Diagnosis			
Hepatitis A	~ serology		
Hepatitis B DNA جاد virus	~ serology	~ molecular detection	
Hepatitis C	~ serology	~ molecular detection	
Hepatitis D	~ serology	~ molecular detection	~ presence of HBV
Hepatitis E	~ serology		
Rhinoviruses	~ real-time PCR		
Polioviruses	~ PCR	~ virus culture	
Coxsackieviruses	~ real-time PCR		
Echoviruses	~ real-time PCR		
Enteroviruses	~ real-time PCR		
Parechoviruses	~ real-time PCR		
Orthomyxoviridae	~ PCR	~ Rapid antigen detection	
Coronaviridae	~ PCR		
PIV, RSV, Metap..	~ PCR	~ Rapid antigen detection	
Measles	~ serology IgM		
Mumps	~ serology IgM	~ PCR	
Rubella	~ serology IgM	~ PCR	
Rotavirus	~ PCR	~ antigen detection	~ electron microscopy
Norovirus	~ PCR	~ antigen detection	~ electron microscopy
Astrovirus	~ PCR	~ antigen detection	~ electron microscopy
Sapovirus	~ PCR	~ antigen detection	~ electron microscopy

Treatment	
Acute hepatitis	Supportive care
Chronic HBV	Antiviral medications (nucleoside analogs), interferon
Chronic HCV	Antiviral medications (direct-acting antivirals DAAs), interferon
Chronic HDV	Interferon. HBV control. Newer drugs are evaluated.
Rhinoviruses	symptomatic
Orthomyxoviridae	Supportive, antivirals (oseltamivir (Tamiflu), zanamivir (Relenza))
Coronaviridae	supportive
PIV, RSV, Metap..	Supportive, ribavirin (antiviral) used for RSV lower respiratory tract infection
Measles	Supportive. Vitamin A treatment has decreased mortality and morbidity.
Mumps	Supportive. Vitamin A treatment has decreased mortality and morbidity.
Rubella	supportive

Transmission	
HAV	fecal-oralroute
HBV HCV HDV	blood (transfusion, injection drug use, needlestick injuries), mother-to-child, sexual, organ transplant patients, hemodialysis patients
HEV	fecal-oralroute
Rhinoviruses	hand-to-hand, hand-to-eye, or hand-to-object- (e.g., doorknob) to-hand contamination
Poliovirus	The mouth is the portal of entry of the virus
Orthomyxoviridae	respiratory secretions, aerosols
PIV, RSV, Metap..	respiratory secretions, aerosols
Measles	respiratory secretions
Mumps	respiratory secretions
Rubella	respiratory secretions, mother-to-child
Viruses that cause gastroenteritis	fecal-oral
rabies	bite of a rabid animal

Prevention	
Hepatitis A	Inactivated vaccine (very effective). Two doses
Hepatitis B	Subunit vaccine. Three doses
Hepatitis D	HBV vaccination prevents HDV infection
Rhinoviruses	hand washing
Polioviruses	~ live-virus (oral polio vaccine OPV, also called Sabin vaccine) ~ killed- virus (inactivated polio vaccine IPV, also called Salk vaccine)
Orthomyxoviridae	~ Live attenuated ~ inactivated ~ recombinant vaccines are available. Trivalent (2 A strains and 1 B strain) or quadrivalent (2 A strains and 2 B strains) are available
Measles	Live-attenuated vaccine MMR (measles mumps rubella vaccine)
Mumps	Live-attenuated vaccine MMR (measles mumps rubella vaccine)
Rubella	Live-attenuated vaccine MMR (measles mumps rubella vaccine)
Rotavirus	Live-attenuated vaccine is available
Rabies	Passive immunization

Diagnosis	
simplex type 1,2	~ Clinical ~ PCR ~ Antibodies: IgM in primary infection and IgG indicates past infection ~ Nuclear inclusions in cells (technique called Tzanck smear)
varicella zoster	~ Clinical ~ PCR ~ Antibodies: IgM in primary infection and IgG indicates past infection ~ Nuclear inclusions in cells (technique called Tzanck smear)
Epstein Barr	~ Clinical ~ Blood film showing atypical lymphocytes (large reactive T cells) ~ PCR ~ Serology: IgM to viral capsid antigen (VCA) in primary infection and IgG to EBV nuclearantigen (EBNA) indicates past infection
cytomegaloviruses	~ Clinical (primary infection is mostly asymptomatic) ~ Blood film showing atypical lymphocytes (large reactive T cells) ~ PCR ~ Serology: IgM in primary infection and IgG to indicates past infection
roseola (HHV 6,7)	~ Clinical ~ PCR
kaposi sarcoma	~ Histopathology ~ PCR
pavoviridae	~Clinical ~ PCR ~ Serology: IgM in primary infection and IgG to indicates past infection
adenoviridae	~ Antigen detection ~ PCR
papillomaviridae	~ Clinical ~ Pap smear (Papanicolaou smear is a cytology method of cervical screening to look for precancerous lesions in the cervix) ~ PCR
polyomaviridae	~ PCR ~ Radiology ~ Histopathologic examination

Tropism	
Epstein Barr	~ epithelial cells ~ B lymphocytes
cytomegaloviruses	~ many many many cells
parvoviridae	~ erythroid progenitors for **B19 virus** ~ respiratory cells for **bocaviruses**
adenoviridae	~ epithelial cells of the respiratory tract, eyes, gastrointestinal & urinary tracts
papillomaviridae	~ epithelial cells of the skin and mucous membranes

Transmission				
simplex type 1,2	~ saliva	~ sexual	~ vertical	~ direct contact
varicella zoster	~ aerosols	~ direct contact		
Epstein Barr	~ saliva			
cytomegaloviruses	~ saliva	~ direct contact	~ mother-to-child	
roseola (HHV 6,7)	~ saliva			
kaposi sarcoma	~ saliva	~ sexual especially among male homosexuals		~mother-to-child
pavoviridae	~ respiratory secretions		~ mother-to-child	
adenoviridae	~ respiratory secretions		~ fecal-oral	~ direct contact
papillomaviridae	~ direct contact		~ sexual	

Treatment	
simplex type 1,2	~ Antivirals: acyclovir, valacyclovir, and vidarabine, all of which are inhibitors of viral DNA synthesis
varicella zoster	~ chickenpox: symptomatic ~ zoster: acyclovir, valacyclovir, and famciclovir ~ postherpetic neuralgia: tricyclic antidepressants
Epstein Barr	~ supportive
cytomegaloviruses	~ supportive ~ In immunocompromised patients and in congenital infection: Ganciclovir (antiviral drug)
roseola (HHV 6,7)	~ supportive ~antipyretics خافض حرارة
pavoviridae	~ supportive
adenoviridae	~ supportive
papillomaviridae	~ most do not require treatment ~ other methods: surgical excision, laser therapy, chemical agents (e.g., podophyllotoxin and podophyllin, imiquimod)

Prevention	
varicella zoster	~ live attenuated vaccine is available to prevent chickenpox ~ therapeutic vaccines are available to reduce the occurrence of zoster (both recombinant subunit and live attenuated vaccines)
adenoviridae	~ Live attenuated vaccine is available for a few serotypes that can cause pneumonia
papillomaviridae	Subunit vaccines: ~ Cervarix (bivalent vaccine for HPV-16 and 18) ~ Gardasil (quadrivalent vaccine for HPV-6, HPV-11, HPV-16, and HPV-18) ~ Nonavalent vaccine (for the following types: 6, 11, 16, 18, 31, 33, 45, 52, 58)