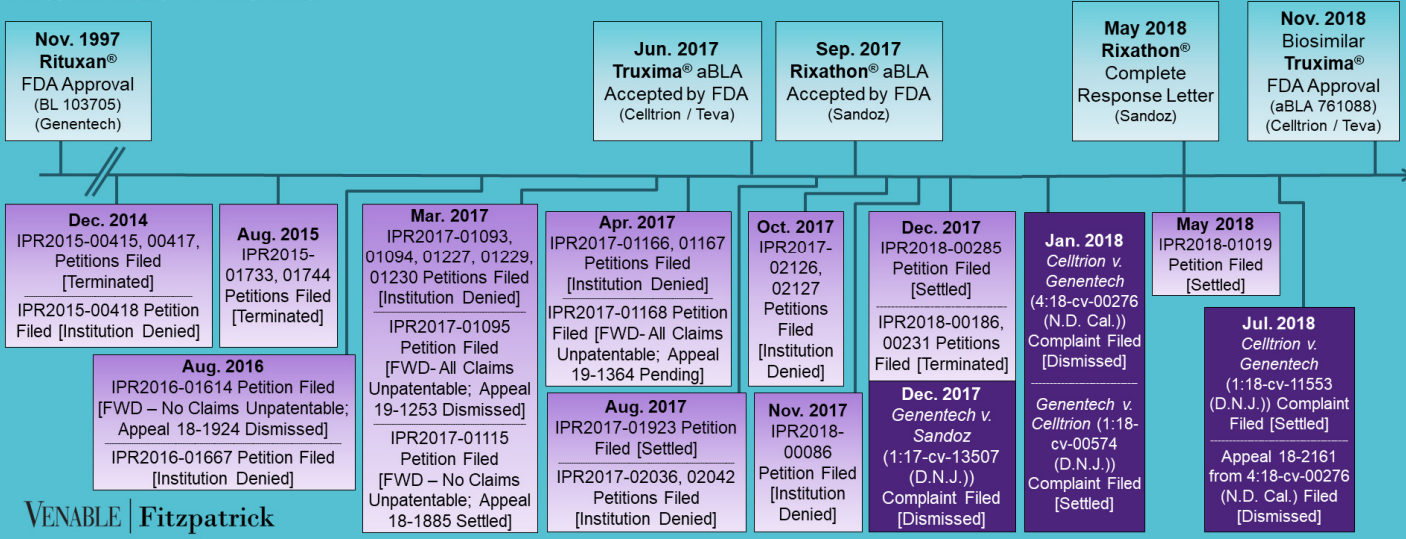
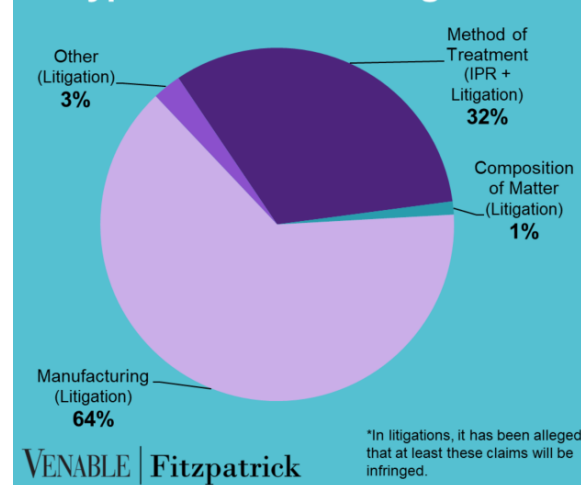


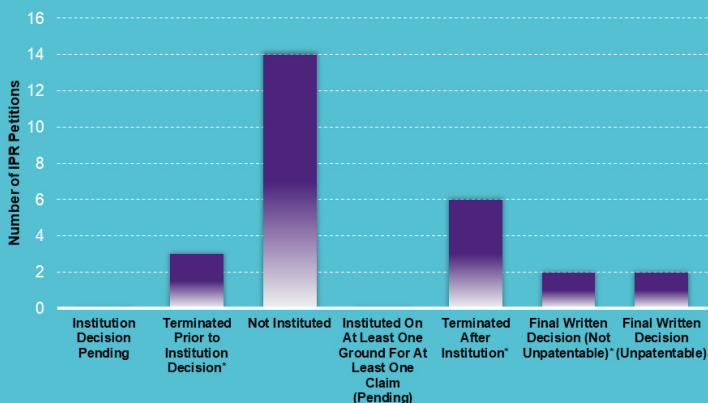
## Rituximab Timeline



## Rituximab Challenged Claim Types in IPR and Litigation\*

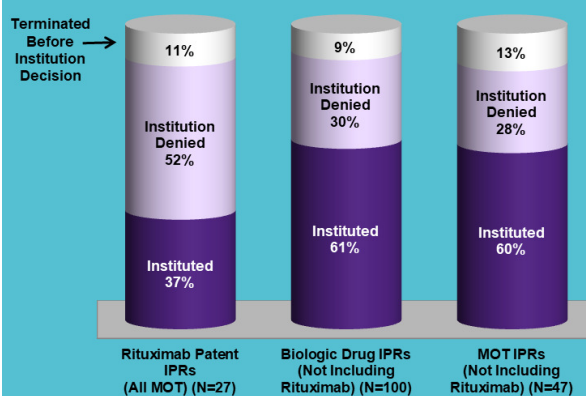


## Rituximab IPR Status (All Method of Treatment Claims)



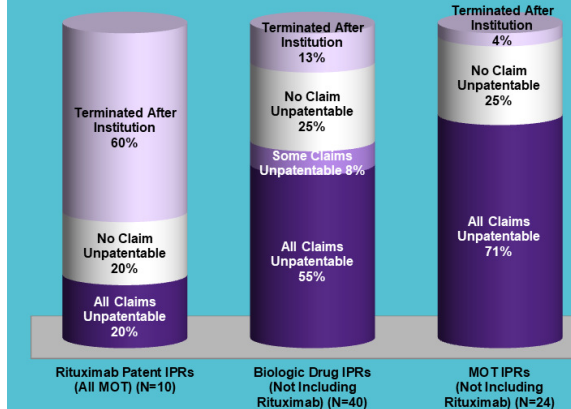
\*Joinder counted as separate decisions  
1 Motion to terminate after institution pending

## IPR Institution Rates\*



\*Joinder counted as separate decisions

## Outcomes After Institution\*



\*Joinder counted as separate decisions

**Technology:** Rituximab is a chimeric murine/human monoclonal antibody that is directed against the CD20 antigen. CD20 is a protein that is primarily found on the surface of immune system B cells. CD20 is involved in cell growth and differentiation.

	<i>Genentech v. Celltrion</i> 1:18-cv-11553 (D.N.J.) Settled  Cont'd below	<i>Genentech v. Celltrion</i> 1:18-cv-00574 (D.N.J.) Settled  Cont'd below	<i>Celltrion v. Genentech</i> 4:18-cv-00276 (N.D. Cal.) Dismissed; Appeal No. 18-2161 Dismissed  Cont'd below	<i>Genentech v. Sandoz</i> 1:17-cv-13507 (D.N.J.) Dismissed  Cont'd below	<i>Celltrion v. Genentech</i> IPR2017-01227 Institution denied	<i>Celltrion v. Genentech</i> IPR2017-01230 Institution denied	<i>Pfizer v. Genentech</i> IPR2017-02126 Institution denied	<i>Boehringer Ingelheim v. Genentech</i> IPR2015-00415 Petitioner request for adverse judgment after institution	<i>Celltrion v. Genentech</i> IPR2015-01744 Petitioner dismissed prior to institution decision	<i>Celltrion v. Genentech</i> IPR2016-01614 FWD (no instituted claim unpatentable); Appeal 18-1924 dismissed	<i>Pfizer v. Genentech</i> IPR2017-01115 (Joined with IPR2016-01614) FWD (no instituted claim unpatentable); Appeal 18-1885 dismissed (settled)
6,121,428		x		x							
6,242,177		x									
6,331,415	x	x	x	x							
6,417,335		x	x								
6,455,043		x	x								
6,489,447	x	x	x	x							
6,586,206		x	x								
6,610,516	x	x	x	x							
6,620,918	x	x	x	x							
6,716,602		x	x								
6,870,034				x							
7,381,560	x	x		x							
7,390,660		x	x								
7,485,704	x	x	x	x							
7,682,612		x	x		x	x	x				
7,807,799	x	x	x	x							
7,820,161	x	x	x	x				x	x	x	x
7,923,221	x	x	x	x	<i>Boehringer Ingelheim v. Genentech</i> IPR2015-00417 Petitioner request for adverse judgment after institution	<i>Celltrion v. Genentech</i> IPR2015-01733 Petitioner dismissed prior to institution decision	<i>Celltrion v. Genentech</i> IPR2016-01667 Institution denied	<i>Pfizer v. Genentech</i> IPR2017-01923 Settled after institution	<i>Sandoz v. Genentech</i> IPR2017-02036 Institution denied	<i>Sandoz v. Genentech</i> IPR2017-02042 Institution denied	<i>Celltrion v. Genentech</i> IPR2018-01019 Joined with IPR2017-01923; Settled after institution
7,976,838	x	x	x	x	x	x	x	x	x	x	x

	<i>Genentech v. Celltrion</i> 1:18-cv-11553 (D.N.J.) Settled Cont'd from above	<i>Genentech v. Celltrion</i> 1:18-cv-00574 (D.N.J.) Settled Cont'd from above	<i>Celltrion v. Genentech</i> 4:18-cv-00276 (N.D. Cal.) Dismissed; Appeal No. 18-2161 Dismissed Cont'd from above	<i>Genentech v. Sandoz</i> 2:17-cv-13507 (D.N.J.) Dismissed Cont'd from above	<i>Celltrion v. Genentech</i> IPR2017-01229 Institution denied	<i>Pfizer v. Biogen</i> IPR2017-02127 Institution denied	<i>Boehringer Ingelheim v. Biogen</i> IPR2015-00418 Institution denied	<i>Celltrion v. Biogen</i> IPR2017-01093 Institution denied	<i>Pfizer v. Biogen</i> IPR2017-01166 Institution denied; Request for rehearing withdrawn	<i>Pfizer v. Biogen</i> IPR2018-00285 Settled after institution	
8,044,017		x	x								
8,206,711	x	x	x	x	x	x					
8,314,225				x							
8,329,172	x	x	x	x			x	x	x	x	
8,357,301		x	x								
8,460,895		x	x								
8,512,983		x	x	x	<i>Pfizer v. Genentech</i> IPR2018-00086 Institution denied	<i>Celltrion v. Biogen</i> IPR2017-01094 Institution denied	<i>Pfizer v. Biogen</i> IPR2017-01167 Institution denied	<i>Pfizer v. Biogen</i> IPR2017-01168 FWD (All instituted claims unpatentable); Appeal 19-1364 pending with US, settled with Pfizer	<i>Celltrion v. Biogen</i> IPR2017-01095 FWD (All instituted claims unpatentable); Appeal 19-1253 dismissed as to US, settled with Celltrion	<i>Pfizer v. Biogen</i> IPR2018-00186 Terminated after institution	<i>Pfizer v. Biogen</i> IPR2018-00231 Petitioner dismissed prior to institution decision
8,545,843	x	x	x	x	x						
8,557,244	x	x	x	x		x	x				
8,574,869	x	x	x	x							
8,633,302		x	x								
8,710,196		x	x	x							
8,771,988		x	x								
8,821,873	x	x	x	x				x			
8,822,655		x	x								
9,047,438		x	x								
9,080,183		x	x								
9,296,821	x	x	x	x					x	x	
9,428,548		x	x								
9,428,766		x	x								
9,487,809		x	x								
9,504,744	x	x	x	x						x	
9,714,293		x	x	x							