myelogenous leukemia; Adenocarcinoma; Adenoid tumor; Adrenal gland tumor; Advanced solid tumor; Anal tumor; Anaplastic thyroid cancer; Astrocytoma; B-cell acute lymphoblastic leukemia; Basal cell carcinoma; Biliary cancer; Bladder cancer; Breast tumor; Cancer; Carcinoma; Cholangiocarcinoma; Chronic lymphocytic leukemia; Colon tumor; Colorectal tumor; Diffuse large B-cell lymphoma; Endometrioid carcinoma; Esophagus tumor; Fallopian tube cancer; Follicle center lymphoma; Gastrointestinal tumor; Germ cell and embryonic cancer; Glioblastoma; Glioma; Head and neck tumor; Hematological neoplasm; Hepatocellular carcinoma; Hodgkins disease; Hormone refractory prostate cancer; Inflammatory breast cancer; Kaposi sarcoma; Leiomyosarcoma; Lymphoma; Mantle cell lymphoma; Melanoma; Merkel cell carcinoma; Mesothelioma; Metastatic bladder cancer; Metastatic brain cancer; Metastatic breast cancer; Metastatic colorectal cancer; Metastatic esophageal cancer; Metastatic head and neck cancer; Metastatic liver cancer; Metastatic non small cell lung cancer; Metastatic ovary cancer; Metastatic pancreas cancer; Metastatic renal cancer; Metastatic stomach cancer; Metastatic urinary tract cancer; Mouth tumor; Multiple myeloma; Myelodysplastic syndrome; Myelofibrosis; Nasopharyngeal carcinoma; Neoplasm; Nerve tumor; Neurodegenerative disease; Neuroendocrine tumor; Neurofibromatosis type I; Neurofibromatosis type II; Non-Hodgkin lymphoma; Osteosarcoma; Ovary tumor; Pancreas tumor; Papillomavirus infection; Penis tumor; Peripheral T-cell lymphoma; Peritoneal tumor; Primary mediastinal large B-cell lymphoma;
Number of Products/Options	4

Determine the optimal stage to license an asset

- Exclude the AstraZeneca/Merck deal from the analysis
 - Sort by Deal Start Date, locate the deal and uncheck it
 - Download the Financial Summary again

118 results found for 'lymphoma' with filter(s) applied: Yes; Adult T-cell lymphoma; Anaplastic large cell lymphoma; Diffuse large B-cell lymphoma; Lymphoma; Lymphoplasmacytic lymphoma; Mantle cell lymphoma; Non-Hodgkin lymphoma; Skin lymphoma; License

Results Per page: 50 Sort by: Deal Start Date Most Recent Order Columns EFR Analyser

✓ Millennium to develop and commercialize TESARO's niraparib against tumors in Japan excluding prostate cancer in South Korea, Taiwan, Russia and Australia	TESARO Inc (Biotech)	Takeda Oncology (Pharma)	27-Jul-2017	Advanced solid tumor (Primary); Breast tumor; Chronic lymphocytic leukemia; Ewing sarcoma; Fallopian tube cancer; Glioblastoma; Hormone refractory prostate cancer; Mantle cell lymphoma;	
✓ AstraZeneca and Merck establish worldwide immuno-oncology alliance to develop and commercialize Lynparza and Selumetinib in combinations with Imfinzi and Keytruda	AstraZeneca plc (Pharma)	Merck & Co Inc (Pharma)	26-Jul-2017	Non-small-cell lung cancer (Primary); Acute myelogenous leukemia; Adenocarcinoma; Adenoid tumor; Adrenal gland tumor; Advanced solid tumor; Anal tumor; Anaplastic thyroid cancer; Astrocytoma; B-cell acute lymphoblastic leukemia;	

Search Results

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118 results found for 'lymphoma' with filter(s) applied: Yes; Adult T-cell lymphoma; Anaplastic large cell lymphoma; Diffuse large B-cell lymphoma; Lymphoma; Lymphoplasmacytic lymphoma; Mantle cell lymphoma; Non-Hodgkin lymphoma; Skin lymphoma; License

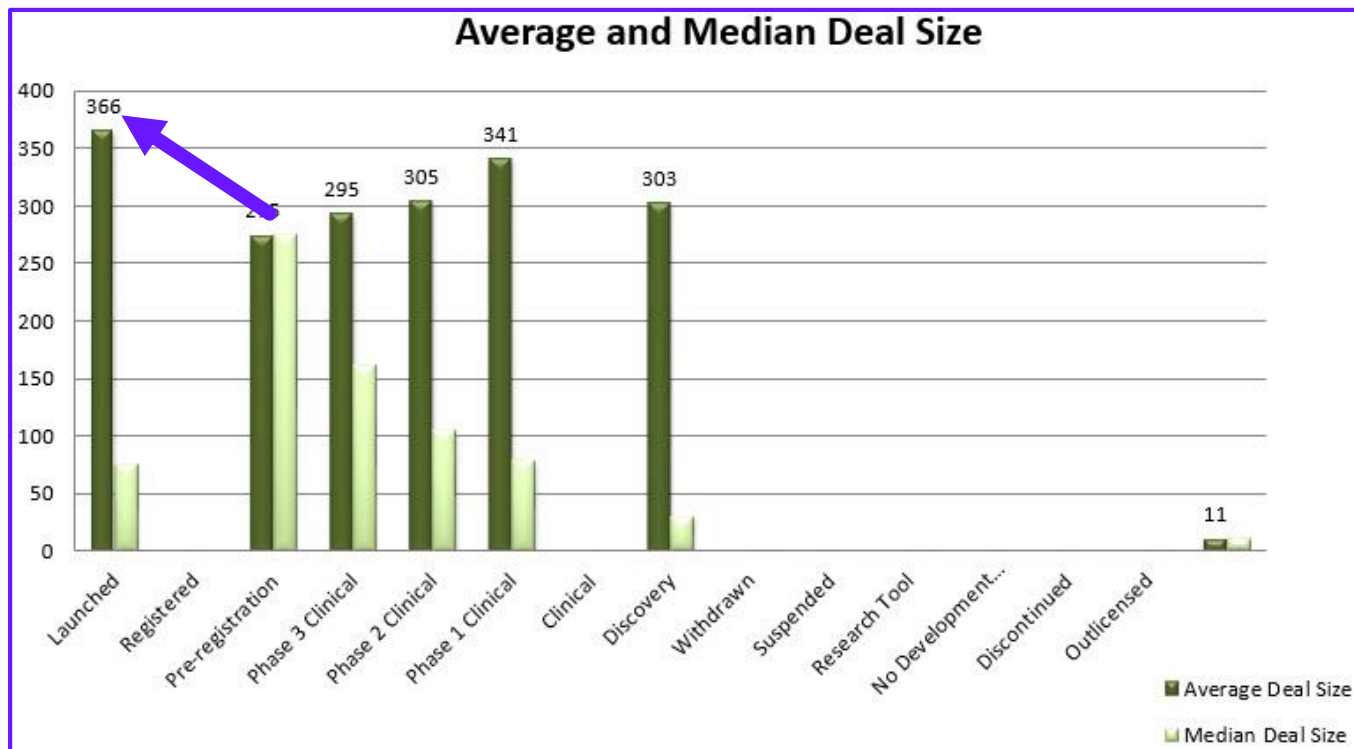
Results Per page: 50 Sort by: Deal Start Date Most Recent Order Columns EFR Analyser

First Previous 2 3 Next Last

View

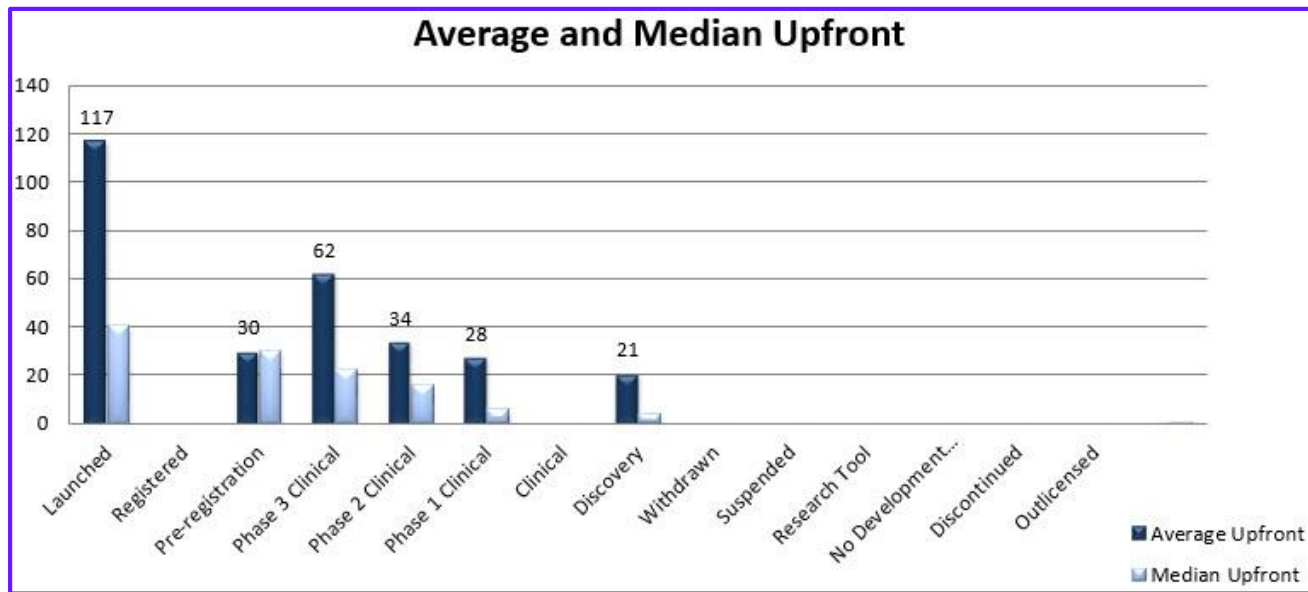
Determine the optimal stage to license an asset

- Revised deal size chart observations
 - Average for Launched is approximately half of previous value



Determine the optimal stage to license an asset

- Upfront chart observations
 - Averages (dark columns) and medians (light columns) generally increase from Discovery to Launched
 - However, the Pre-registration average has dipped



Determine the optimal stage to license an asset

- View the underlying data
 - Pre-registration group has only 2 data points, which may be affecting the average value
 - Click the Pivot Table View tab in the Excel file to see how many data points exist for each stage

GSK to codevelop Ge	Launched	1369.62	239.52
Yakult Honsha to dev	Pre-registration	100	10
Kite Pharma to licens	Pre-registration	450	50
Antengene to develop	Phase 3 Clinical	162	12

Data				
Drugs Highest Status (Deal Start)	Deal Counts	Deal Size Counts (Total Projected Current)	Deal Size Sum (Total Projected Current)	Deal Size Average
Launched	22	22	8052.96	366.04
Pre-registration	2	2	550	275.00
Phase 3 Clinical	25	25	7363.48	294.54
Phase 2 Clinical	29	29	8854.63	305.33
Phase 1 Clinical	10	10	3414.4	341.44
Discovery	27	27	8188.48	303.28
	2	2	21.57	10.79
Grand Total	117	117	36445.52	311.50

Determine the optimal stage to license an asset

- Download the Full Raw Data to easily see details for multiple deals

Search Results

118 results found for 'lymphoma' with filter(s) applied: Yes; Adult T-cell lymphoma; Anaplastic large cell lymphoma; Diffuse large B-cell lymphoma; Lymphoma; Lymphoplasmacytic lymphoma; Mantle cell lymphoma; Non-Hodgkin lymphoma; Skin lymphoma; License

Results Per page: 50 Sort by: Deal Start Date Most Recent Order Columns EFR Analyser

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1. Document Type 2. Document Format 3. Delivery Format 4. Download Files

CHOOSE THE DOCUMENT TYPE

You have 117 records selected.

Results

- ☐ Microsoft Excel
- ☐ Microsoft Excel (unformatted)
- ☒ Full Raw Data
- ☐ Financial Summary

Deal Title	Territories Included	Indications	Number of Products/Options	Drugs Highest Status (Deal Start)
Shandong Danhong and Shanghe		Lymphoma (Primary)	1	Discovery
AstraZeneca and Merck establish	Japan; World	Non-small-cell lung cancer (Primary)	4	Launched
TG Therapeutics and Novimmune	World	Hematological neoplasm (Primary)	1	Discovery
Baxalta and Symphogen to develop	World	Cancer (Primary); Advanced solid	Multiple - Unknown Number	Phase 1 Clinical
Yakult Honsha to develop and commercialize	Japan	Cancer (Primary); Chronic lymph	1	Pre-registration
Antengene to develop and commercialize	Brunei; Burma; Cambodia; China	Acute leukemia; Acute myelogen	4	Phase 3 Clinical
Otsuka Pharmaceutical to develop and commercialize	Japan	Cancer (Primary); Adult T-cell lym	2	Phase 2 Clinical
Nektar and BMS to develop and commercialize	World	Cancer (Primary); Acute myeloge	3	Launched
Autolus to develop and commercialize	World	Cancer (Primary); Acute lymphoblastic	Multiple - Unknown Number	Phase 2 Clinical

Determine the optimal stage to license an asset

- Further refine a group of deals using other fields, such as license sub-types or company types

The image displays three overlapping screenshots of the 'SHOW ALL FILTERS' dialog box in the Cortellis interface, illustrating how to refine search results for licensing deals.

Top Screenshot: The 'Deal Transaction Type' filter is selected. The 'Hierarchical List' is expanded, showing various deal types. The 'License' category is selected, and its sub-types are listed: 'Basic License (Licensee takes over) (57)', 'Co-Development/Co-Development Option (Shared responsibilities and costs) (2)', and 'Co-Marketing (Both parties book sales under different brands) (2)'. The 'Co-Development/Co-Development Option' is checked.

Bottom Left Screenshot: The 'Principal Company Type' filter is selected. The list of company types includes 'Pharma (67)', 'Biotech (43)', 'Academic (4)', and 'Not for profit'. The 'Pharma' option is selected.

Bottom Right Screenshot: The 'Partner Company Type' filter is selected. The list of company types includes 'Pharma (89)', 'Biotech (27)', and 'Government agency (1)'. The 'Pharma' option is selected.

Wrap-up

- Determine the optimal stage to license an asset, with a focus on deal value
 - Searched for lymphoma license deals with financials disclosed
 - Examined average/median deal size and upfronts by stage
 - Identified outliers and excluded them from the analysis
 - Reviewed key fields such as territories, indications and number of products/options
 - Viewed other fields for refining original search

Training & support

- Online resources
 - Live chat
 - Customer Care
 - Training resources
 - PDF guides

The screenshot displays the Cortellis website interface. At the top, the Cortellis logo is on the left, and a search bar on the right contains the text 'glioblastoma'. Below the search bar, there are links for 'Advanced search' and 'Structure search'. The main content area shows '1100 results found for 'glioblastoma''. On the left side, there is a 'Report Type' section with a list of categories: 'Broker Research (137)', 'Clinical Trials (5318)', 'Companies (903)', 'Conferences (1214)', and 'Deals (1100)'. A green box highlights the 'Live chat' button on the left. A dropdown menu is open for 'Robert Provines', showing options: 'Customer Care', 'Training resources', 'What's new', and 'Feedback'. A green box highlights the 'Customer Care' and 'Training resources' options in the dropdown. The Clarivate Analytics logo is visible in the top right corner of the interface.

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