



HIV & Hep C in Saskatchewan

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Disclaimer

- I have in the past received funding and educational support from both Schering and Roche

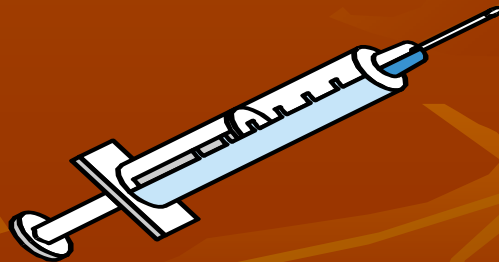
Objectives

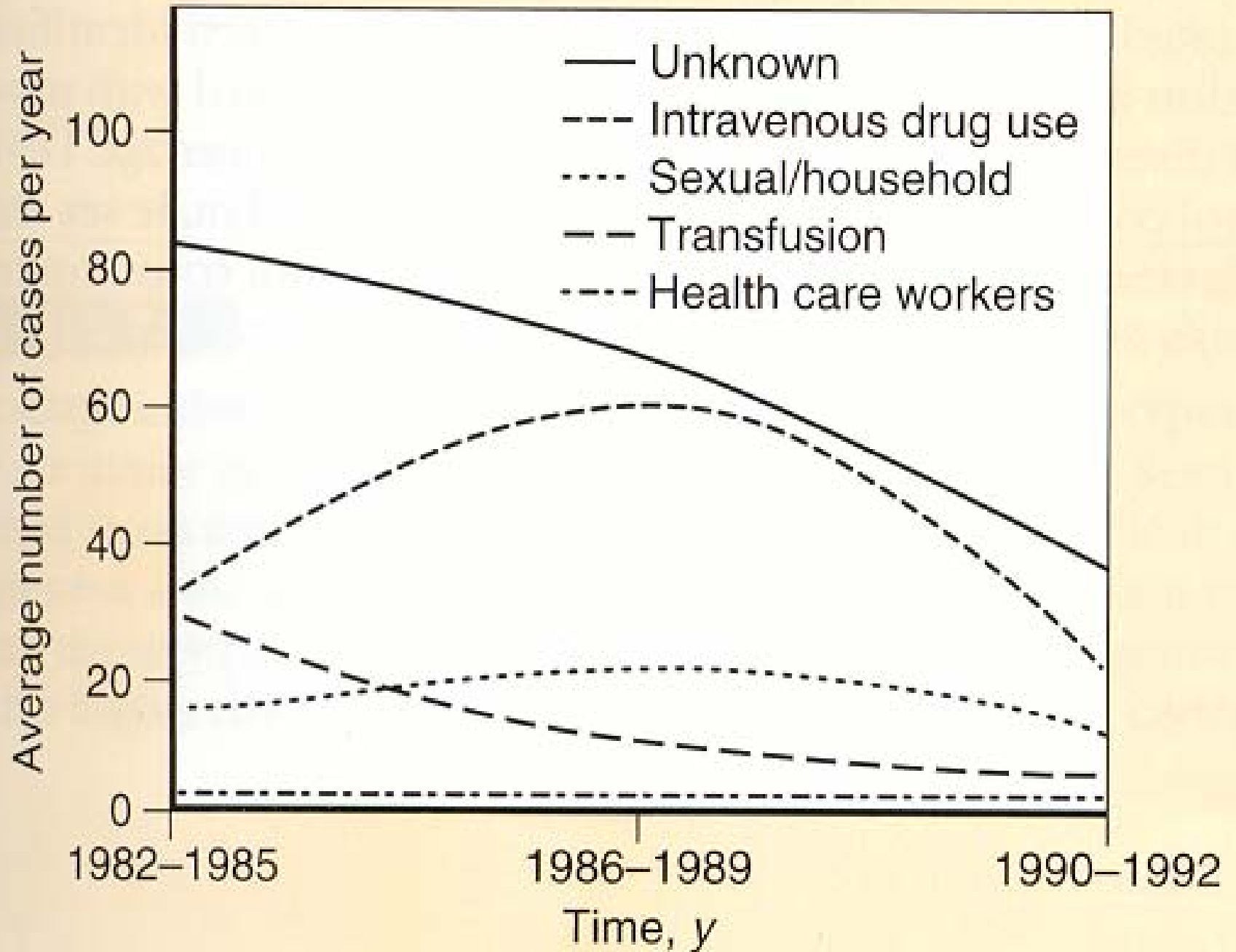
- Provide an overview of the epidemiology and demographics of Hepatitis C and HIV/AIDS in Sask.

Risk of infection after Needlestick injury

The Rule of Three

- HBV --> 6-30% 3/10
- HCV --> 1.8% 3/100
- HIV --> 1/300 3/1000

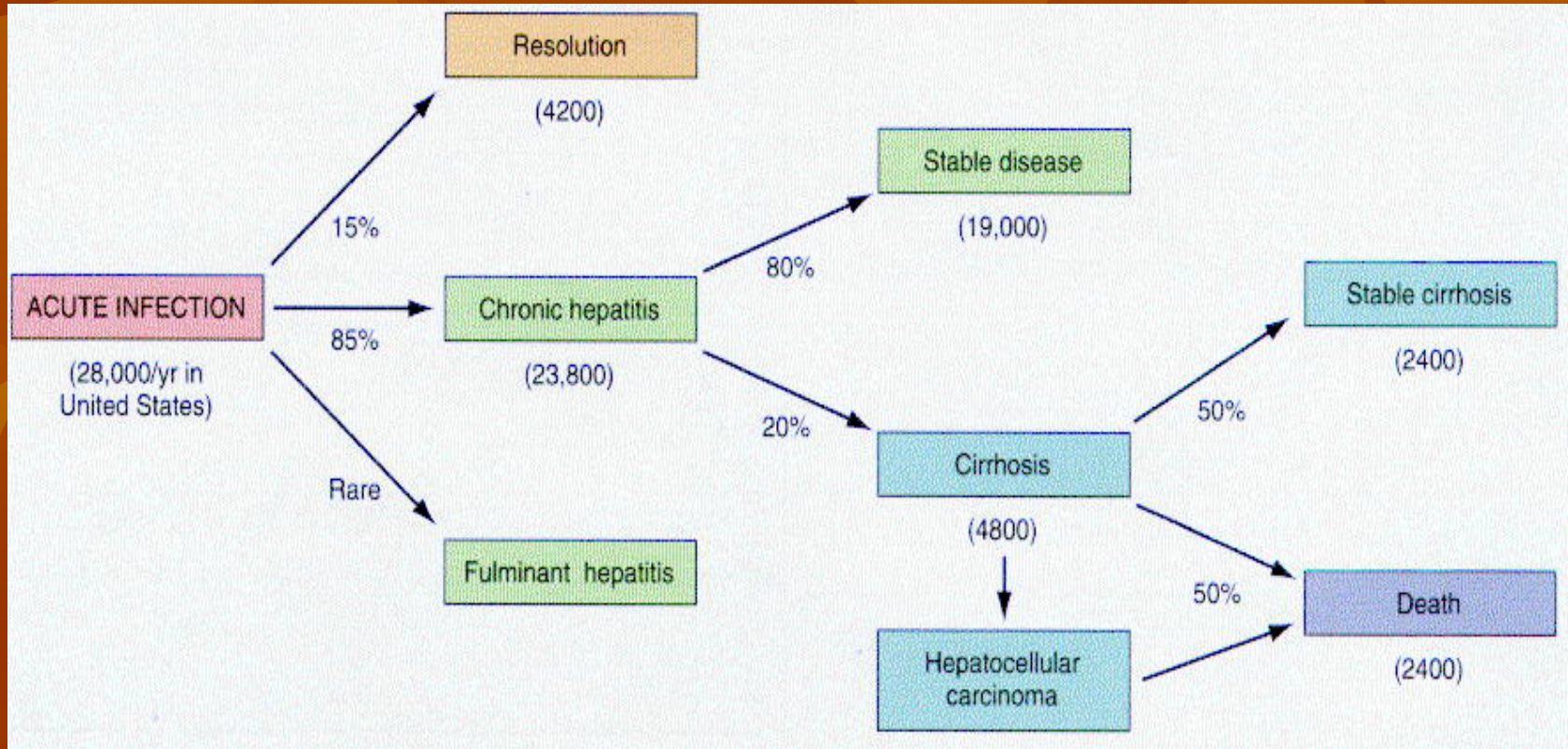


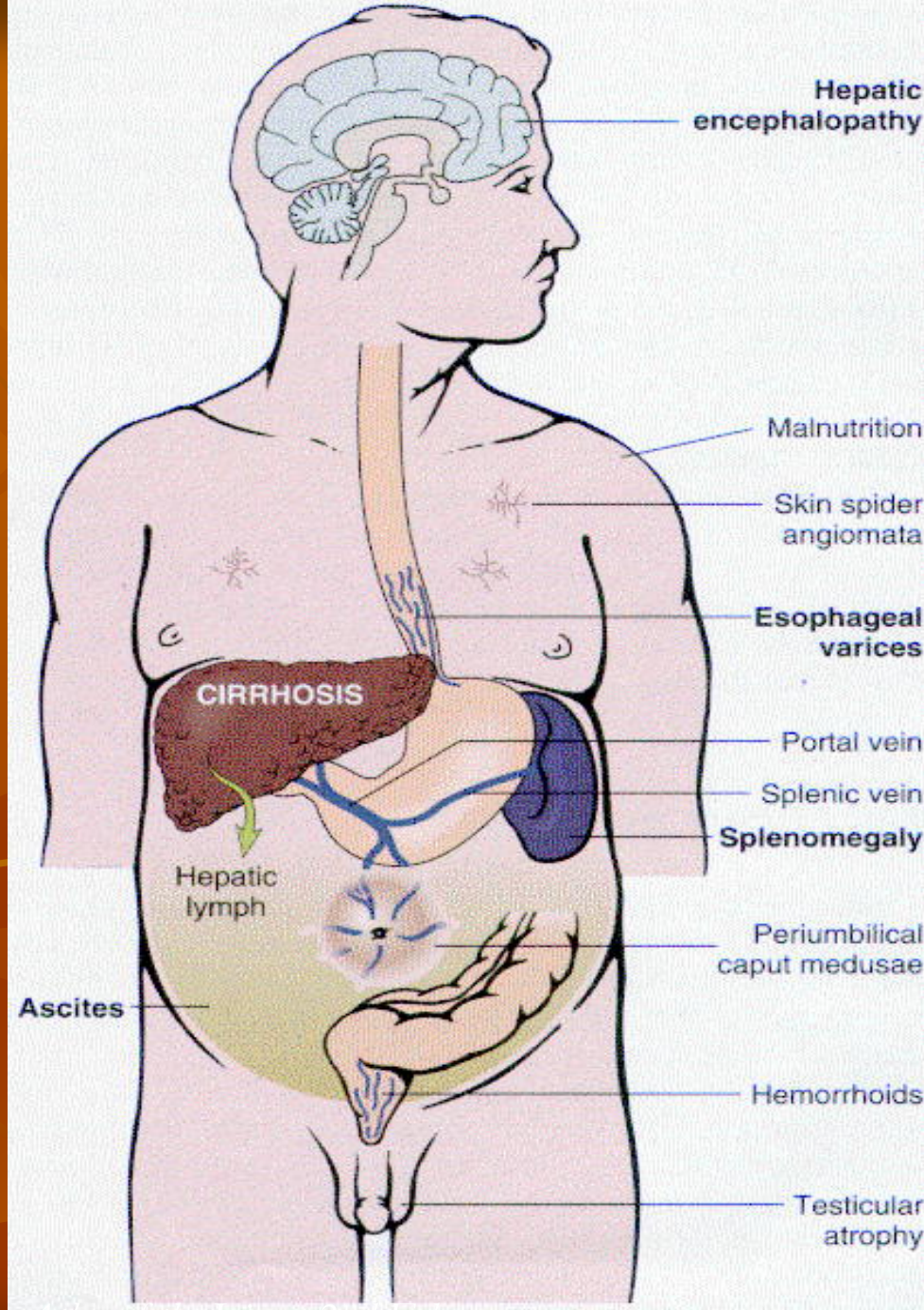


Hepatitis C Virus

- An RNA Virus
- Blood Borne
- No Vaccine

How Hep C Works





Extrahepatic Disease

- Porphyria cutanea tarda
Photosensitivity



Extrahepatic Disease

- **Essential mixed cryoglobulinemia**

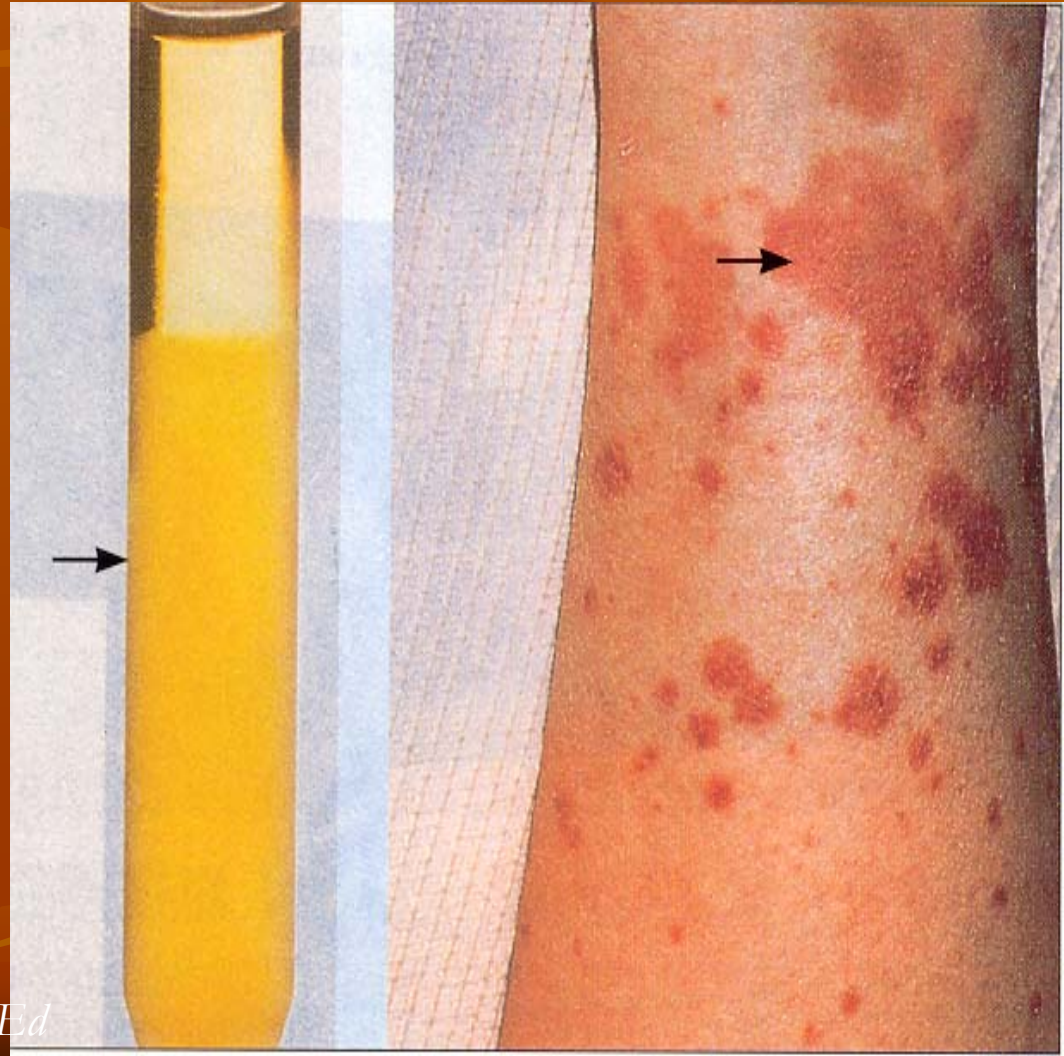
Vasculitis

Cryoglobulinemia

Arthritis

Myalgia

Death





Epidemiology in Sask

Rates only

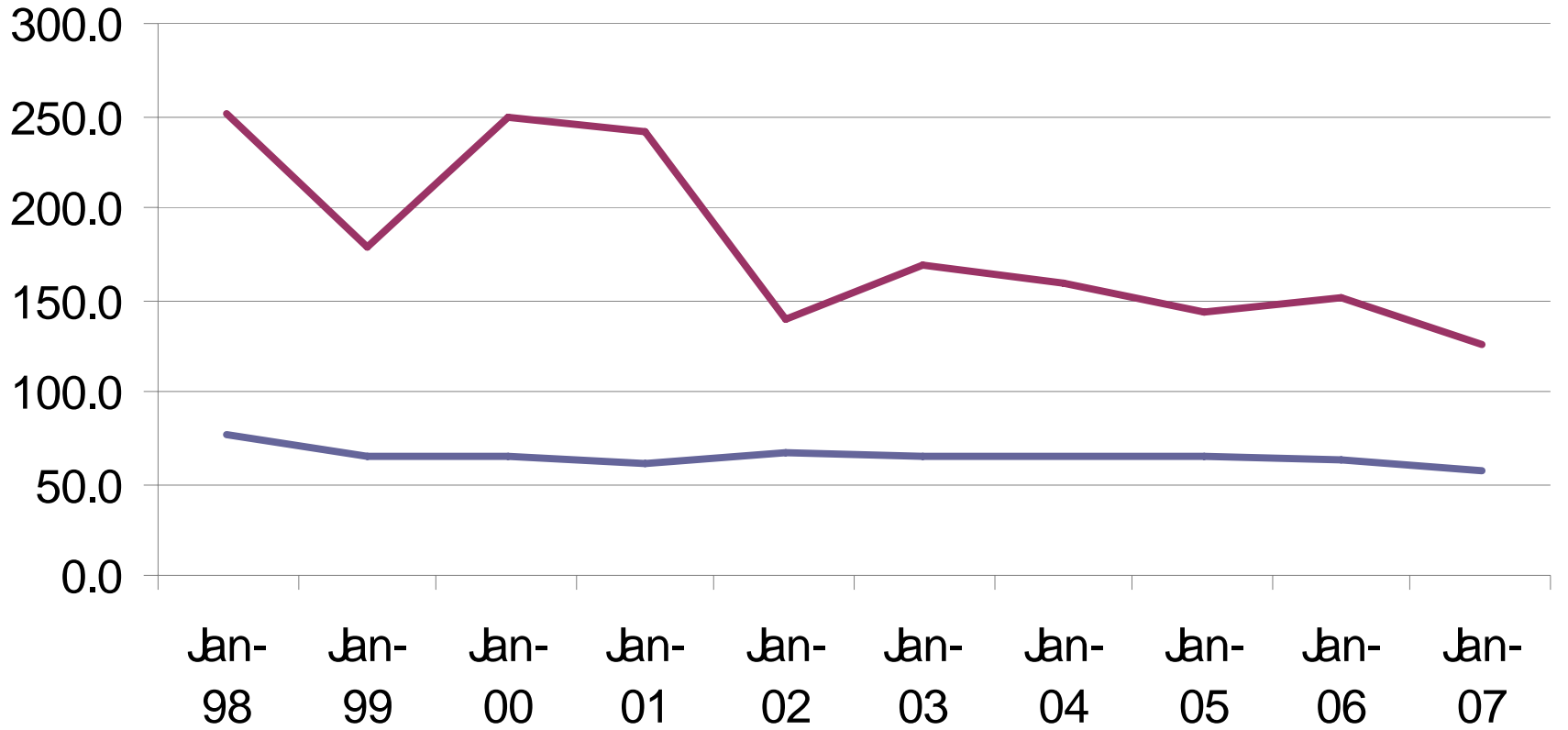
Year	Rates	
	Saskatchewan	PA Parkland
Dec-98	75.7	251.3
Dec-99	65.6	179.3
Dec-00	64.6	249.0
Dec-01	61.5	240.6
Dec-02	66.2	139.9
Dec-03	64.5	169.4
Dec-04	64.0	158.9
Dec-05	64.0	142.6
Dec-06	63.0	151.7
Dec-07	57.5	125.4

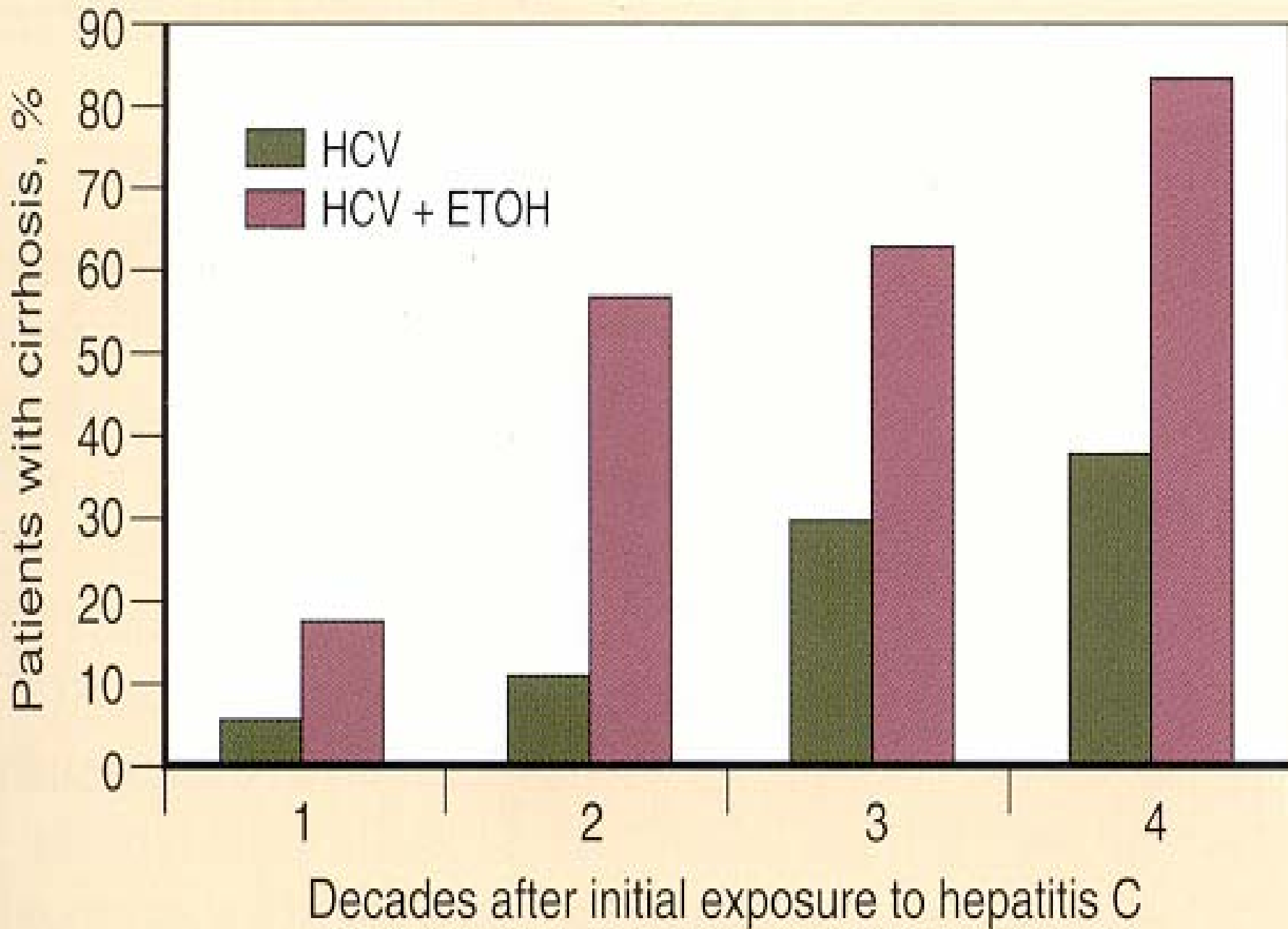
Hep C Cases & Rates per 100,000 Saskatchewan & Prince Albert Parkland For the years 1998-2007

Year	Cases		Rates	
	Saskatchewan	PA Parkland	Saskatchewan	PA Parkland
1998	781	141	75.7	251.3
1999	683	104	65.6	179.3
2000	660	140	64.6	249.0
2001	630	136	61.5	240.6
2002	678	108	66.2	139.9
2003	650	130	64.5	169.4
2004	652	123	64.0	158.9
2005	654	111	64.0	142.6
2006	632	116	63.0	151.7
2007	583	97	57.5	125.4

— Rates Saskatchewan

— Rates PA Parkland





Cirrhosis prevention 101

- No ethanol
- Prevent exposure to other hepato toxic substances
- Protect form Hepatitis A and Hepatitis B infections

HIV

Human immunodeficiency Virus

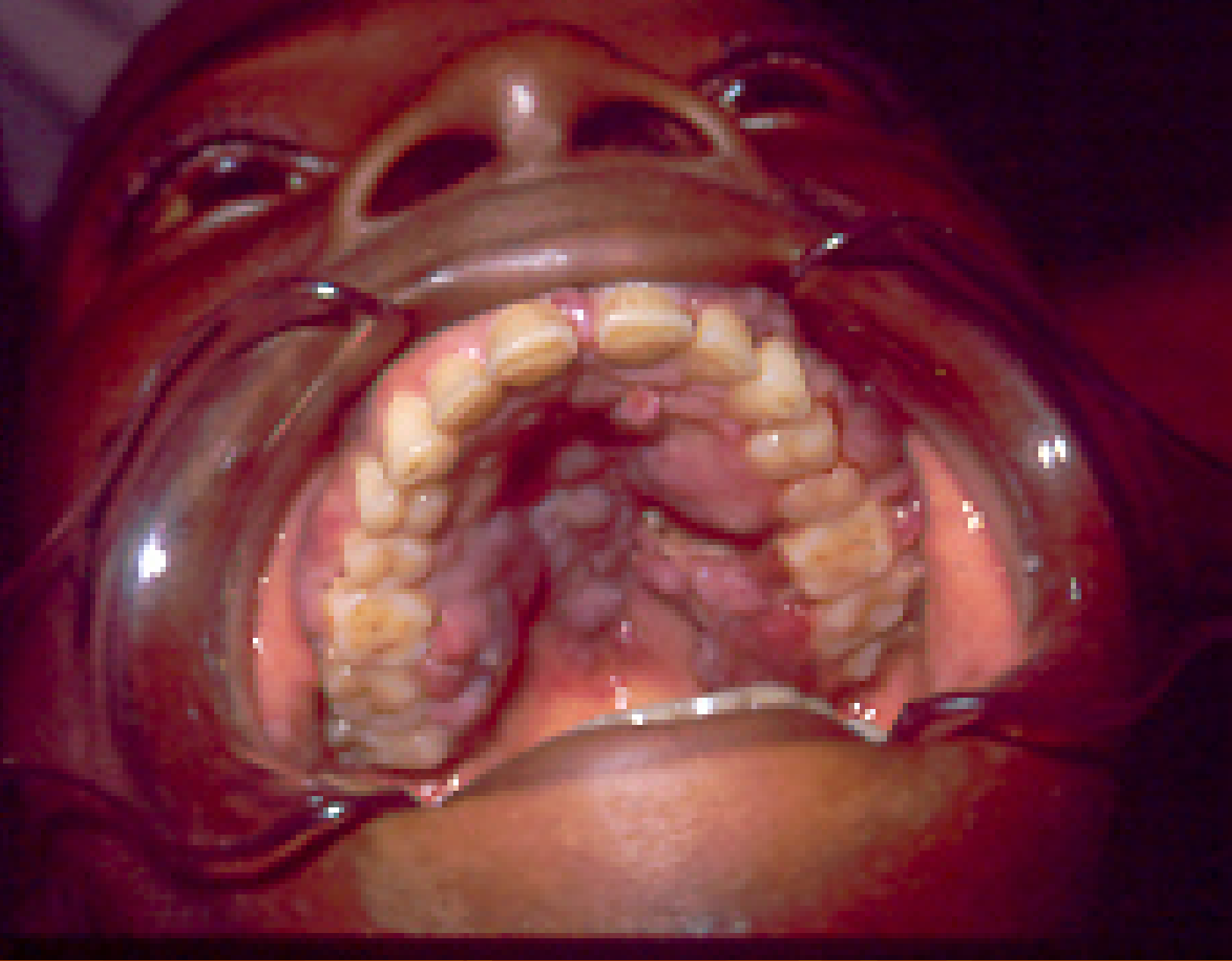
- RNA Virus
- Retrovirus
- Mutates often
- Acquired Immunodeficiency Syndrome (AIDS)

AIDS

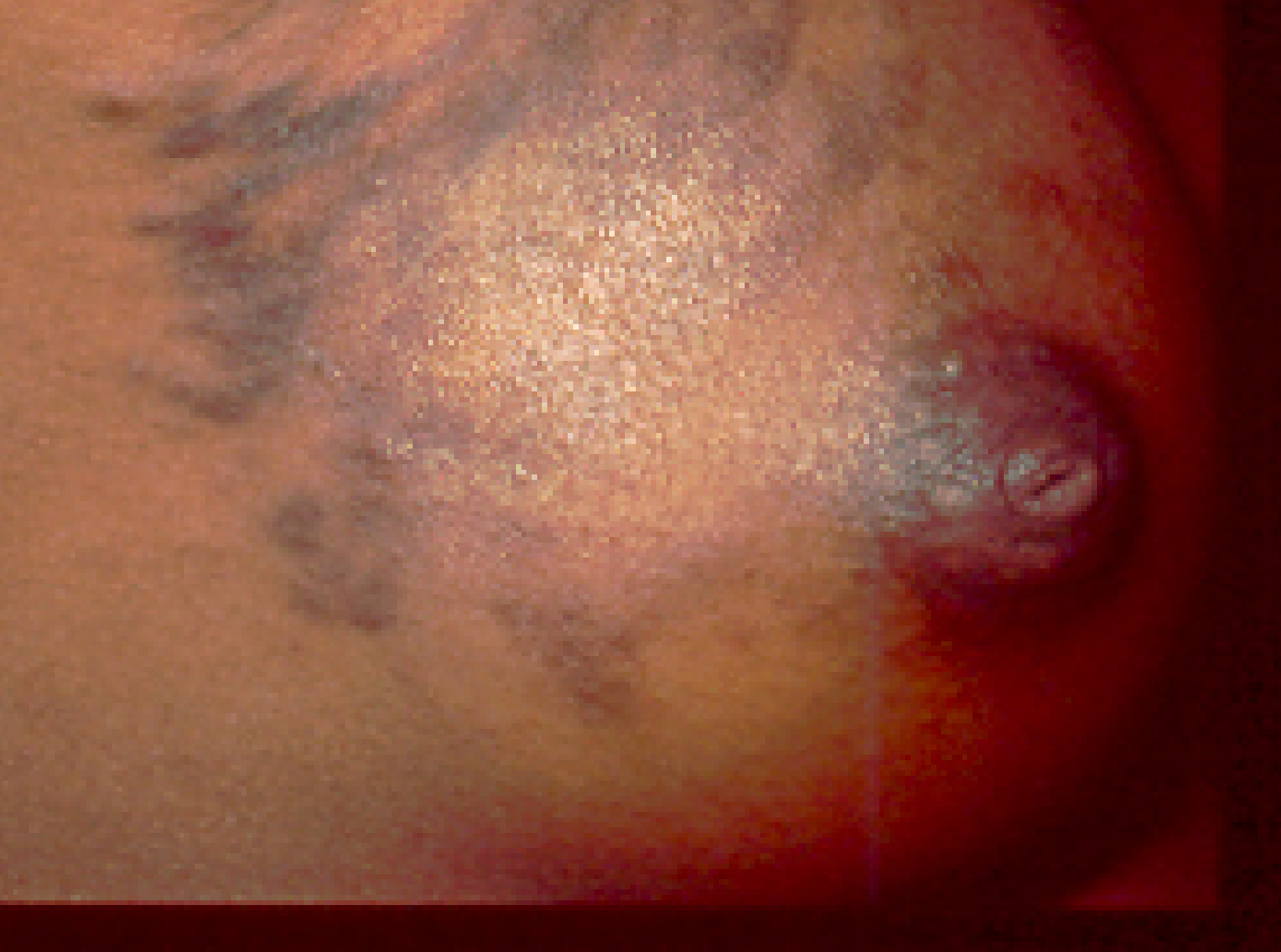
- Opportunistic infections
 - Tuberculosis & MAC
 - *Pneumocystis jiroveci*
 - Cryptosporidiosis
 - Cytomegalovirus (CMV)
 - Candida
- Malignancies
 - Kaposi's sarcoma
 - Primary CNS lymphoma



Oral Thrush



Kaposi's Sarcoma



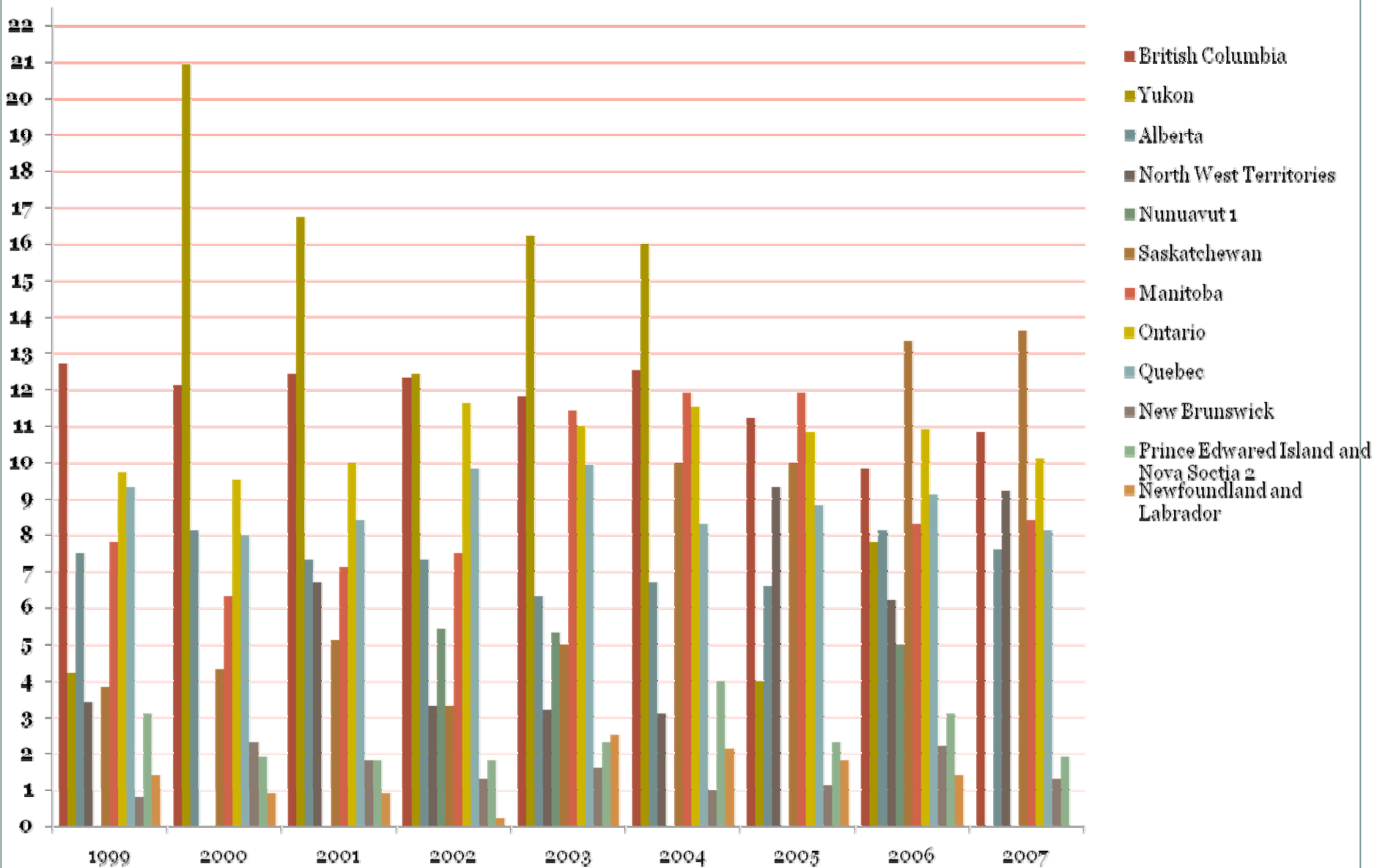
Kaposi's Sarcoma

The Saskatchewan Outbreak

- HIV in North America is still an infection that primarily affects MSM
- In the prairie provinces it is primarily related to injection drug use (IDU)
- Following courtesy of Dr. Germain Bukassa Kazadi

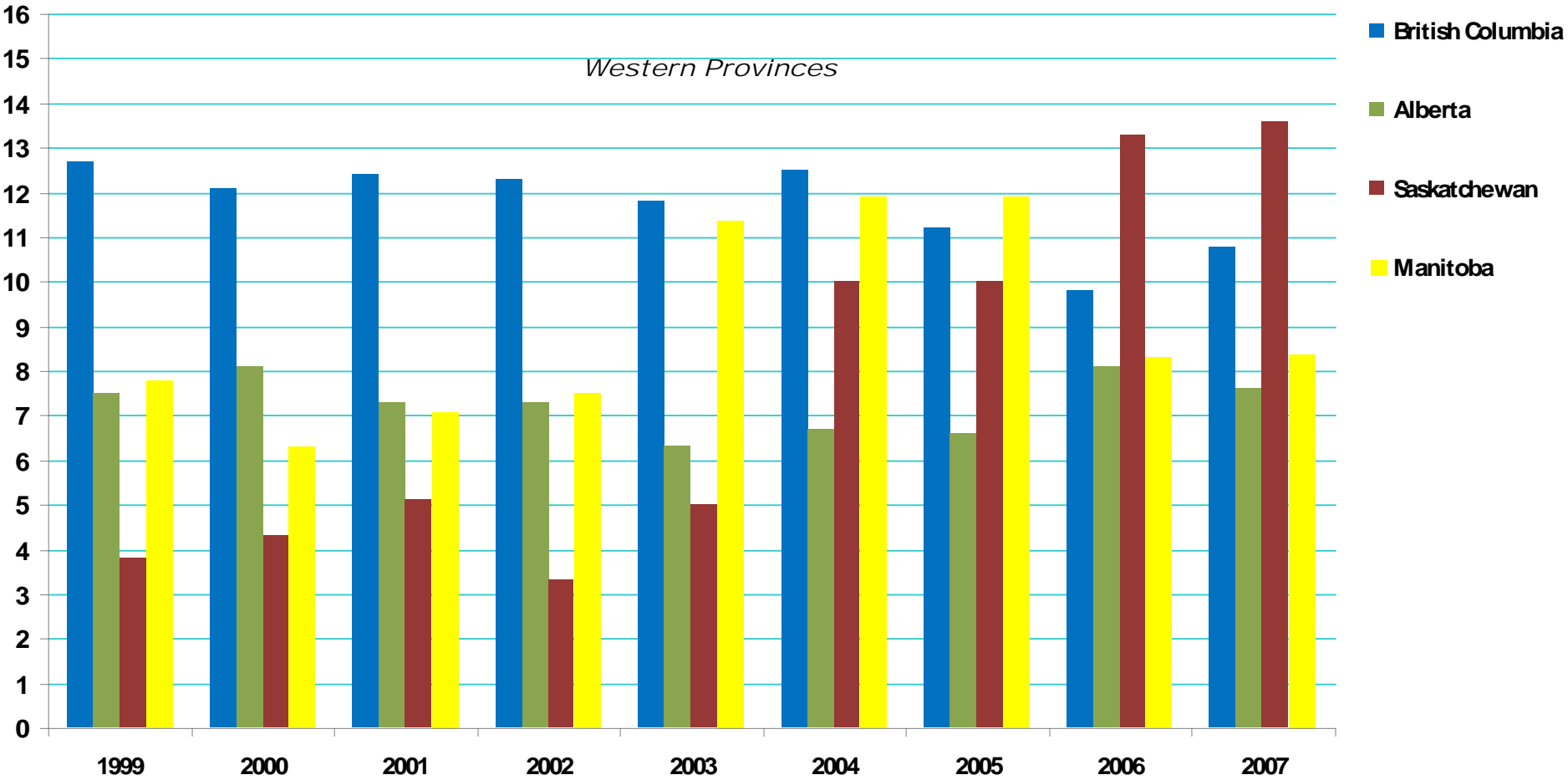
<i>Province/Territory</i>	<i>1999</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>
British Columbia	12.7	12.1	12.4	12.3	11.8	12.5	11.2	9.8	10.8
Yukon	4.2	20.9	16.7	12.4	16.2	16	4	7.8	0
Alberta	7.5	8.1	7.3	7.3	6.3	6.7	6.6	8.1	7.6
North West Territories	3.4	0	6.7	3.3	3.2	3.1	9.3	6.2	9.2
Nunavut 1	0	0	0	5.4	5.3	0	0	5	0
Saskatchewan	3.8	4.3	5.1	3.3	5	10	10	13.3	13.6
Manitoba	7.8	6.3	7.1	7.5	11.4	11.9	11.9	8.3	8.4
Ontario	9.7	9.5	10	11.6	11	11.5	10.8	10.9	10.1
Quebec	9.3	8	8.4	9.8	9.9	8.3	8.8	9.1	8.1
New Brunswick	0.8	2.3	1.8	1.3	1.6	1	1.1	2.2	1.3
Prince Edward Island and Nova Scotia	3.1	1.9	1.8	1.8	2.3	4	2.3	3.1	1.9
Newfoundland and Labrador	1.4	0.9	0.9	0.2	2.5	2.1	1.8	1.4	0
Total	8.9	8.4	8.8	9.6	9.6	9.6	6.3	9.4	8.8

Per 100,000

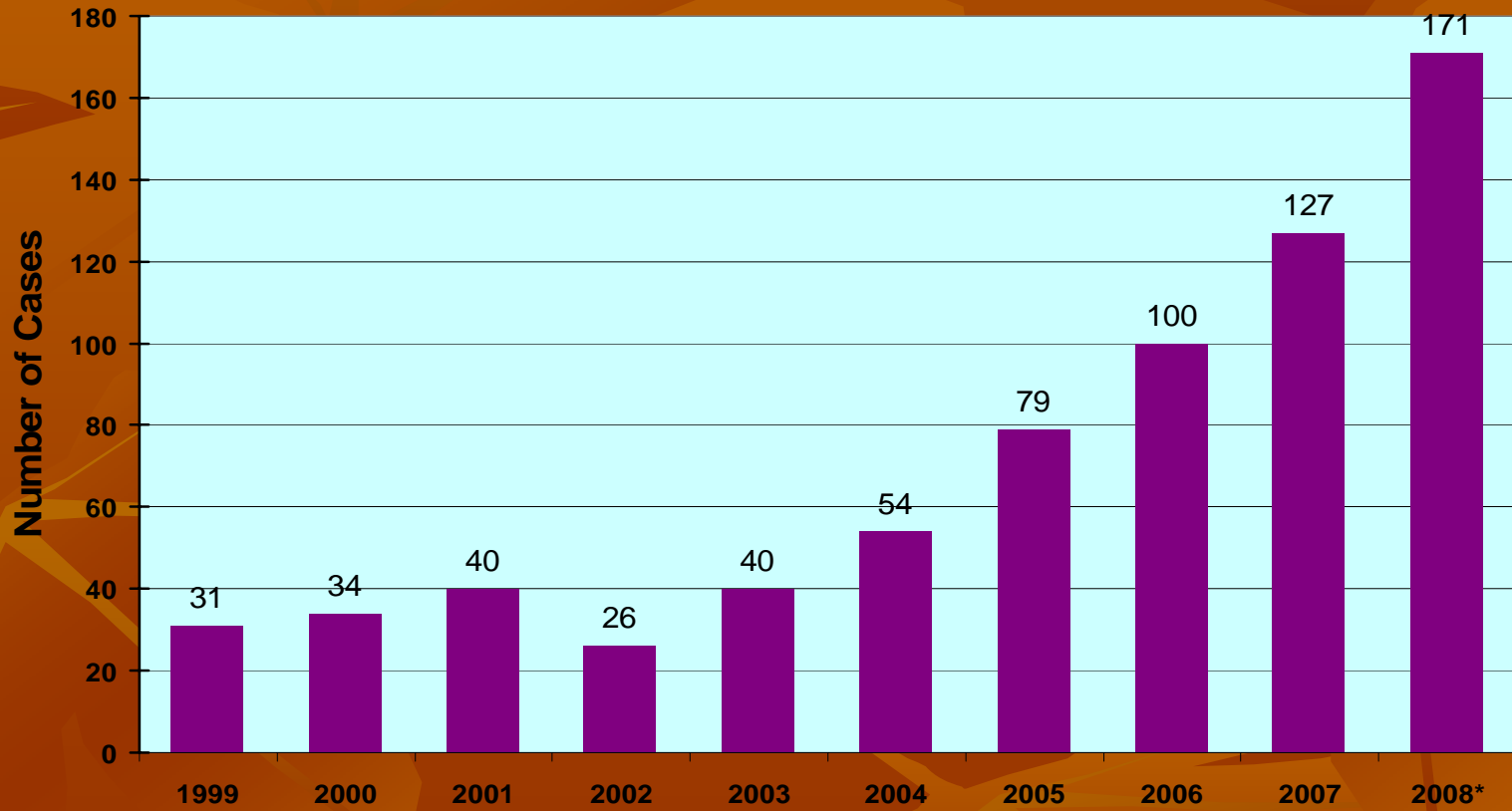


Courtesy of Barb Bowditch

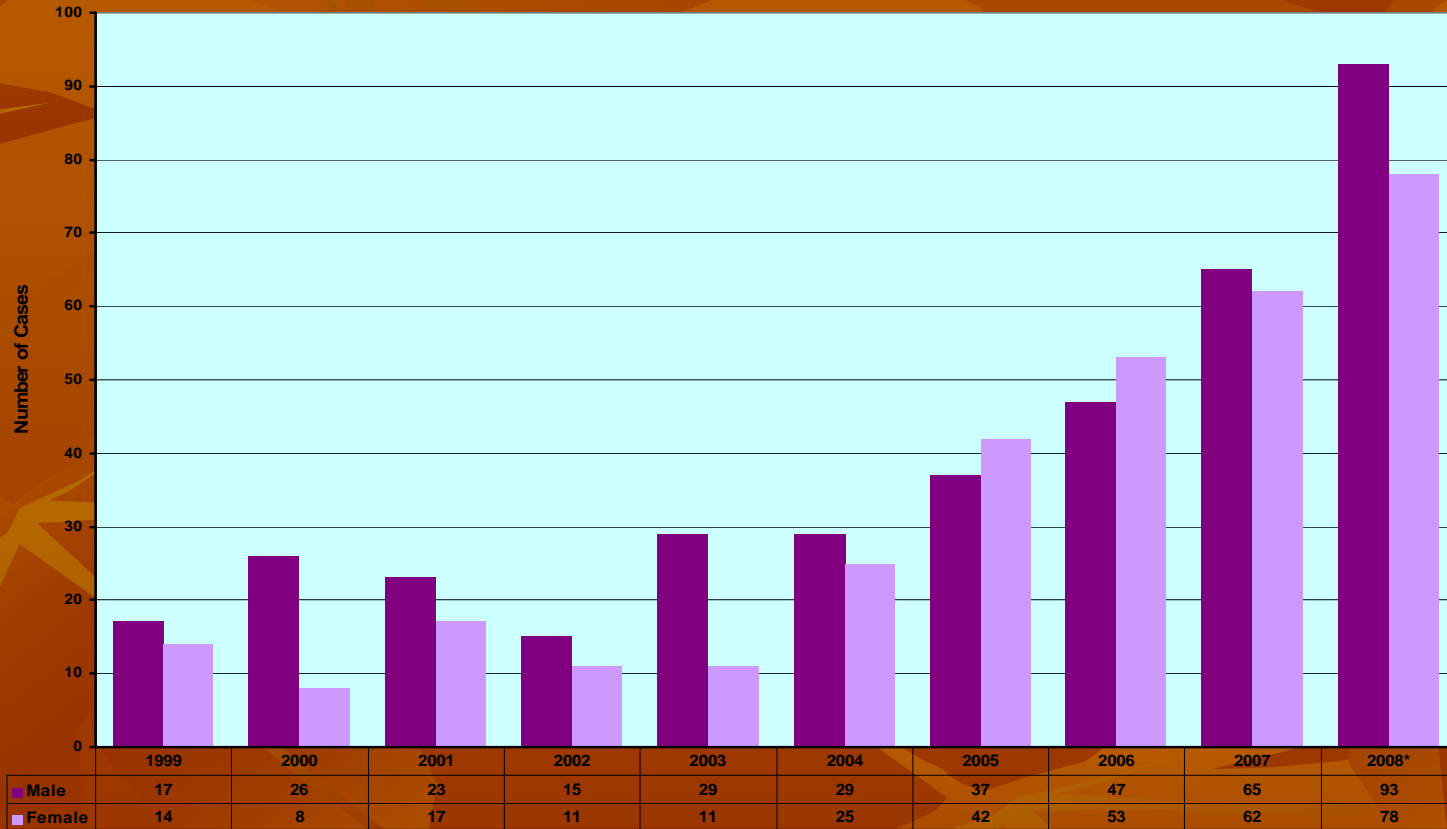
Western Provinces



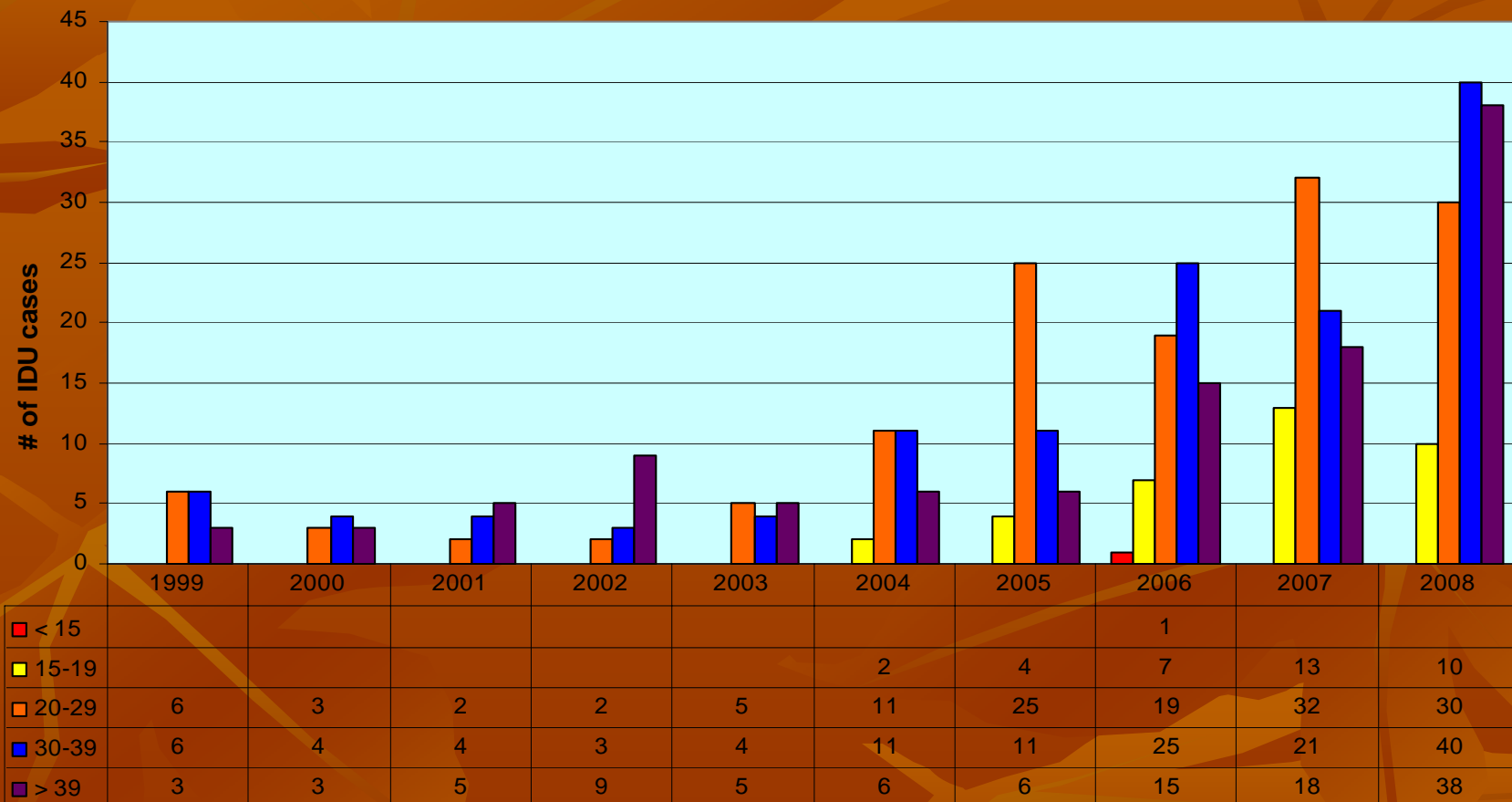
HIV Cases in Saskatchewan, 1999 - 2008



**Fig 2. HIV Cases in Saskatchewan By Gender
1999- 2008**

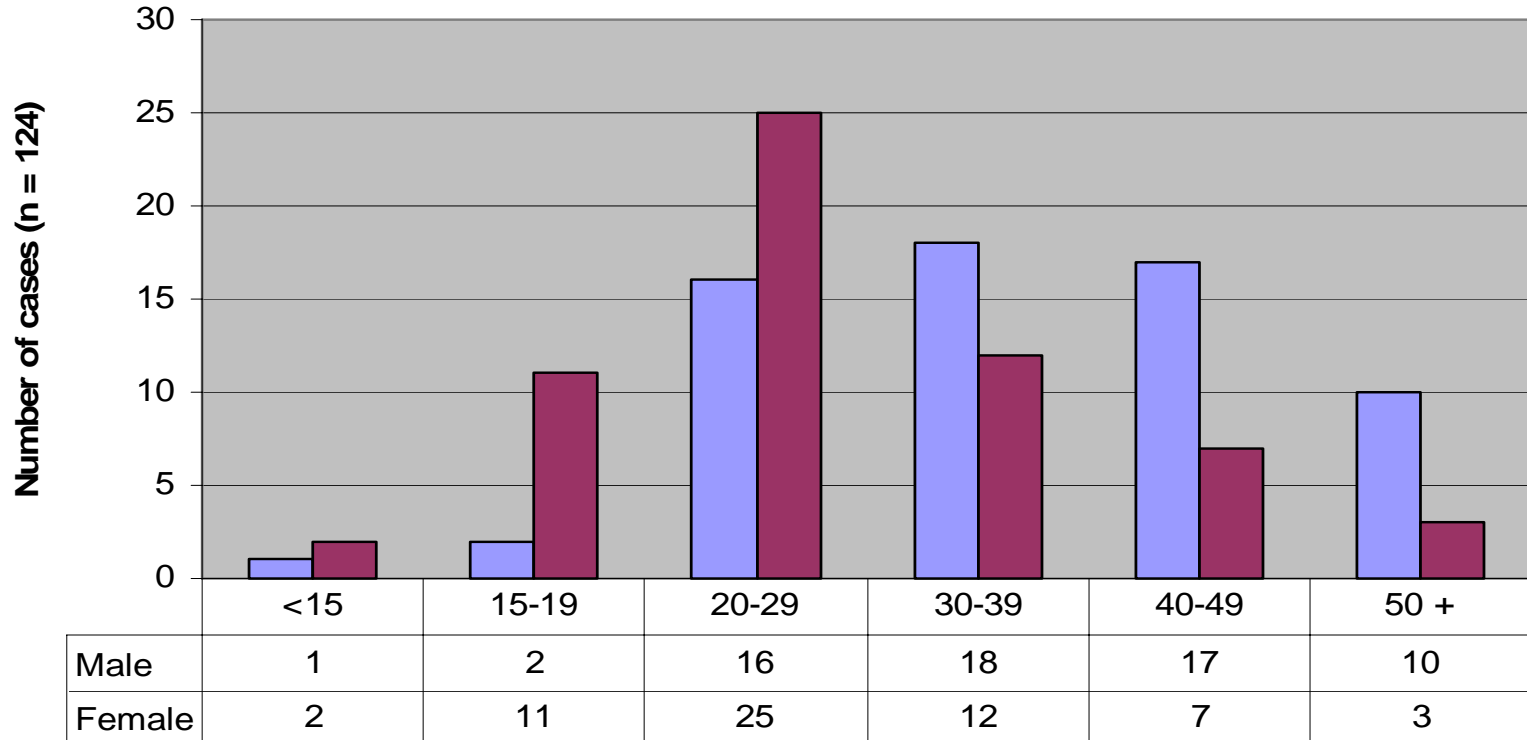


HIV Infection among Self-reported Injection drug Users by Age Group, Saskatchewan, 1999-2008

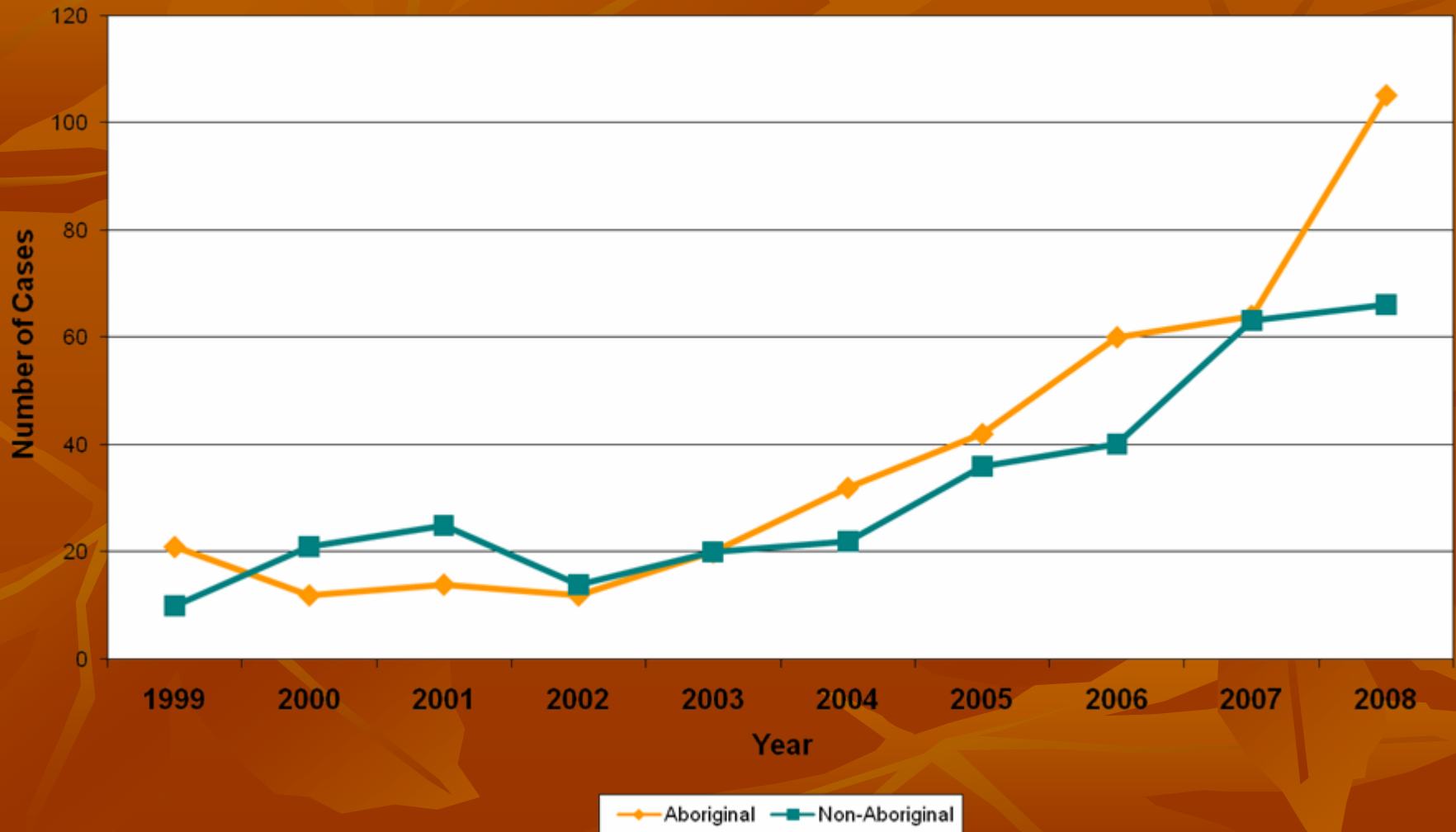


Changing profile of HIV

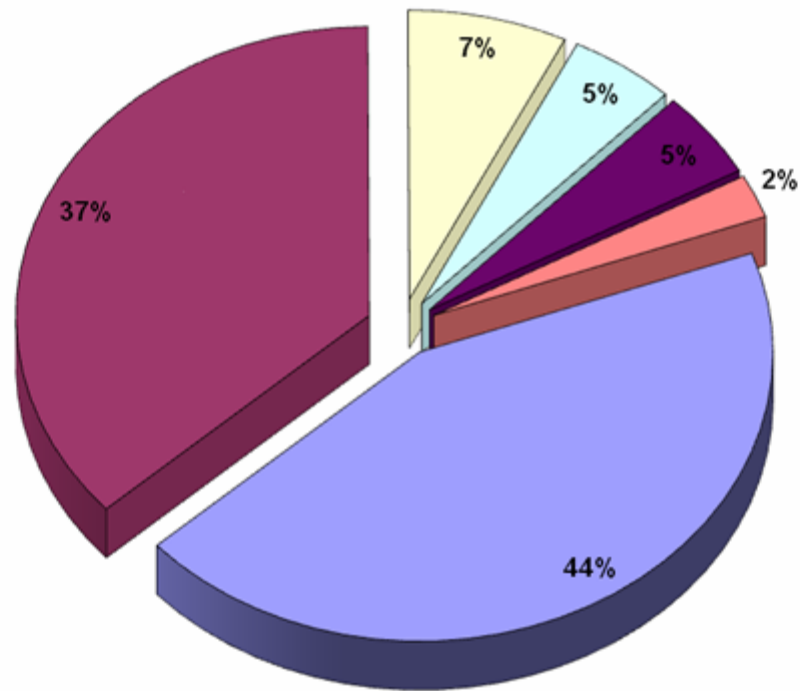
HIV cases in Saskatchewan by Age and Gender, 2007



Saskatchewan HIV Cases by Selected Ethnicity, 1999 to 2008



Percentage of HIV cases by Selected HRs, Saskatchewan 2004



□ Regina

■ Saskatoon

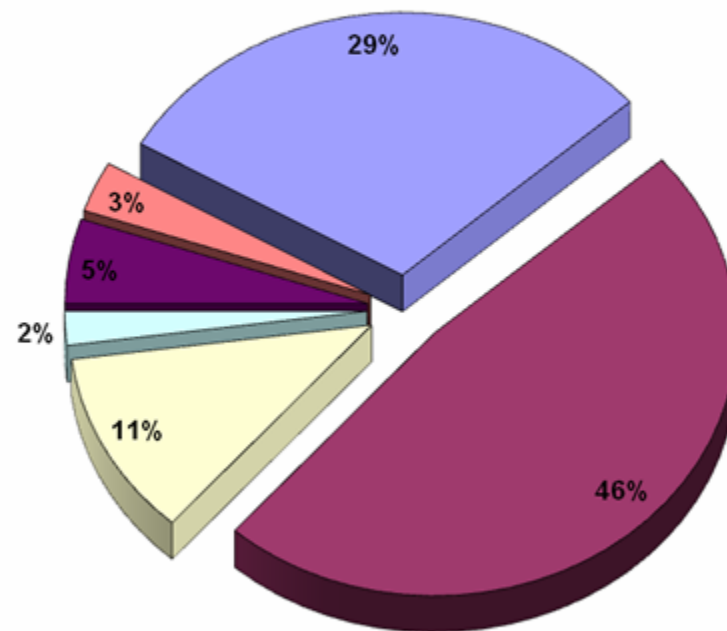
□ PA-Parkland

□ Pr. North

■ FNIH

□ NITHA

Percentage of HIV cases reported by Selected HR, Saskatchewan 2004-2008



■ Regina

■ Saskatoon

■ PA-Parkland

■ Pr. North

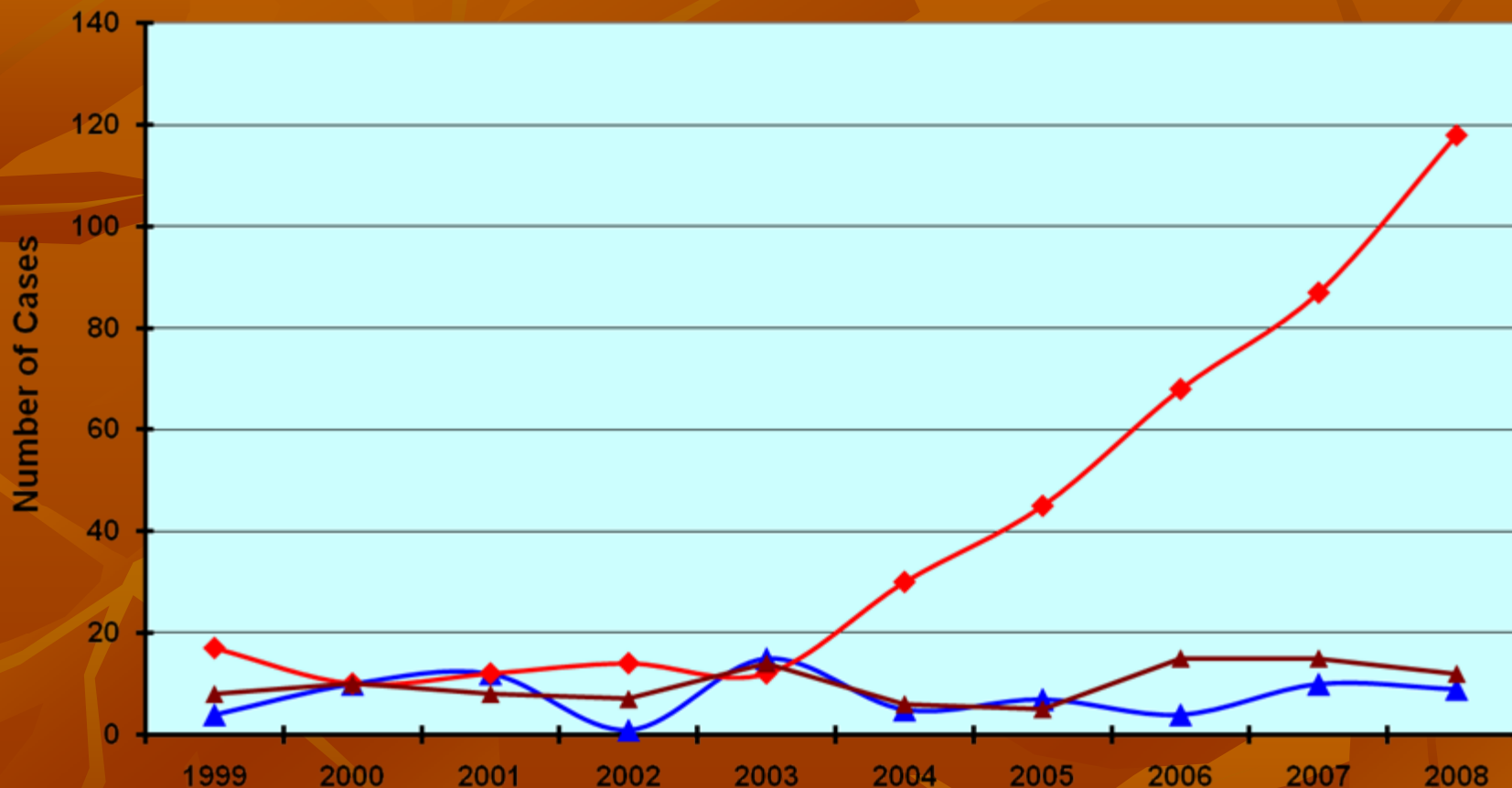
■ FNIH

■ NITHA

Table 2 - Saskatchewan HIV Cases by Risk Factor 1984 - 2008

Year	Men Who Have Sex With Men (MSM)	Injection Drug Use (IDU)	Both MSM & IDU	Heterosexual Exposure	Recipient of Blood/Products	Endemic	Perinatal Transfer	Other*	Total
1984-97	101	49	23	35	9	13	7	27	264
1998	5	11	1	6		2		1	26
1999	3	16	1	8	1	2			31
2000	10	10		10		1		3	34
2001	10	10	2	8		7		3	40
2002	1	14		7		3		1	26
2003	12	9	3	14		2			40
2004	2	27	3	6		8		8	54
2005	6	44	1	5			3	20	79
2006	4	68		15				13	100
2007	7	84	3	15		1	4	13	127
2008	6	118	3	12		1		24	171

HIV Cases by Selected Risk Exposures 1999 - 2008



—▲— Men Who Have Sex With Men

—◆— Injection Drug Use

—▲— Heterosexual Contact

1984 - 2007 AIDS Cases Diag

YEAR	Dead	Alive	TOTAL CASES
1984	1		1
1985	6		6
1986	7		7
1987	8	1	9
1988	6		6
1989	8		8
1990	16		16
1991	5		5
1992	12	2	14
1993	12	1	13
1994	10	5	15
1995	13	5	18
1996	3	3	6
1997	8	8	16
1998	4	8	12
1999	3	6	9
2000	7	6	13
2001	2	6	8
2002	5	5	10
2003	4	7	11
2004	5	10	15
2005	7	6	13
2006	1	4	5
2007	4	4	8
TOTAL	157	87	244

The Message

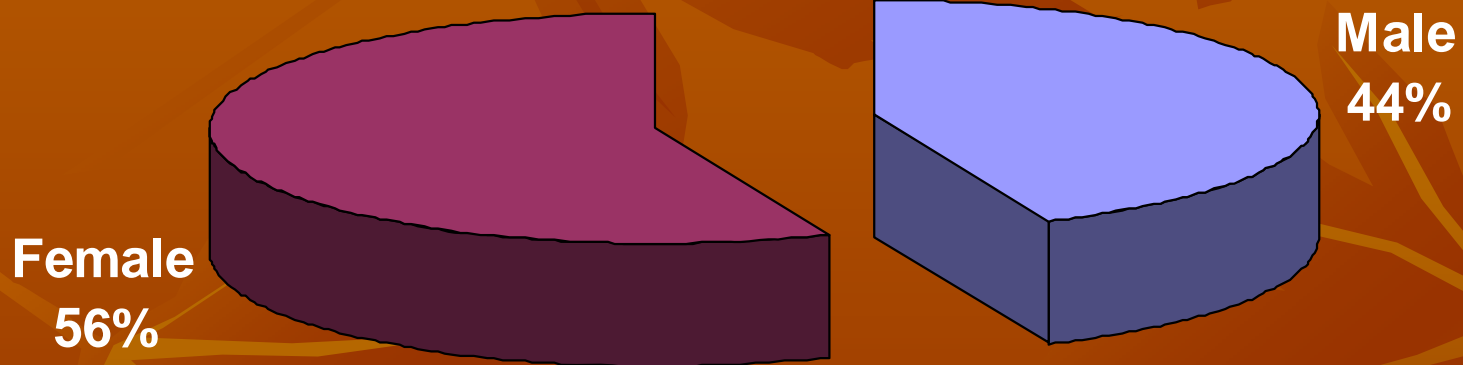
- Counseling
 - “You are not going to die”

**Prince Albert Methadone
Assisted Recovery
Program – Who are our
clients?**

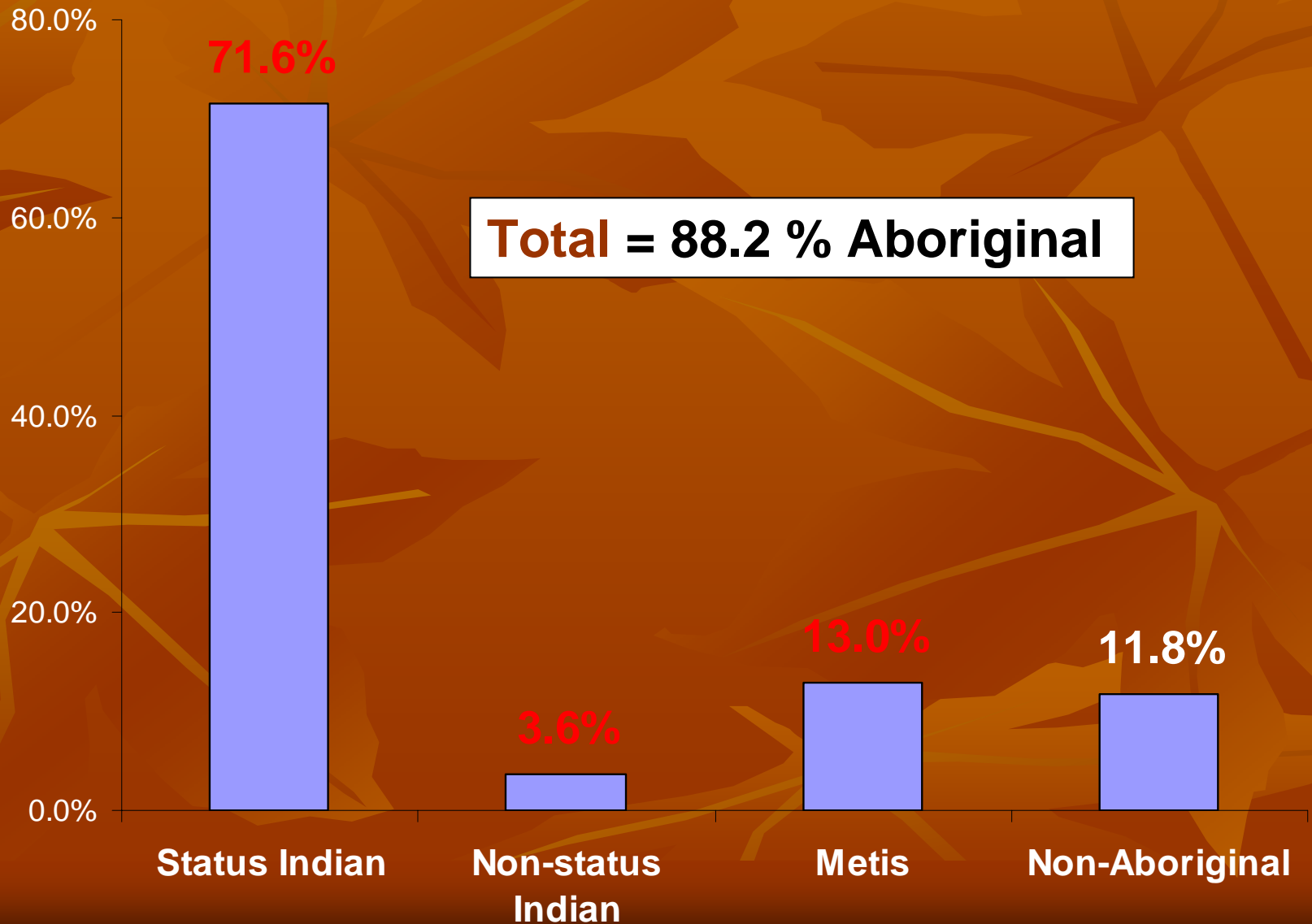
Dr. Leo Lanoie

Melanie Dubyk

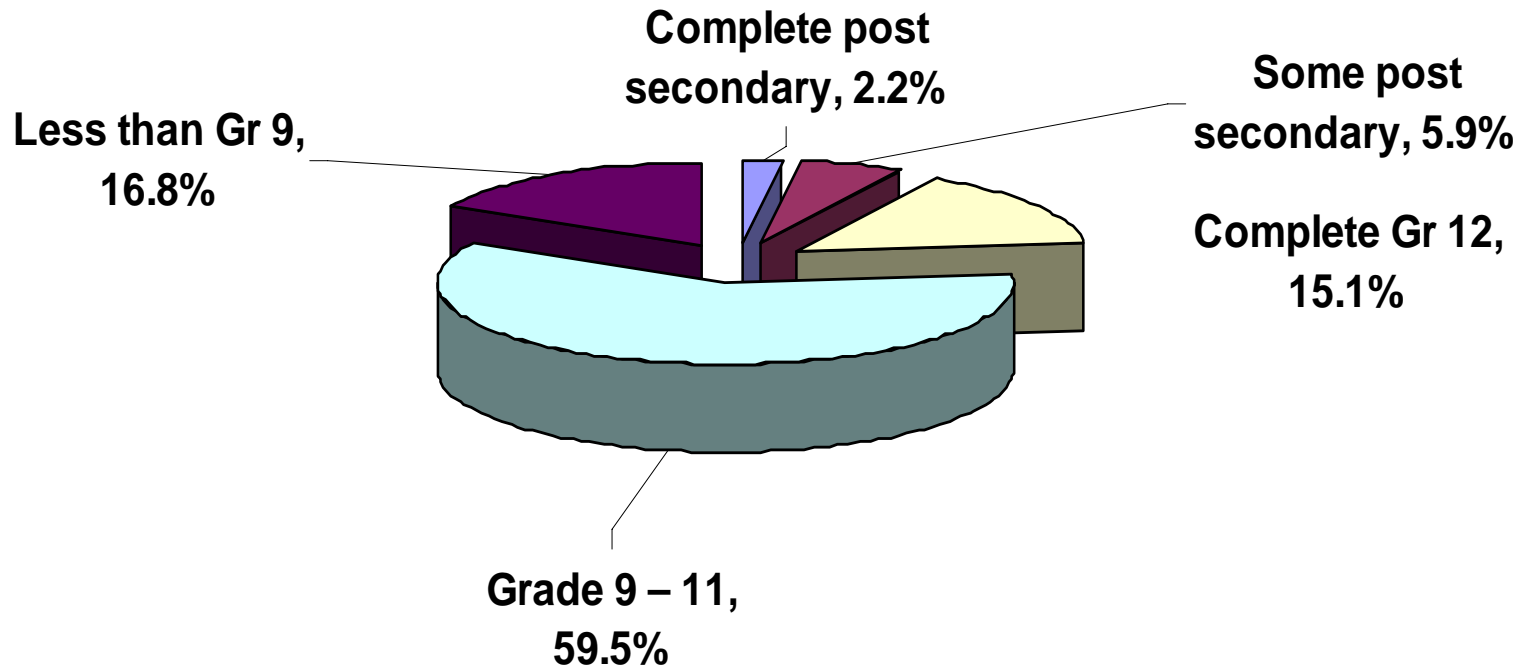
Methadone clients by gender (n=200)



Aboriginal Status (n=169)



Highest level of education (n=184)



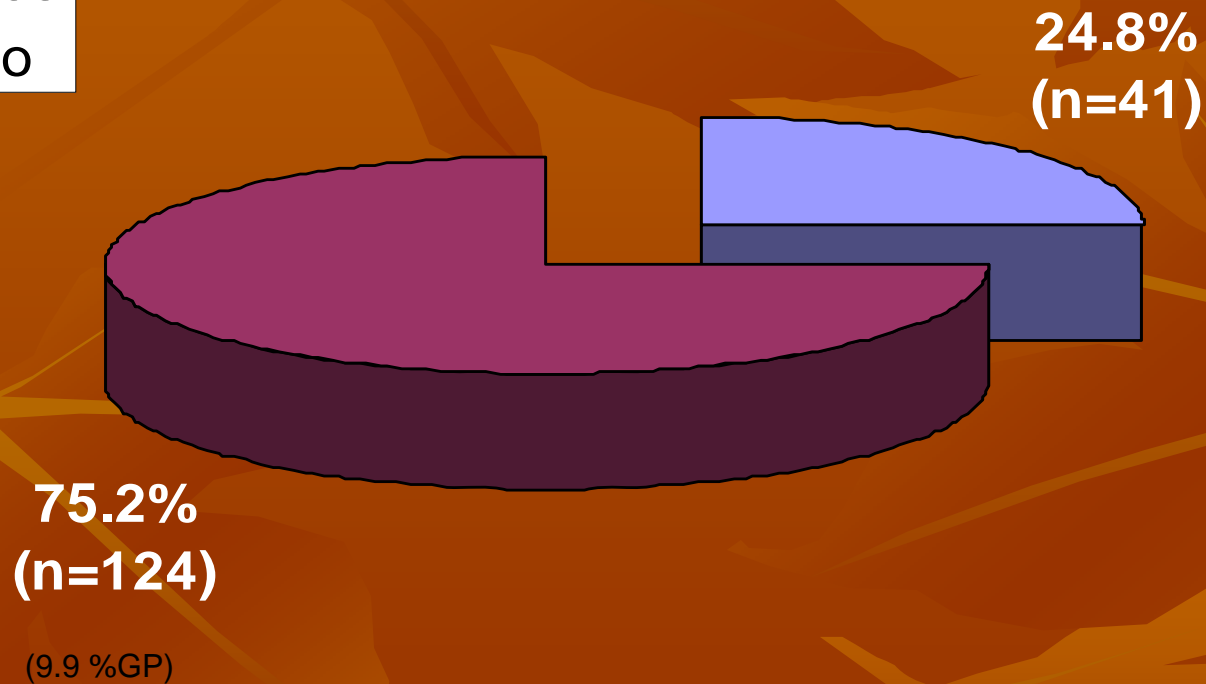
< Grade 12:

31.5% PAPHR general pop

44 % PAPHR Aboriginal pop

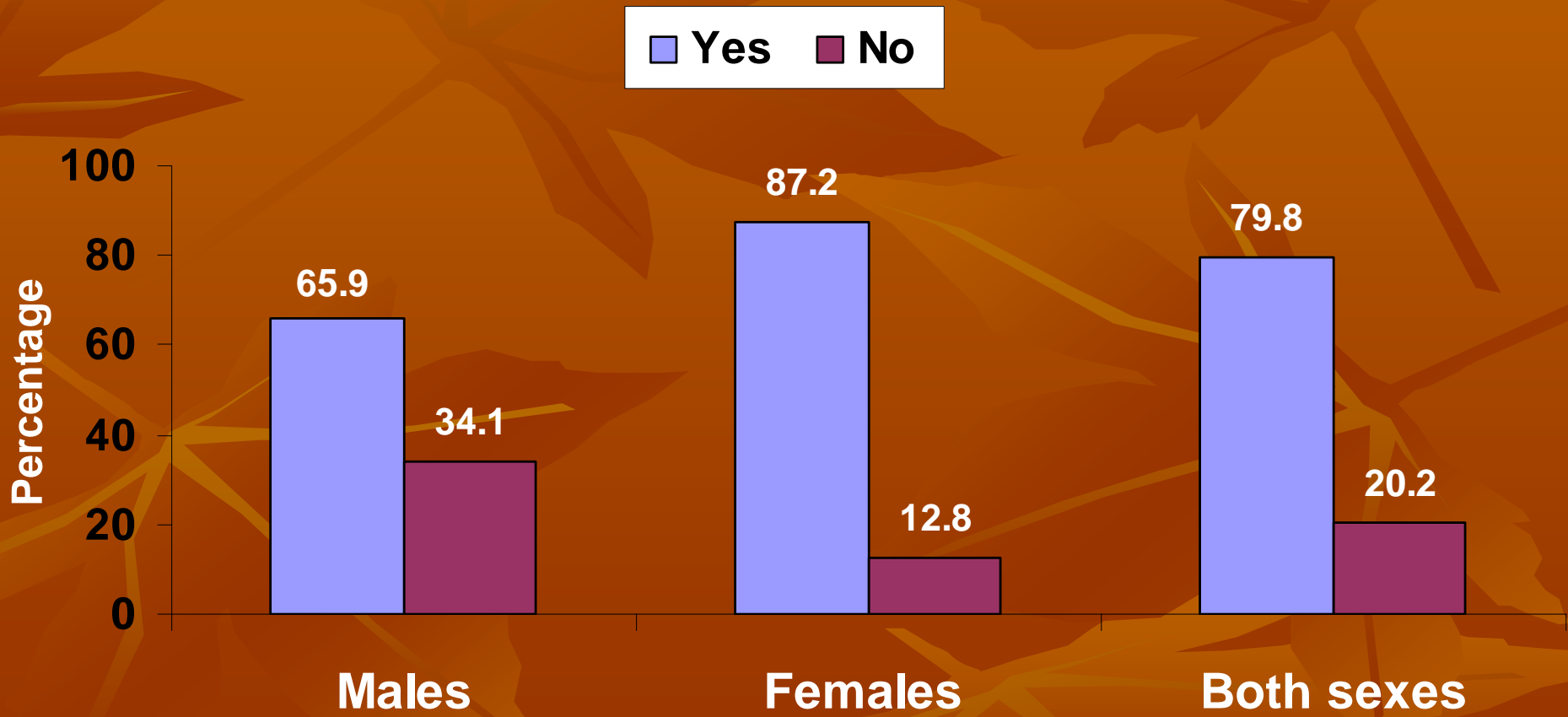
76.3 % Methadone

Employed previous 12 months (n=165)

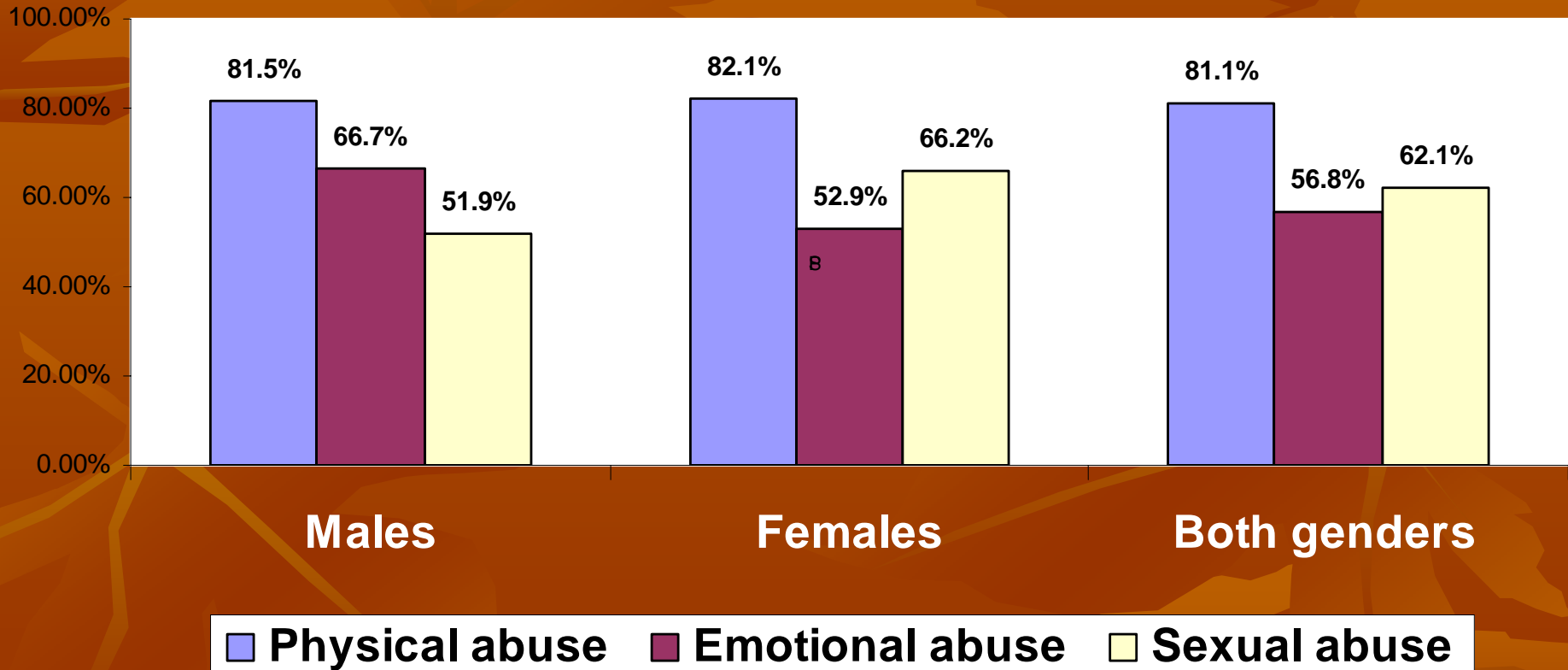


Prostitution documented for 51.3 % of females

Prevalence of abuse as proportion of cases with known history (n=119)



Type of abuse (self-reported, n=119)



Issues

- Unsafe intravenous drug use
- Transience, poverty, under-education, incarceration.
- Abuse



Questions?