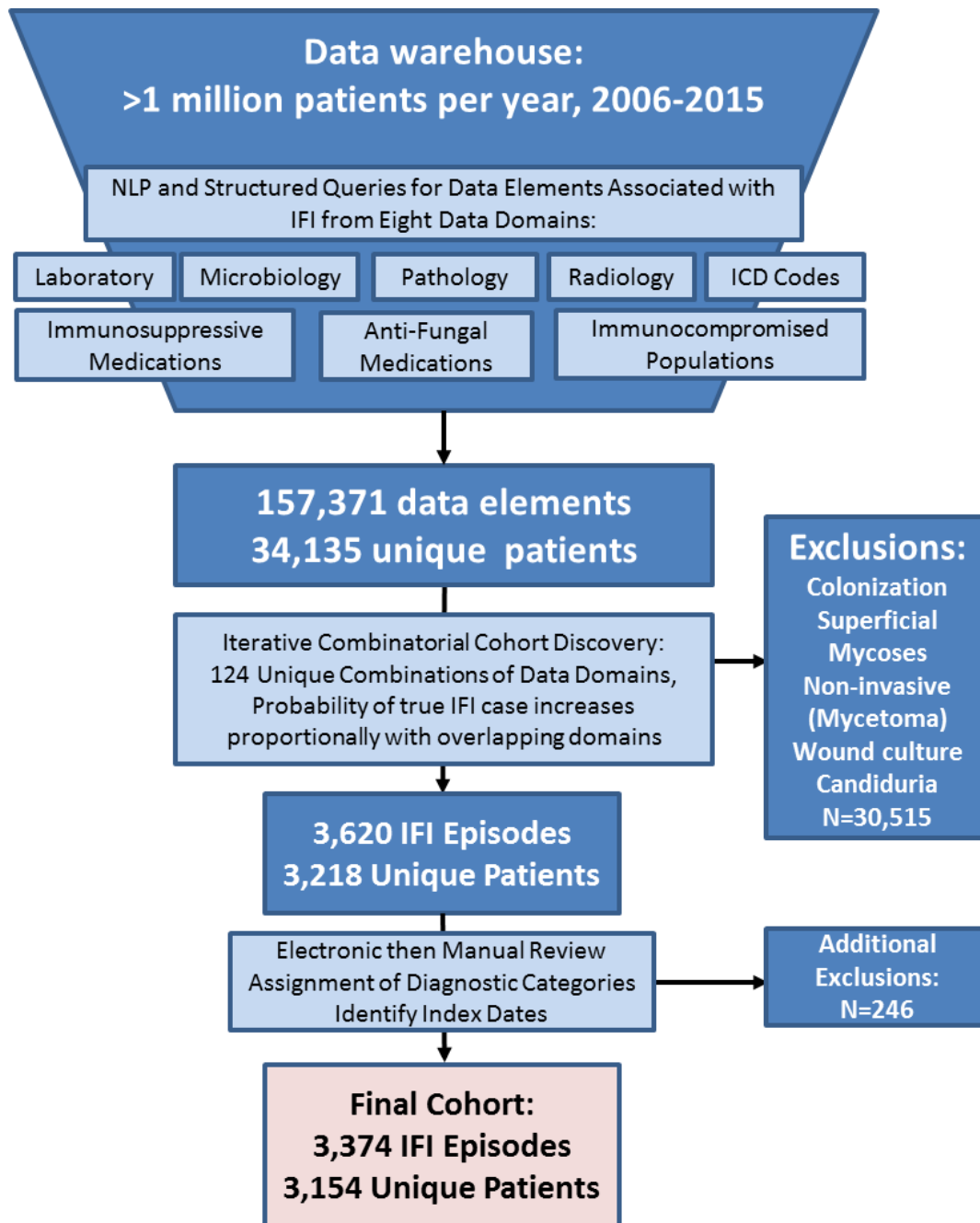
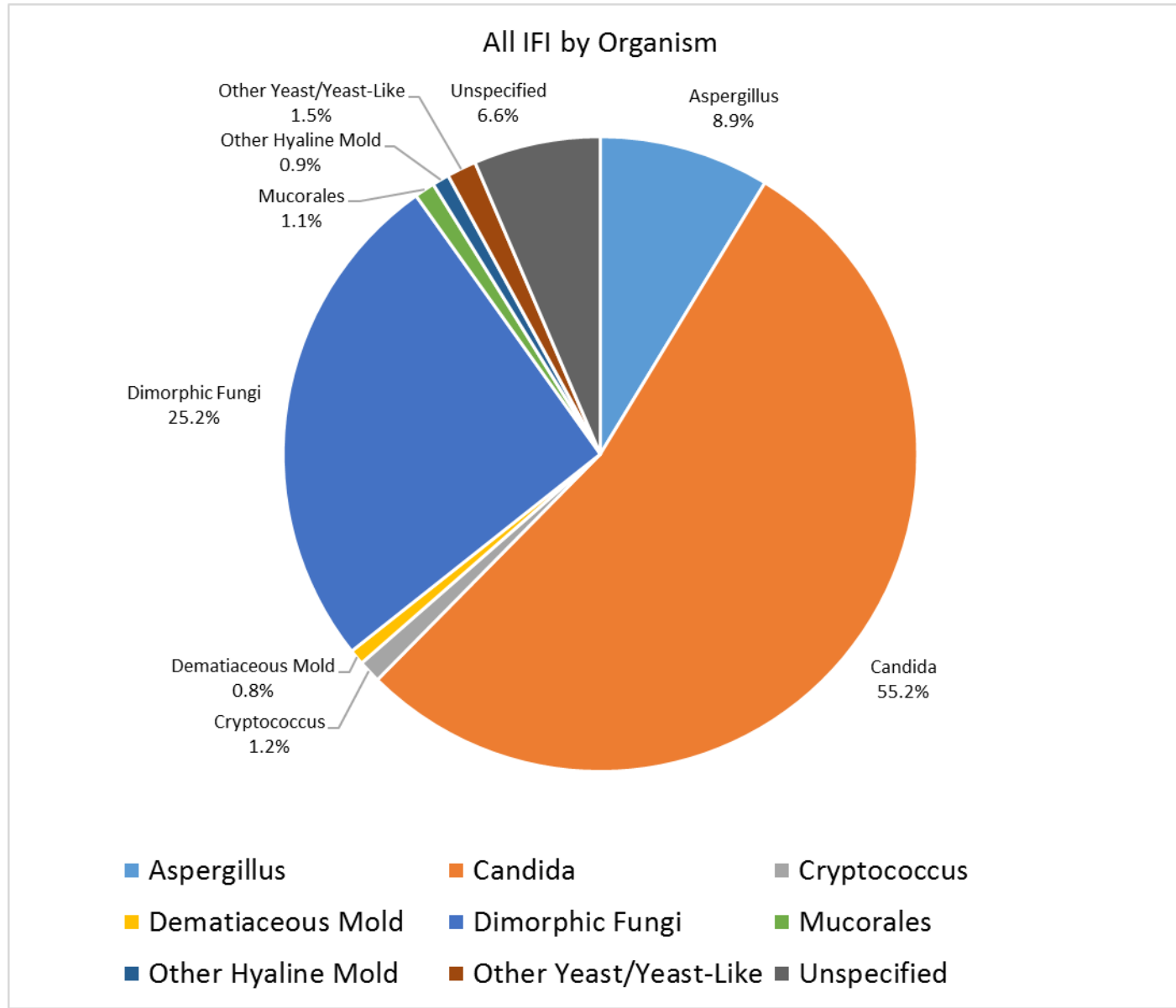


Supplementary Figure 1. Cohort Discovery Flowchart



**Supplemental Figure 2. Distribution of IFI by fungal class**

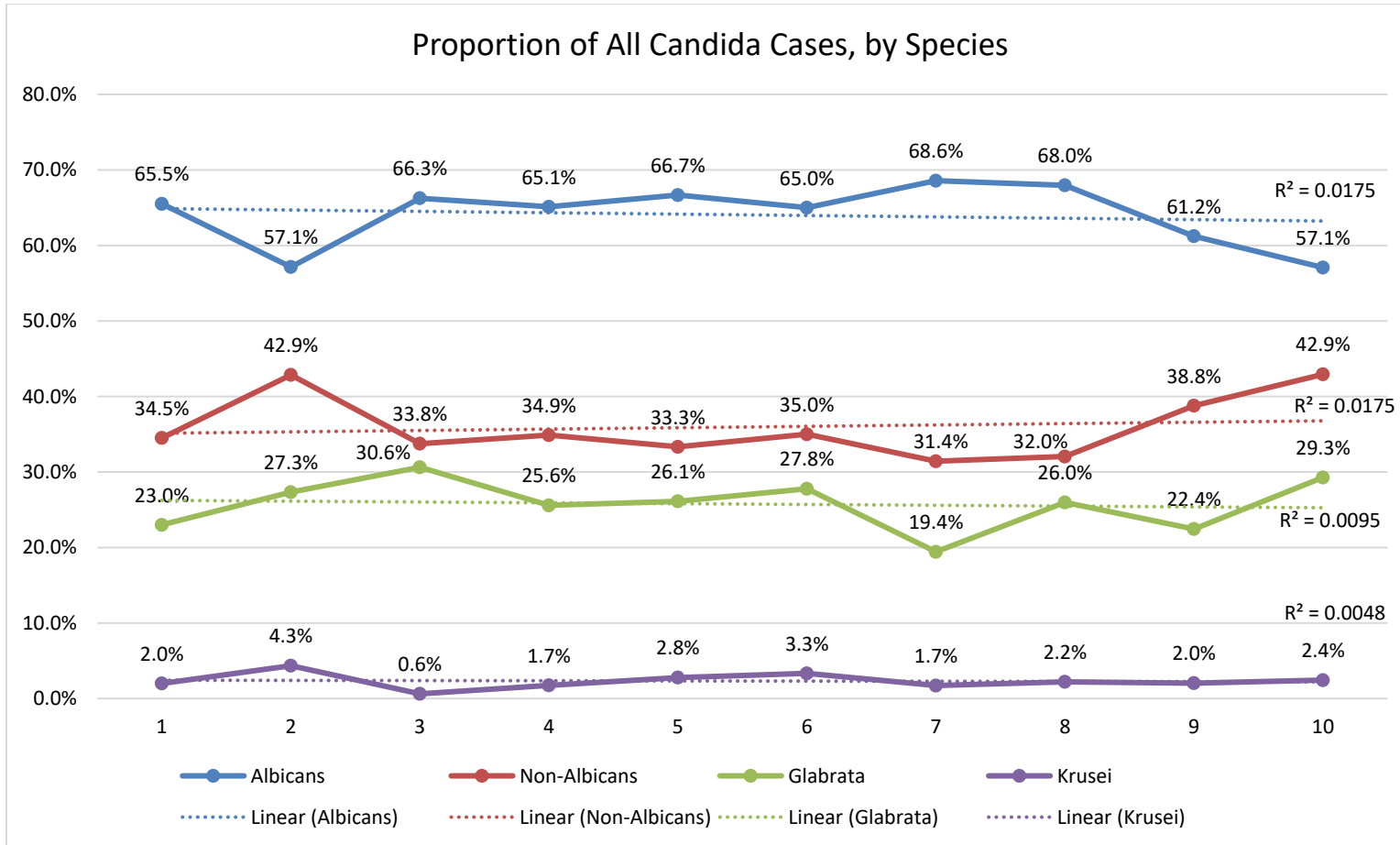


**Supplementary Table 1. Distribution of Species**

<b>Category</b>	<b>Species</b>	<b>N=</b>	<b>%</b>	<b>Category</b>	<b>Species</b>	<b>N=</b>	<b>%</b>
<b>Candida</b>	Candida, not specified	151	8.1	<b>Cryptococcus</b>	Cryptococcus, not specified	31	77.5
	Candida albicans	1128	60.6		Cryptococcus albidus	1	2.5
	Candida dubliniensis	12	0.6		Cryptococcus laurentii	4	10.0
	Candida famata	2	0.1		Cryptococcus neoformans	23	57.5
	Candida glabrata	454	24.4	<b>Aspergillus</b>	Aspergillus, not specified	290	96.3
	Candida guilliermondii	19	1.0		Aspergillus flavus	7	2.3
	Candida kefyr	6	0.3		Aspergillus fumigatus	40	13.3
	Candida krusei	41	2.2		Aspergillus nidulans	3	1.0
	Candida lipolytica	1	0.1		Aspergillus niger	1	0.3
	Candida lusitaniae	54	2.9	Aspergillus terreus	3	1.0	
	Candida parapsilosis	121	6.5	Aspergillus ustus	1	0.3	
	Candida robusta	1	0.1	<b>Dimorphic Fungi</b>	Blastomyces, not specified	5	0.6
	Candida tropicalis	47	2.5		Blastomyces dermatitidis	1	0.1
	Torulopsis glabrata	1	0.1		Coccidioides, not specified	778	91.6
<b>Other Yeast/Yeast-Like</b>	Blastoschizomyces capitatus	1	1.8	Coccidioides immitis	78	9.2	
	Cyberlindnera fabianii	1	1.8	Histoplasma, not specified	67	7.9	
	Debaryomyces species	4	7.3	Histoplasma capsulatum	7	0.8	
	Geotrichum species	2	3.6	Malassezia furfur	1	0.1	
	Geotrichum capitatum	1	1.8	Malassezia pachydermatis	1	0.1	
	Pichia farinosa	1	1.8	Sporothrix schenckii	1	0.1	
	Rhodotorula species	10	18.2	<b>Mucorales</b>	Absidia species	1	2.8

	Rhodotorula mucilaginosa	5	9.1		Actinomucor species	1	2.8
	Saccharomyces cerevisiae	24	43.6		Mucor, not specified	24	66.7
	Trichosporon species	4	7.3		Mucor circinelloides	1	2.8
	Trichosporon asahii	1	1.8		Rhizopus species	16	44.4
	Trichosporon beigelii	1	1.8				
<b>Dematiaceous Mold</b>	Alternaria species	6	25.0	<b>Other Hyaline Mold</b>	Acremonium species	1	2.9
	Bipolaris species	6	25.0		Fusarium species	17	48.6
	Cladosporium species	8	33.3		Fusarium solani	1	2.9
	Curvularia species	6	25.0		Paecilomyces species	3	8.6
	Ochroconis humicola	1	4.2		Pseudallescheria boydii	4	11.4
	Scopulariopsis species	1	4.2		Scedosporium apiospermum	5	14.3
	Ulocladium species	1	4.2		Sepedonium	1	2.9
	Exophiala jeanselmei	1	4.2		Trichophyton rubrum	1	2.9
					Trichoderma species	2	5.7

**Supplementary Figure 3. Proportion of Candida Cases, by Species**



**Supplementary Table 2. Data Domain Combinations with Percent Confirmed IFI**

<b>DOMAINS</b>	<b>Data Count (Cases)</b>	<b>True Positive IFI</b>	<b>Percent</b>
MEDS,PATH_ST,LAB	1	1	100
MICRO,ICD,LAB	8	8	100
MICRO,ICD,RAD	1	1	100
MICRO,RAD,LAB	2	2	100
RAD,PATH_ST,LAB	1	1	100
ICD,MEDS,PATH_ST,LAB	9	9	100
ICD,MEDS,RAD,LAB	2	2	100
ICD,MEDS,RAD,PATH_ST	3	3	100
ICD,RAD,PATH_ST,LAB	4	4	100
MICRO,ICD,PATH_ST,LAB	3	3	100
MICRO,ICD,RAD,LAB	5	5	100
MICRO,ICD,RAD,PATH_ST	4	4	100
MICRO,MEDS,PATH_ST,LAB	2	2	100
MICRO,MEDS,RAD,LAB	1	1	100
MICRO,MEDS,RAD,PATH_ST	2	2	100
RAD,PATH_ST,LAB,IMMSUPP	4	4	100
ICD,MEDS,RAD,PATH_ST,LAB	4	4	100
MICRO,ICD,MEDS,PATH_ST,LAB	10	10	100
MICRO,ICD,PATH_ST,LAB,IMMSUPP	2	2	100
MICRO,MEDS,PATH_ST,LAB,IMMSUPP	10	10	100
MICRO,ICD,MEDS,RAD,PATH_ST,LAB	3	3	100
MICRO,ICD,RAD,PATH_ST,LAB,IMMSUPP	3	3	100
MICRO,MEDS,RAD,PATH_ST,LAB,IMMSUPP	3	3	100
MICRO,ICD,MEDS,RAD,PATH_ST,LAB,IMMSUPP	54	53	98.1
ICD,RAD,LAB	17	16	94.1
ICD,PATH_ST,LAB	14	13	92.9
ICD,PATH_ST,LAB,IMMSUPP	20	18	90
MICRO,ICD,MEDS,RAD,LAB	10	9	90
ICD,MEDS,RAD,PATH_ST,LAB,IMMSUPP	30	27	90
MICRO,ICD,MEDS,PATH_ST,LAB,IMMSUPP	32	28	87.5

MICRO,ICD,MEDS,LAB	13	11	84.6
MICRO,ICD,RAD,PATH_ST,LAB	6	5	83.3
MEDS,LAB,IMMSUPP	154	127	82.5
MICRO,ICD,MEDS,RAD,PATH_ST,IMMSUPP	40	33	82.5
ICD,MEDS,PATH_ST,LAB,IMMSUPP	11	9	81.8
MEDS,RAD,PATH_ST,LAB,IMMSUPP	11	9	81.8
MICRO,ICD,MEDS,PATH_ST	16	13	81.3
MICRO,PATH_ST,LAB	5	4	80
MICRO,ICD,MEDS,RAD	20	16	80
MICRO,ICD,MEDS,RAD,PATH_ST	10	8	80
MEDS,RAD,LAB,IMMSUPP	29	23	79.3
MICRO,ICD,MEDS	197	152	77.2
ICD,LAB	87	67	77
MEDS,LAB	21	16	76.2
ICD,MEDS,RAD,LAB,IMMSUPP	33	25	75.8
MICRO,ICD,MEDS,RAD,LAB,IMMSUPP	27	20	74.1
ICD,RAD,LAB,IMMSUPP	19	14	73.7
MICRO,MEDS,RAD,LAB,IMMSUPP	11	8	72.7
MICRO,ICD,MEDS,LAB,IMMSUPP	58	42	72.4
MEDS,PATH_ST,LAB,IMMSUPP	18	13	72.2
MICRO,ICD,MEDS,RAD,IMMSUPP	54	39	72.2
MICRO,MEDS,LAB	7	5	71.4
MICRO,MEDS,LAB,IMMSUPP	39	27	69.2
ICD,LAB,IMMSUPP	84	58	69
MICRO,ICD,MEDS,IMMSUPP	351	241	68.7
ICD,MEDS,RAD	3	2	66.7
MEDS,RAD,LAB	3	2	66.7
MICRO,RAD,LAB,IMMSUPP	3	2	66.7
MICRO,ICD,RAD,LAB,IMMSUPP	6	4	66.7
ICD,MEDS,LAB,IMMSUPP	41	26	63.4
MICRO,ICD,MEDS,PATH_ST,IMMSUPP	57	35	61.4
MICRO,ICD,LAB,IMMSUPP	5	3	60
RAD,LAB,IMMSUPP	35	20	57.1

MICRO,LAB	14	7	50
ICD,MEDS,PATH_ST	10	5	50
ICD,RAD,PATH_ST,LAB,IMMSUPP	4	2	50
RAD,LAB	28	13	46.4
ICD,MEDS,PATH_ST,IMMSUPP	34	15	44.1
ICD,MEDS,LAB	14	6	42.9
PATH_ST,LAB,IMMSUPP	49	21	42.9
MICRO,MEDS	627	266	42.4
MICRO,MEDS,PATH_ST,IMMSUPP	110	46	41.8
ICD,RAD	17	7	41.2
MICRO,MEDS,RAD	5	2	40
MICRO,MEDS,RAD,PATH_ST,IMMSUPP	13	5	38.5
MICRO,MEDS,IMMSUPP	882	338	38.3
LAB,IMMSUPP	526	201	38.2
ICD,MEDS,RAD,IMMSUPP	21	8	38.1
ICD,MEDS,RAD,PATH_ST,IMMSUPP	24	9	37.5
MICRO,MEDS,PATH_ST	30	11	36.7
ICD,PATH_ST,IMMSUPP	105	37	35.2
MEDS,RAD,PATH_ST	6	2	33.3
MICRO,ICD,RAD,PATH_ST,IMMSUPP	6	2	33.3
MICRO,MEDS,RAD,IMMSUPP	47	15	31.9
MICRO,ICD,PATH_ST,IMMSUPP	22	7	31.8
ICD,RAD,PATH_ST,IMMSUPP	27	8	29.6
LAB	409	118	28.9
ICD,PATH_ST	95	25	26.3
PATH_ST,LAB	8	2	25
MICRO,ICD,PATH_ST	20	5	25
ICD,RAD,PATH_ST	9	2	22.2
MICRO,LAB,IMMSUPP	18	4	22.2
MICRO,PATH_ST,IMMSUPP	141	28	19.9
RAD,PATH_ST	41	8	19.5
MICRO,ICD	114	22	19.3
MEDS,PATH_ST	79	15	19



MICRO,PATH_ST	109	19	17.4
MICRO,RAD,PATH_ST	7	1	14.3
MICRO,ICD,IMMSUPP	131	18	13.7
MICRO,RAD,IMMSUPP	62	7	11.3
MICRO,IMMSUPP	2591	251	9.7
MICRO,RAD	33	3	9.1
MICRO,ICD,RAD,IMMSUPP	12	1	8.3
RAD,PATH_ST,IMMSUPP	81	6	7.4
ICD,MEDS	89	6	6.7
MICRO	3039	192	6.3
MEDS,PATH_ST,IMMSUPP	275	16	5.8
MEDS,RAD,PATH_ST,IMMSUPP	26	1	3.8
ICD,MEDS,IMMSUPP	170	4	2.4
PATH_ST,IMMSUPP	3354	21	0.6
MEDS,RAD,IMMSUPP	191	1	0.5
PATH_ST	4744	12	0.3
ICD	1202	0	0
IMMSUPP	1144	0	0
MEDS	2995	1	0
RAD	1792	0	0
ICD,IMMSUPP	843	0	0
MEDS,IMMSUPP	4364	2	0
MEDS,RAD	26	0	0
RAD,IMMSUPP	1516	0	0
ICD,RAD,IMMSUPP	31	0	0
MEDS,RAD,PATH_ST,LAB	1	0	0
MICRO,PATH_ST,LAB,IMMSUPP	1	0	0
MICRO,RAD,PATH_ST,IMMSUPP	13	0	0
<b>Total Cases</b>	<b>34135</b>	<b>3154</b>	