**Purpose**To provide guidelines for providing crossmatch compatible blood for transfusion.

**Policy**

The Harborview Transfusion Service will follow accepted regulations and standards for providing crossmatch compatible blood for patients.

The following blood products qualify for crossmatch compatibility testing:

* Whole blood
* Red cells
* Granulocytes
* Platelets that contain >2ml red cells- are not typically released by blood suppliers. In the case of emergency, platelets with other specific requirements may be released and used with Medical Director approval

**Types of Crossmatch and Requirements:**

|  |  |  |
| --- | --- | --- |
| **Sample requirements for all crossmatches:**   * Current acceptable sample * Two determinations of ABO/Rh from separate collections, at least one of which is on the current sample * Current antibody Screen | | |
| **Computer Crossmatch (electronic)** | **Antiglobulin Crossmatch (AHG)** | **Immediate Spin Crossmatch** |
| Additional Requirements:   * No history of clinically significant antibodies * Patient with historical clinically insignificant antibody and current screen is negative * Retrospective crossmatches for transfused trauma units that qualify for the above criteria. | Required for all patients who have:   * Evidence of clinically significant antibodies * A history of clinically significant antibodies, even if currently not detectable in serum * Current reactive clinically insignificant antibody * When ordered by the Medical Director * Units given out during urgent release on patients found to have history of clinically significant antibodies | * Performed in place of Computer crossmatch during Computer downtime. * Performed for ABO and Rh discrepancies * Performed for retrospective crossmatches. * Patients whose Rh typing is negative but received Rh positive blood due to MTP |

**Antibody Clinical Significance**

| **Antibody** | **SQ Code** | **HTR or HDFN** | **AHG XM required**  **(see comments)** | **Antigen Negative Units Required** |
| --- | --- | --- | --- | --- |
| anti-A IgG | AAIGG | Yes | Yes | Yes |
| anti-A IgM | AAIGM | Yes | Yes | Yes |
| anti-A1 | AA1 | Rare | \*No | No |
| anti-B IgG | ABIGG | Yes | Yes | Yes |
| anti-B IgM | ABIGM | Yes | Yes | Yes |
| anti-Bg (Bga, Bgb, Bgc) | ANTIBG | No | \*No | No |
| Possible anti Bg(a) | ABBGA | No | No | No |
| anti-c | ABLC | Yes | Yes | Yes |
| anti-C | ABBC | Yes | Yes | Yes |
| Nonspecific cold auto agglutinin. | ABCOLD | No | \*No | No |
| anti-Coa | ABCOA | Yes | Yes | Yes |
| anti-Cob | ABCOB | Yes | Yes | Yes |
| anti-Csa | ABCSA | No | \*No | No |
| anti-Cw | ABCW | Yes | Yes | Yes |
| anti-D | ABBD | Yes | Yes | Yes |
| Anti-D (Passive) | PTAD | No | \*No | Yes |
| anti-Dia | ABDIA | Yes | Yes | Yes |
| anti-Dib | ABDIB | Yes | Yes | Yes |
| Anti-Doa | ABDOA | Yes | Yes | Yes |
| Anti-Dob | Z20152 | Yes | Yes | Yes |
| Anti-e | ABLE | Yes | Yes | Yes |
| Anti-E | ABBE | Yes | Yes | Yes |
| anti-f | ABF | Yes | Yes | Yes |
| anti-Fya | ABFYA | Yes | Yes | Yes |
| anti-Fyb | ABFYB | Yes | Yes | Yes |
| anti-Fy3 | Z20154 | Yes | Yes | Yes |
| Anti-G | ABBG | Yes | Yes | Yes |
| anti-Goa | ABGOA | Yes | Yes | Yes |
| anti-H | ABH | No | No | No |
| anti-He | Z20155 | No | No | No |
| High titer, low avidity antibody, probable anti-Rg(a) or anti-ch(a), not clinically significant. | ABCHRG | No | \*No | No |
| anti-hrb | Z20156 | Yes | Yes | Yes |
| HTLA antibody | ABHTL | Yes | Yes | Yes |
| anti-Hy | Z20157 | Yes | Yes | Yes |
| anti-i | ABLI | Yes | Yes | Yes |
| anti-IH | ABIH | No | \*No | No |
| anti-Jk3 | Z20159 | Yes | Yes | Yes |
| anti-Jka | ABJKA | Yes | Yes | Yes |
| anti-Jkb | ABJKB | Yes | Yes | Yes |
| anti-JMH | Z20035 | No | \*No | No |
| anti-Jra | Z20160 | Yes | Yes | Yes |
| anti-Jsa | ABJSA | Yes | Yes | Yes |
| anti-Jsb | ABJSB | Yes | Yes | Yes |

**Antibody Clinical Significance (continued)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Antibody** | **SQ Code** | **HTR or HDFN** | **AHG XM required**  **(see comments)** | **Antigen Negative**  **Units Required** |
| anti-K | ABBK | Yes | Yes | Yes |
| anti-k | ABLK | Yes | Yes | Yes |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| anti-Kna | ABKNA | No | \*No | No |
| Knops system antibody, | Z20161 | No | \*No | No |
| anti-Kpa | ABKPA | Yes | Yes | Yes |
| anti-Kpb | ABKPB | Yes | Yes | Yes |
| anti-Lan | Z20162 | Yes | Yes | Yes |
| anti-Lea | ABLEA | No | \*No | No |
| anti-Leb | ABLEB | No | \*No | No |
| anti-Lua | ABLUA | No | \*No | No |
| anti-Lub | ABLUB | Yes | Yes | Yes |
| anti-M | ABM | Rare | \*No | No |
| anti-N | ABBN | Rare | \*No | No |
| anti-P1 | ABP1 | Rare | \*No | No |
| anti-Rogers A | ABRG | No | \*No | No |
| anti-s | ABLS | Yes | Yes | Yes |
| anti-S | ABBS | Yes | Yes | Yes |
| anti-Sc2 | Z20165 | No | No | No |
| anti-Sda | ABSDA | No | No | No |
| anti-U | ABU | Yes | Yes | Yes |
| Antibody of unknown specificity | ABUKN | No | Yes | No |
| anti-V | ABV | Yes | Yes | Yes |
| anti-Vel | ABVEL | Yes | Yes | Yes |
| anti-Vw | Z20039 | Yes | Yes | Yes |
| warm auto antibody | ABWARM | Yes | Yes | No |
| anti-Wra | ABWRA | Yes | Yes | Yes |
| anti-Wrb | ABWRB | Yes | Yes | Yes |
| anti-Xga | ABXGA | No | \*No | No |
| anti-Yka | ABYA | No | \*No | No |
| anti-Yta | ABYTA | Yes | Yes | Yes |
| anti-Ytb | ABYTB | Yes | Yes | Yes |
| LISS antibody | ABLISS | No | \*No | No |
| PEG antibody | ABPEG | No | \*No | No |

**Comments:**

**\***AHG XM only required if antibody is currently reactive at 37°C or AHG

**References**

Standards for Blood Banks and Transfusion Services, Current Edition. American Association of Blood Banks. AABB Press, Bethesda MD.