**APPENDIX**

**Clinical Data Used**

Vitals

|  |  |
| --- | --- |
| Abdominal girth | Intracranial pressure |
| Bladder pressure | Left pupillary response |
| Capillary refill rate | Mean arterial pressure |
| Central Venous Pressure | Motor Response |
| Cerebral perfusion pressure | Near-infrared spectroscopy |
| Diastolic Blood Pressure | Pulse Oximetry |
| EtCO2 | Respiratory rate |
| Eye Response | Right pupillary response |
| Glascow Coma Score | Systolic Blood Pressure |
| Head circumference | Temperature |
| Heart rate | Verbal Response |
| Height | Weight |

Labs

|  |  |
| --- | --- |
| ABG Base excess | GGT |
| ABG FiO2 | Glucose |
| ABG HCO3 | Haptoglobin |
| ABG O2 sat | Hema |
| ABG PCO2 | Hemo |
| ABG PO2 | INR |
| ABG TCO2 | Influenza Lab |
| ABG pH | Lactate |
| ALT | Lactate Dehydrogenase blood |
| AST | Lactic Acid blood |
| Albumin level | Lipase |
| Alkaline phosphatase | Lymphocyte % |
| Amylase | MCH |
| B-type Natriuretic Peptide | MCHC |
| BUN | MCV |
| Bands % | MVBG Base excess |
| Basophils % | MVBG FiO2 |
| Bicarbonate serum | MVBG HCO3 |
| Bilirubin conjugated | MVBG O2 sat |
| Bilirubin total | MVBG PCO2 |
| Bilirubin unconjugated | MVBG PO2 |
| Blasts % | MVBG TCO2 |
| C-reactive protein | MVBG pH |
| CBG Base excess | Macrocytes |
| CBG FiO2 | Magnesium level |
| CBG HCO3 | Metamyelocytes % |
| CBG O2 sat | Monocytes % |
| CBG PCO2 | Myelocytes % |
| CBG PO2 | Neutrophils % |
| CBG TCO2 | Oxygenation index |
| CBG pH | P/F ratio |
| CSF Bands % | PT |
| CSF Lymphs % | PTT |
| CSF RBC | PaO2/FiO2(LungInSc) |
| CSF Segs % | Phosphorus level |
| CSF WBC | Platelet count |
| CSF glucose | Potassium |
| CSF protein | Protein total |
| Calcium ionized | RBC blood |
| Calcium total | RDW |
| Chloride | Reticulocyte count |
| Complement C3 serum | Schistocytes |
| Complement C4 serum | Sodium |
| Creatinine | Spherocytes |
| Culture CSF | T4 free |
| Culture blood | TSH |
| Culture fungus blood | Triglycerides |
| Culture respiratory | VBG Base excess |
| Culture urine | VBG FiO2 |
| Culture wound | VBG HCO3 |
| ESR | VBG O2 sat |
| Eosinophils % | VBG PCO2 |
| FDP Titer | VBG PO2 |
| Ferritin level | VBG TCO2 |
| FiO2 | VBG pH |
| Fibrinogen | White blood cell count |

Interventions

|  |  |
| --- | --- |
| Abdominal X ray | MRI brain |
| Amplitude | Mean Airway Pressure |
| CT abdomen | NIV set rate |
| CT abdomen/pelvis | Nitric Oxide |
| CT brain | O2 Flow |
| CT chest | PEEP |
| CT pelvis | Peak Inspiratory Pressure |
| Chest X ray | Peritoneal dyalisis |
| Continuous EEG | Pressure support |
| ECMO hours | Tidal volume delivered |
| EPAP | Tidal volume expiratory |
| Foley catheter | Tidal volume inspiratory |
| Frequency | Tidal volume set |
| Gastrostomy tube | Tracheostomy |
| Hemofiltration/CRRT | Ventilator rate |
| IPAP | Ventriculostomy site |
| Inspiratory time | Volume Tidal |

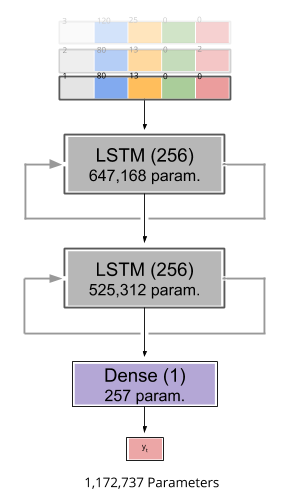
Drugs

|  |  |
| --- | --- |
| Acetaminophen | Immune Globulin |
| Acetaminophen/Codeine | Insulin |
| Acetaminophen/Hydrocodone | Ipratropium Bromide |
| Acetazolamide | Isoniazid |
| Acyclovir | Isoproterenol |
| Albumin | Isradipine |
| Albuterol | Ketamine |
| Allopurinol | Ketorolac |
| Alteplase | Labetalol |
| Amikacin | Lactobacillus |
| Aminocaproic Acid | Lansoprazole |
| Aminophylline | Levalbuterol |
| Amiodarone | Levetiracetam |
| Amlodipine | Levocarnitine |
| Amoxicillin | Levofloxacin |
| Amoxicillin/clavulanic acid | Levothyroxine Sodium |
| Amphotericin B | Lidocaine |
| Amphotericin B Lipid Complex | Linezolid |
| Ampicillin | Lisinopril |
| Aspirin | Lorazepam |
| Atenolol | Magnesium Sulfate |
| Atropine | Meropenem |
| Azathioprine | Methadone |
| Azithromycin | Methylprednisolone |
| Baclofen | Metoclopramide |
| Basiliximab | Metolazone |
| Budesonide | Metronidazole |
| Bumetanide | Micafungin |
| Calcium Chloride | Midazolam HCl |
| Calcium Glubionate | Milrinone |
| Calcium Gluconate | Montelukast Sodium |
| Captopril | Morphine |
| Carbamazepine | Mycophenolate Mofetl |
| Carvedilol | Naloxone HCL |
| Caspofungin | Nifedipine |
| Cefazolin | Nitrofurantoin |
| Cefepime | Nitroprusside |
| Cefotaxime | Norepinephrine |
| Cefoxitin | Nystatin |
| Ceftazidime | Octreotide Acetate |
| Ceftriaxone | Olanzapine |
| Cephalexin | Ondansetron |
| Chloral Hydrate | Oseltamivir |
| Chlorothiazide | Oxacillin |
| Ciprofloxacin HCL | Oxcarbazepine |
| Cisatracurium | Oxycodone |
| Clindamycin | Pantoprazole |
| Clonazepam | Penicillin G Sodium |
| Clonidine HCl | Pentobarbital |
| Cromolyn Sodium | Phenobarbital |
| Cyclophosphamide | Phenylephrine HCl |
| Cyclosporine | Phenytoin |
| Desmopressin | Piperacillin/Tazobactam |
| Dexamethasone | Potassium Chloride |
| Dexmedetomidine | Potassium Phosphate |
| Diazepam | Prednisolone |
| Digoxin | Prednisone |
| Diphenhydramine HCl | Propofol |
| Dobutamine | Propranolol HCl |
| Dopamine | Prostacyclin |
| Dornase Alfa | Racemic Epi |
| Enalapril | Ranitidine |
| Enoxaparin | Rifampin |
| Epinephrine | Risperidone |
| Epoetin | Rocuronium |
| Erythromycin | Sildenafil |
| Esmolol Hydrochloride | Sodium Bicarbonate |
| Etomidate | Sodium Chloride |
| Factor VII | Sodium Phosphate |
| Famotidine | Spironolactone |
| Fentanyl | Sucralfate |
| Ferrous Sulfate | Tacrolimus |
| Filgrastim | Terbutaline |
| Fluconazole | Tobramycin |
| Fluticasone | Topiramate |
| Fosphenytoin | Trimethoprim/Sulfamethoxazole |
| Furosemide | Ursodiol |
| Gabapentin | Valganciclovir |
| Ganciclovir Sodium | Valproic Acid |
| Gentamicin | Vancomycin |
| Glycopyrrolate | Vasopressin |
| Haloperidol | Vecuronium |
| Heparin | Vitamin E |
| Hydrocortisone | Vitamin K |
| Hydromorphone | Voriconazole |
| Ibuprofen | Warfarin Sodium |

**Regression Polynomials**

In the equations below, *x* is the patient’s age.

**RNN Architecture**

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