

EBV Protocol

8.26.14

Data From UNOS

Summary Stats 1988-2014 CASU + 2009-2014 CAPC

Organ	Total	PTLD	Percent PTLD	Percent PTLD in Literature
Heart	294	21	7	3-9
Heart-Lung	34	3	9	16
Intestine	42	7	17	10-45
Liver	512	12	2	5
Lung	43	5	12	n/a

Summary Stats 1995-2014 CAPC

Organ	Total	PTLD	Percent PTLD	Percent PTLD in Literature
Kidney	426	7	2	2-4

PTLD Risk Factors from Literature

- Pre-transplant
 - Seronegative
- Time of transplant
 - Use of T cell suppressive therapy
 - <24 months of age
 - Circulating virus
 - Viral co-infections (?)
- Post-transplant
 - EBV DNAemia
 - Persistent low levels of DNAemia
 - Use of T cell suppressive therapy
 - Use of steroids
 - < 5 years old at time of EBV DNAemia

Screening

- Laboratory pre-transplant
 - EBV serology Viral Capsid IgG and IgM at time of listing and every six months on the list
- Laboratory at time of transplant
 - EBV serology Viral Capsid IgG and IgM for recipient and donor
 - EBV PCR

Risk Stratification

High Risk

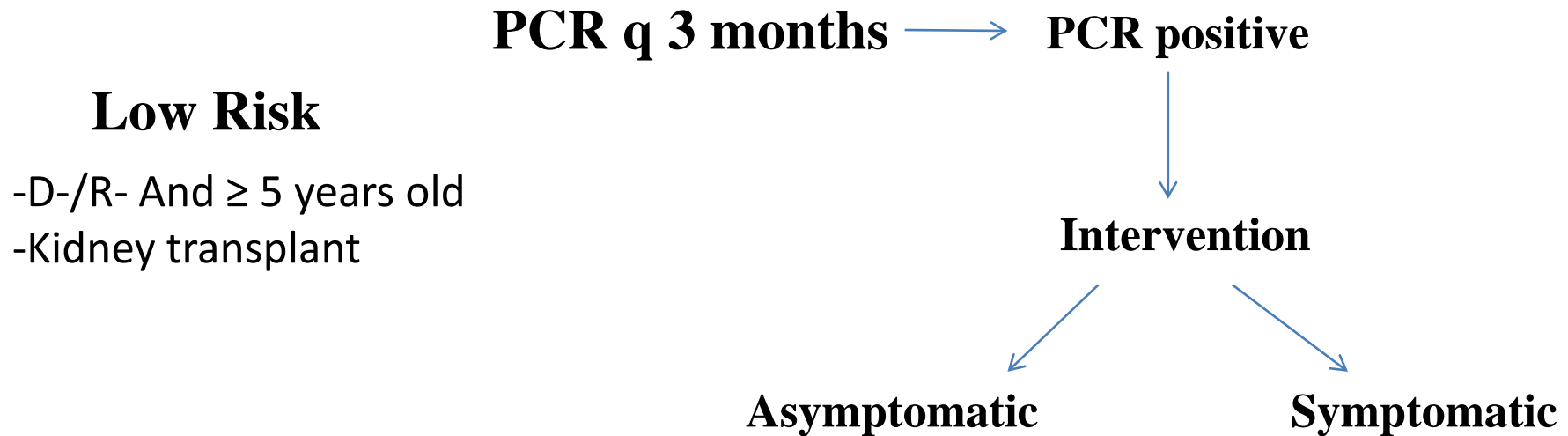
- Age < 5 years old
- D+/R-
- D^{-/+}/R+
- D-/R-
- Steroids, ATG, increased immunosuppression
- Small bowel transplant
- Lung transplant

Low Risk

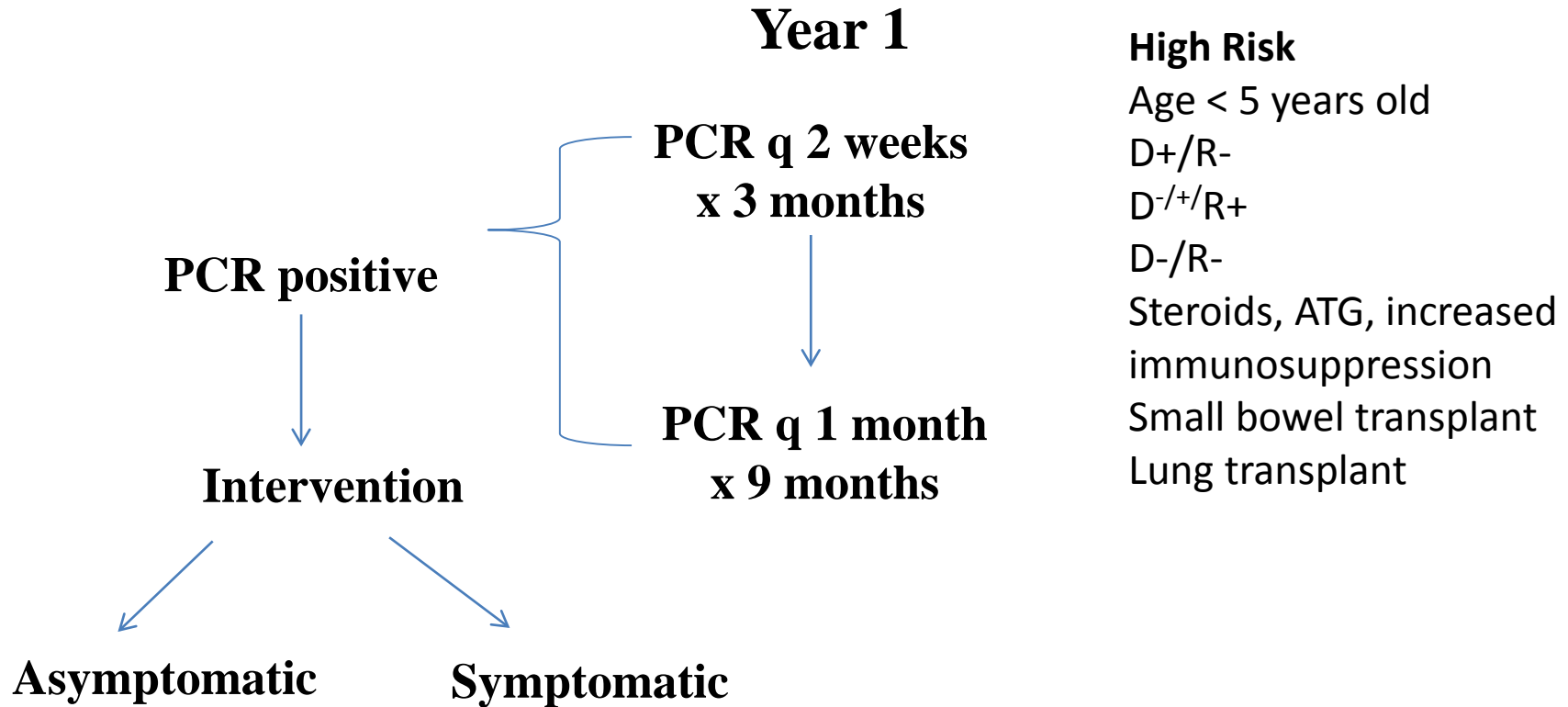
- D-/R- AND ≥ 5 years old
- Kidney transplant

Screening-Post transplant-Low Risk

Year 1



Screening-Post transplant-High Risk



Screening-Post transplant

Year 1

High Risk



PCR q 2 weeks
x 3 months



PCR q 1
month x 9
months

Low Risk



PCR q 3
months x 12
months



PCR positive



Intervention

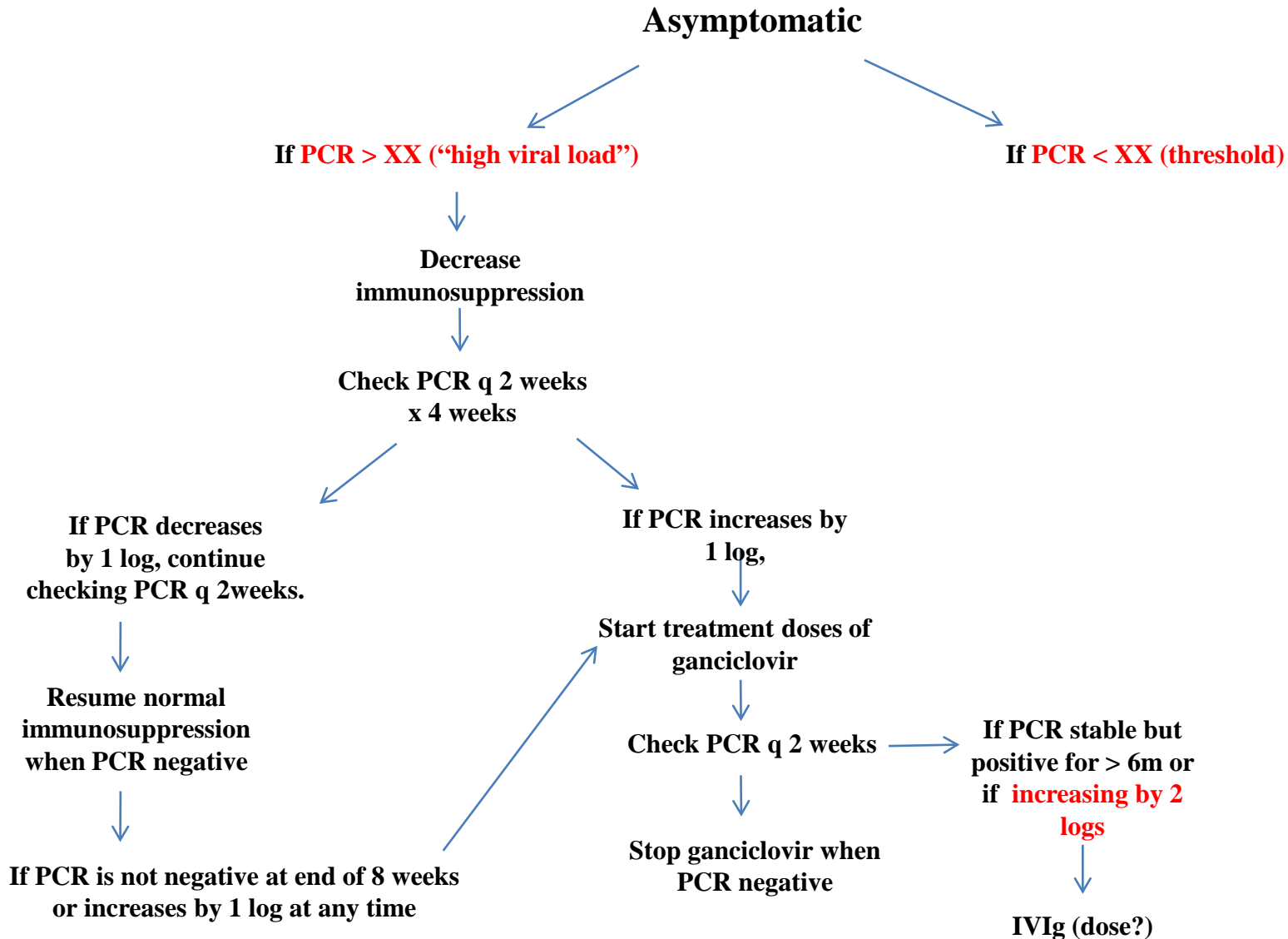
High Risk

- Age <5 years
- Recipient -/Donor+
- Recipient +/Donor+
- Recipient -/Donor-
- Steroids, ATG, enhanced immunosuppression
- Small bowel, lung

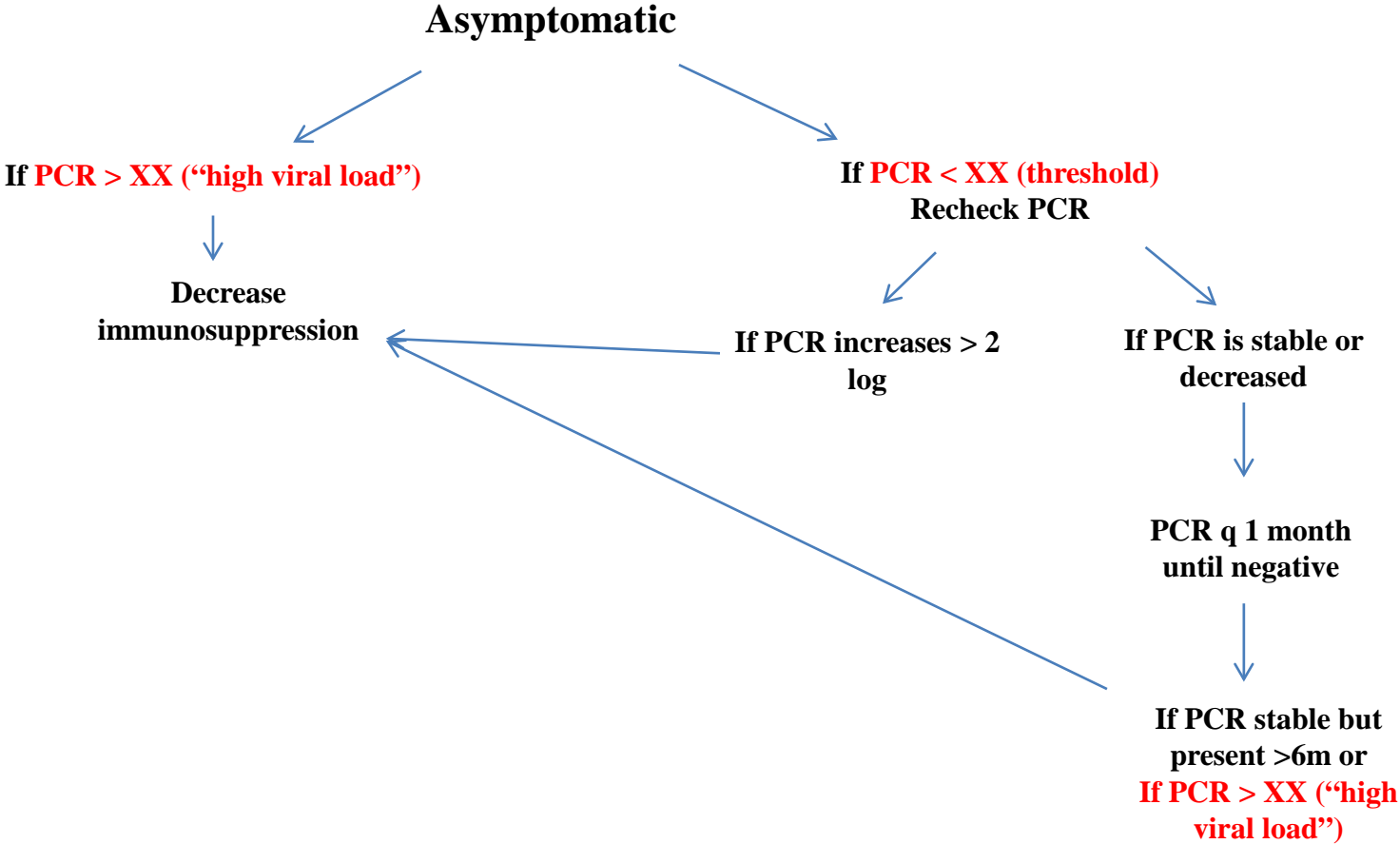
Low Risk

- Recipient -/Donor- Age >5 years
- Kidney transplant

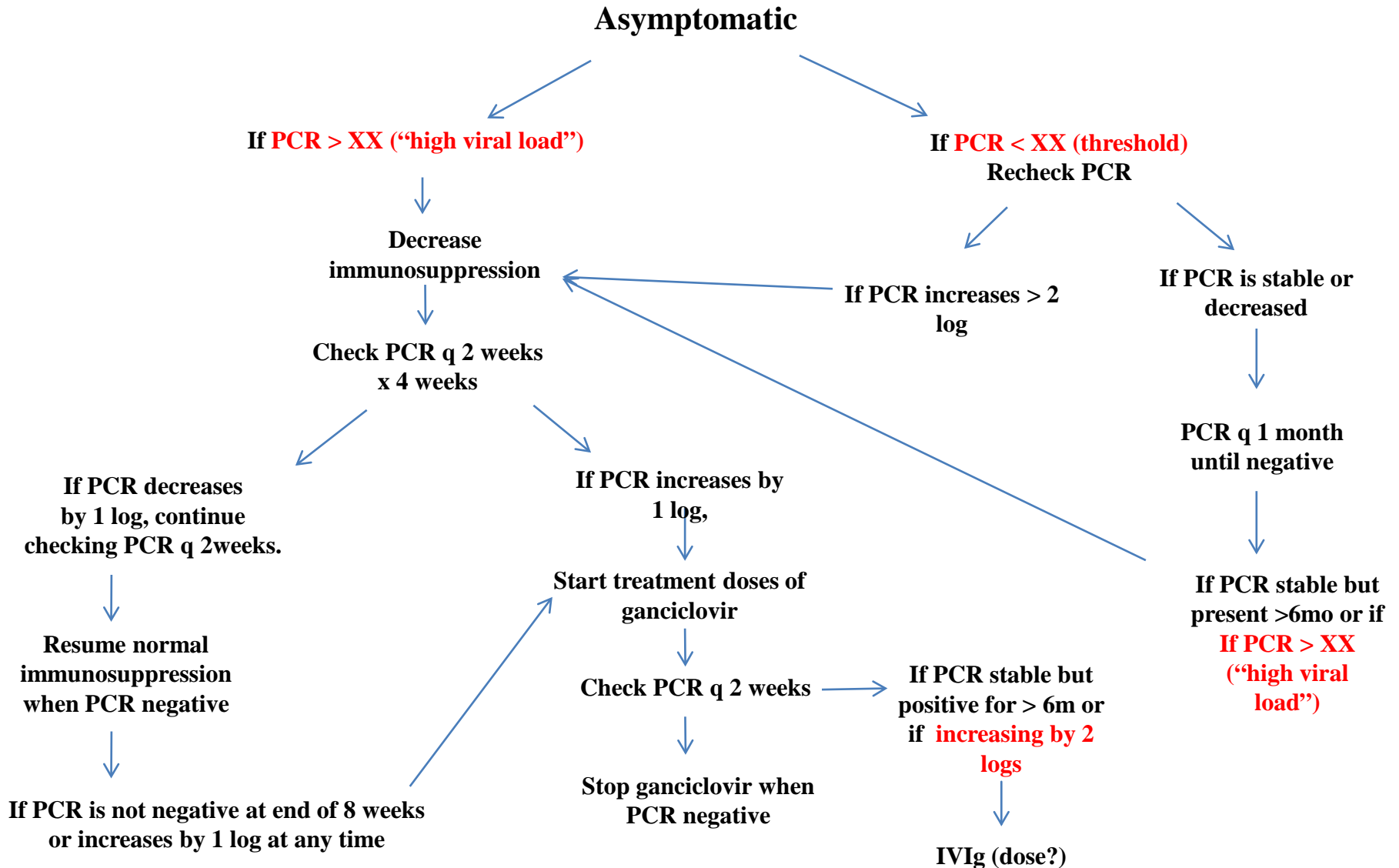
Intervention EBV PCR Positive & Asymptomatic



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Intervention EBV PCR Positive & Asymptomatic



Symptomatic EBV - Definition

- EBV viremia or seroconversion AND
 - Fever
 - Leukopenia
 - Atypical lymphocytosis
 - Exudate tonsillitis
 - Adenopathy
 - Hepatitis
- OR tissue diagnosis of EBV infection but not PTLD

Intervention EBV PCR Positive & Symptomatic

Symptomatic



Work up to distinguish SEBV from PTLD

CT scan

Biopsy as indicated



Decrease immunosuppression

Start treatment doses of ganciclovir and IVIg



PCR q 1 week
until negative

Data To Extract from STRIDE

- Level of EBV PCR (viral load) that is associated with development of PTLD
- Age range of our patients that have developed PTLD
- Time from transplant for our development of PTLD in our patients.